AD A046955

(12) B.S.

ARI TECHNICAL REPORT

TR 77-TH-2

Unit Effectiveness and Leadership In A Changing Society

by

Philip Worchel, Joseph A. Sgro, and Richard W. Cravens

DDC
RECEIVED
NOV 14 1977
F

NOVEMBER 1977

DDC FILE COPY
AD NO.

Prepared for

U.S. ARMY RESEARCH INSTITUTE
for the BEHAVIORAL and SOCIAL SCIENCES
5001 Eisenhower Avenue
Alexandria, Virginia 22333

Approved for public release; distribution unlimited.

U. S. ARMY RESEARCH INSTITUTE
FOR THE BEHAVIORAL AND SOCIAL SCIENCES

A Field Operating Agency under the Jurisdiction of the Deputy Chief of Staff for Personnel

J. E. UHLANER
Technical Director

W. C. MAUS
COL, GS
Commander

Research accomplished under a grant to Virginia Polytechnic Institute and State University

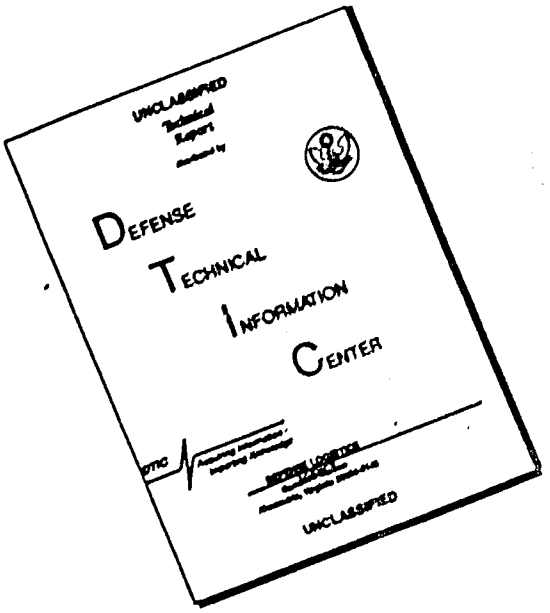
NOTICES

DISTRIBUTION: Primary distribution of this report has been made by ARI. Please address correspondence concerning distribution of reports to: U. S. Army Research Institute for the Behavioral and Social Sciences, ATTN: PERI-P, 5001 Eisenhower Avenue, Alexandria, Virginia 22333.

FINAL DISPOSITION: This report may be destroyed when it is no longer needed. Please do not return it to the U. S. Army Research Institute for the Behavioral and Social Sciences.

NOTE: The findings in this report are not to be construed as an official Department of the Army position, unless so designated by other authorized documents.

DISCLAIMER NOTICE



THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: TR-77-TH 2
2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle): UNIT EFFECTIVENESS AND LEADERSHIP IN A CHANGING SOCIETY.

5. TYPE OF REPORT & PERIOD COVERED: Final rept. Apr 74 — Aug 77

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s): P. Worchel, J. A. Sgro, and R. W. Cravens

8. CONTRACT OR GRANT NUMBER(s): DAHC 19-74-G-0011

9. PERFORMING ORGANIZATION NAME AND ADDRESS: Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS: 2Q161102B74E

11. CONTROLLING OFFICE NAME AND ADDRESS: U.S. Army Research Institute for the Behavioral and Social Sciences, 5001 Eisenhower Ave., Alexandria, Va. 22333

12. REPORT DATE: November 1977

13. NUMBER OF PAGES: 238

14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office): Philip Worchel, Joseph A. Sgro, Richard W. Cravens

15. SECURITY CLASS. (of this report): Unclassified

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

243p.

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

ARI

TR-77-TH-2

DDC RECEIVED NOV 14 1977 F

18. SUPPLEMENTARY NOTES

COTR AE Castelnovo

Tech Area: Personnel Accession and Utilization

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Leadership Behavior	Ego identity	Leader Influence
Personality	Reward Allocation	
Locus of Control	Group Conflict	
Interpersonal Trust	Group Cooperation	
Level of Moral Development	Group Dynamics	

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

A program of field and laboratory research with college-military students is presented which was directed at examining the differential reaction of individuals to varying patterns of leadership behavior and social dynamics of groups. Focus is on the personality and situational factors that were felt to be related to attractiveness of a group and the willingness of group members to cooperate in the attainment of objectives Personality variables which are manipulated are locus-of-control, interpersonal trust, level of moral

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

H07 206

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

development and ego identity status. Situational variables are forms of influence by leaders, differential patterns of reward allocation and integrating conflict and cooperation. The results of five laboratory experiments and six field studies are reported and discussed in relation to prevailing theory.

ACCESSION for
NTIS White Section
DDC Buff Section
UNANNOUNCED
JUSTIFICATION
BY
DISTRIBUTION/AVAILABILITY CODES
SPECIAL
A

TABLE OF CONTENTS

	Page
RESUME OF THE STUDY	i
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	v
FIGURES	viii
APPENDICES	ix
INTRODUCTION	1
SECTION I: COERCIVE AND PERSUASIVE POWER - DETERMINANTS AND REACTIONS	6
STUDY I: A LABORATORY STUDY	11
STUDY II: A FIELD STUDY	37
SECTION II: SELF- VERSUS GROUP-ORIENTED LEADERSHIP	57
SECTION III: INTERPERSONAL TRUST AND THE DELEGATION OF AUTHORITY AND RESPONSIBILITY	77
STUDY I: A LABORATORY STUDY	80
STUDY II: A FIELD STUDY - PART I	95
STUDY II: A FIELD STUDY - PART II	101
SECTION IV: THE ATTRACTIVENESS OF THE MILITARY ORGANIZATION	107
STUDY I: A FIELD STUDY	109
STUDY II: A FIELD STUDY	143
SECTION V: INTRA-GROUP CONFLICT: INDIVIDUAL VERSUS UNIT OBJECTIVES	158
SECTION VI: VALUE CONFLICT AND THE LEGITIMACY OF AUTHORITY	172
STUDY I: A LABORATORY STUDY	180
STUDY II: A FIELD STUDY	193
SECTION VII: SUMMARY	210
SECTION VIII: CONCLUSIONS, IMPLICATIONS AND LIMITATIONS	217
REFERENCES	222

RESUME OF THE STUDY

The present research was conducted from April 1974 to August 1977 under Grant No. DAHC19-74-G-0011 from the U.S. Army Research Institute for the Behavioral and Social Sciences to Virginia Polytechnic Institute and State University. The program of research was entitled "Unit Effectiveness and Leadership in a Changing Society" and was directed at examining the differential reaction of individuals to varying patterns of leadership behavior and social dynamics of groups. The focus of the research was upon the personality and situational factors that were felt to be related to the attractiveness of a group and the willingness of its members to cooperate in the attainment of the objectives. The primary personality variables which were manipulated were Rotter's "locus-of-control" and "interpersonal trust", Kohlberg's "level of moral development" and Marcia's "ego identity status". All of these variables have been shown either theoretically or empirically to be related to group behavior. The primary situational variables which were considered were the forms of influence by the leaders (coercive and persuasive), the differential patterns of reward allocation and intragroup conflict and cooperation.

The field study data were collected from two institutions in the South and involved freshmen military cadets. A later collection involved another class of freshmen cadets from the same two institutions in addition to a university in the Southwest. The laboratory experiments involved undergraduates at Virginia Polytechnic Institute and State University.

Major Findings

1. With regard to the use of coercive and persuasive power, it was found that:

   (a) Cadet subordinates were most satisfied with leaders who were perceived to be considerate and persuasive. The perceived behaviors of structure,

production, and responsibility were not found to be important to satisfaction.

(b) Locus-of-control of the cadet did not moderate the satisfaction of cadets to different uses of power. Rather, internally controlled persons tended to be less responsive to the demands of leaders (in the laboratory study) than externals.

2. For level of moral development it was found that:

(a) The manner in which power is used does not depend on the level of moral development of the leader.

(b) When subordinates are at a conventional level of moral development, a leader who allocates rewards in a manner that differentiates his status from that of his subordinates will in turn enhance his own value to that group.

(c) Low principled persons will express greater satisfaction with a competitive strategy for gaining rewards than moderately principled persons. Moderately principled persons will express greater satisfaction with a cooperative strategy for gaining rewards than low principled persons.

(d) Level of moral development is inversely related to the favorableness of military authority and also inversely related to a preference for Theory X management.

(e) At the conventional level, cadets are more satisfied, get along better with other cadets and have a more positive attitude toward the military system than cadets at the post-conventional level.

(f) If leaders are of a higher level of moral development than their subordinates, the role of the leader as an authority image is enhanced.

3. With regard to the role of the delegation of authority and interpersonal trust in leadership settings, it was found that:

(a) Under situations in which knowledge concerning the recipient is lacking,

persons who are high-trusters tend to allocate the same degree responsibility as low-trusters.

(b) When given knowledge about the degree of trustworthiness of the recipient, the high trust allocator would always give more responsibility than the allocator with low trust.

(c) Cadet leaders with high levels of interpersonal trust show behaviors that are perceived by subordinates as being considerate and persuasive.

(d) The satisfaction with varying degrees of leader delegation of authority did not vary as a function of the cadet subordinate locus-of-control.

(e) Cadets are more satisfied with leaders who are perceived as being high in the delegation of responsibility and authority.

4. With regard to variables relating to the attractiveness of the military, it was found that:

(a) Cadets who withdrew from military programs possessed a low self-concept.

(b) Cadets who are most attracted to the military have a strong commitment to an occupational choice and a political and religious ideology and also are less concerned with future domestic issues such as choosing a spouse or having a family.

(c) Compared to civilians, cadets are more concerned with world matters, attainment of career objectives, and the future of the military. They also have less concern for personal domestic issues.

ACKNOWLEDGEMENTS

A study of the present magnitude is dcpendent upon a number of individuals all of whom have input in some form or another. The project was conceived by Dr. Philip Worchel, who was the principal investigator. Dr. Richard W. Cravens was primarily responsible for the laboratory studies and Dr. Joseph A. Sgro was primarily responsible for the field studies and the completion of the present report. Dr. Sgro served as the principal investigator from June 1976 to the present because of Dr. Worchel's retirement from Virginia Polytechnic Institute and State University. The graduate research assistants who had primary responsibility in the present project were James C. Gutmann, Edgar J. Nottingham, Joseph A. Orban, and Terry Don Phillips.

Finally, the investigators wish to acknowledge the effort of Mr. Anthony Castelnovo who was the project monitor from the U.S. Army Research Institute for the Behavioral and Social Sciences. Mr. Castelnovo's advice and encouragement throughout the project were invaluable to its completion.

J. Sgro

LIST OF TABLES

		Page
1.1	The Number of Votes to Retain or Reject the Leader as a Function of Feedback Strategy and Number of Successes on Task Performance....	22
1.2	The Number of Votes to Retain or Reject the Leader as a Function of Feedback Strategy, Power and Locus of Control.....	24
1.3	Summary Table of the Three-Dimensional Chi-Square Analysis of Votes to Retain the Leader as a Function of Locus of Control and Power.....	25
1.4	Summary Table of the Three-Dimensional Chi-Square Analysis of Votes to Retain the Leader as a Function of Feedback Strategy and Locus of Control.....	26
1.5	Allocation of Bonus Money (in Dollars) to the Leader by Group Members as a Function of Feedback Strategy, Power and Locus of Control.....	28
1.6	A Summary of the Analysis of Variance of the Money Allocated to the Leader.....	29
1.7	Frequency of Successful Compliance with Leader Demands.....	31
1.8	Summary Table of the Three-Dimensional Chi-Square Analysis of Number of Successful Compliances as a Function of Power and Locus of Control.....	32
1.9	Summary Table of the Three-Dimensional Chi-Square Analysis of Number of Successful Compliances as a Function of Feedback Strategy and Locus of Control.....	33
1.10	Means and Standard Deviations for the Leader Behavior Description Questionnaire (LBDQ) and the Leadership Satisfaction Index (LSI) for Sample A and Sample B Freshmen Cadets.....	45
1.11	Correlation Matrix of LBDQ and LSI for Sample A Freshmen Cadets.....	46
1.12	Correlation Matrix of LBDQ and LSI for Sample B Freshmen Cadets.....	47
1.13	Final Regression Equations and Multiple Correlations for Prediction of LSI from LBDQ Variables using Stepwise Regression..... Procedure	48
1.14	Means and Summary of Analysis of Variance Performed on LSI scores for Sample A Freshmen Cadets.....	49
1.15	Means and Summary of Analysis of Variance Performed on LSI scores for Sample B Freshmen Cadets.....	50
1.16	Correlations between Sample A Leader Locus-of-Control and Cadet Scores on the LBDQ Scales and the LSI.....	52

LIST OF TABLES (continued)

		Page
2.1	Money Given to Group Leaders by Group Members	69
2.2	Summary of Votes For Leadership During A New Problem	70
2.3	Ranking of Leader For Participation In A New Group	72
3.1	Sample of Items Which Could be Delgated to Staff with Classification	86
3.2	Means and Standard Deviations of the Total Numbers of Item Delegated	89
3.3	Summary Table of the Analysis of Variance for Total Numbers of Items Delegated	90
3.4	Frequencies of Patterns of Assignment of Items to the Legal Researcher and Legal Aide	92
3.5	Summary Table of the Three-Dimensional Chi-Square Analysis of Patterns of Delegation of Item as a Function of Information and Interpersonal Trust	93
3.6	Mean Scores for LFDQ Dimensions as a Function of Leader and Subordinate Interpersonal Trust	98
3.7	Means and Summary of Analysis of Variance Performed on LSI Scores of Freshmen Cadets in Sample A	103
3.8	Means and Summary of Analysis of Variance Performed on LSI Scores of Freshmen Cadets in Sample B	104
4.1	Means and Standard Deviations for the Cantril Scales and the Semantic Differential Scores of Sample A and Sample B	112
4.2	Correlation Matrix for the Cantril Scales and the Semantic Differential Scores of Sample A	113
4.3	Correlation Matrix for the Cantril Scales and the Semantic Differential Scores of Sample B	114
4.4	Varimax Rotated Factor Matrix for Sample A	115
4.5	Varimax Rotated Factor Matrix for Sample B	116
4.6	Means and Standard Deviations for Freshmen Cadets who Remained and Withdrew in Sample A	120
4.7	Means and Standard Deviations for Freshmen Cadets who Remained and Withdrew in Sample B	121

LIST OF TABLES (continued)

		Page
4.8	Means for the Six-Derived Scales and Commitment Measure as a Function of Status and Attractiveness of the Military.....	148
5.1	Summary Table of the Analysis of Variance for the Question of Satisfaction with the Strategy for Distributing Rewards.....	167
5.2	Means and Standard Deviations of Ratings of Satisfaction with Strategies for the Distribution of Rewards.....	168
5.3	Summary Table of the Analysis of Variance for the Question of Satisfaction with the Actual Distribution of Rewards.....	169
5.4	Means and Standard Deviations of Subject Ratings of Satisfaction with the Experimenter's Distribution of the Rewards.....	170
6.1	Correlation Matrix of Relationship Between Principled Scores and Ratings of Favorability of Legitimate Authority Figures or Concepts.....	184
6.2	Means and Standard Deviations of Ratings of Authority Figures on the Semantic Differential.....	185
6.3	Correlation Matrix of Relationship Between Principled Scores and Willingness to Participate in Experiments for Various Incentives....	186
6.4	Means and Standard Deviations of Willingness to Participate in Experiments for Various Incentives.....	187
6.5	Correlation Matrix of Relationship Between Principled Scores and Ratings of Theory X and Y Managerial Assumptions.....	189
6.6	Means and Standard Deviations of Ratings of Transcripts of Theory X and Y Managerial Assumptions by Low and Low-Moderate Principled Subjects.....	190
6.7	Stage by Dilemma Correlation Matrix.....	196
6.8	Differences Between Sample Means on the P-score.....	199
6.9	Differences in P-score and Satisfaction on the JDI for Remained vs. Resigned and High and Low P-score.....	201
6.10	Differences in P-score on the Present and Future Military Attitude..	202
6.11	Correlations of Present and Future Military Attitude with Satisfaction Scales.....	205

FIGURE

Page

6.1 Path Model for P-score, Satisfaction with Fellow Cadets, and Present and Future Military Attitudes..... 207

APPENDICES

		Page
2.1	NASA Exercise	74
2.2	Bonus Distribution Sheet	75
2.3	Group Participation Questionnaire	76
4.1	Response to Semi-structured Questionnaire: Sample A	124
4.2	Response to Semi-structured Questionnaire: Sample B	136
4.3	Commitment and Concern Questionnaire	151

INTRODUCTION

The present paper represents the final report of a project entitled "Unit Effectiveness and Leadership in a Changing Society." It was conducted by Virginia Polytechnic Institute and State University under a grant awarded by the United States Army Research Institute for the Behavioral and Social Sciences.

The research focused upon those conditions which were felt to be instrumental in determining differential reactions of individuals to varying patterns of leadership behavior and social dynamics of groups. Sufficient evidence has been accumulated in recent years to document the changing values of our youth and the crisis confronting the military. Jacobson in 1972 noted:

> "Characteristically the armed forces have had their budgetary requests and their internal orders complied with. In recent years budgetary requests have been questioned and in some instances denied. Orders have been questioned and openly defied. We see men burning their draft cards, refusing induction, destroying combat ribbons and medals, and facing criminal indictment on a variety of charges.
>
> Has the military "high command" lost its power over its personnel? Or have those whom they order recognized their own power and thereby operationalized the importance of what we have termed the dependent member?
>
> Will men under combat conditions hesitate to obey an order as they weigh the moral components of a command? Will the long-standing power status differences that characterize rank be so diffused that privates will be able to exercise decisive power equal or exceeding that of ranking officers? Since it is not unlikely that a platoon could refuse to obey the orders of its leader and in so doing jeopardize lives, is it conceivable that incidents like this could accelerate to such an extent that they could sabotage national security? [p. 152-153]"

M. E. Wolfgang, director of research for the National Commission on the Causes and Prevention of Violence, reported that during 1967-1968 about 700,000 antiwar, antidraft protesters were involved in more than 170 demonstrations. During 1969, more than 100,000 students participated in 220 incidents. In the military where obedience to authority is one of the most valued norms, there have been numerous indications of increasing AWOLs, resignations of career officers,

fragging, protests and demonstrations by veteran groups, and refusal of troops to obey superior officers in Vietnam. During a period of six months in 1972, 49,000 GIs deserted reflecting the highest desertion rate since WW II. Hersh (1972) quotes from a letter written by an army psychiatrist describing what was going on in his base in Vietnam.

> "The army seems on the verge of collapse. The command structure is rapidly losing control of the troops both in minor aspects and in some very tragic large ones. This collapse is taking place in three distinct and related facets: drugs, disregard for authority, and violence."

Youth today refuse to equate authority with morality. Authority must empirically justify its decisions. Unquestioning obedience is no longer the prevalent virtue. Values that place emphasis upon undue regimentation or authoritarian behavior, as contrasted with cooperation and democratic principles are unacceptable as a basis for governing behavior (Fairweather, 1972). Lipset in a study of American student activism states that

> "reference is frequently made to the idealism of youth, another factor motivating student activism. Societies teach youth to adhere in absolute terms to the basic values of the system, such as equality, honesty, democracy, socialism and the like. The real world, of course, deviates considerably from the ideal, and part of the process of maturation is to learn to compromise, to operate in a world of conflicting role and value demands. But youth views such compromises as violations of basic morality. As a result, those events which point up the gap between ideals and reality stimulate them to action."

Although many observers had predicted that the mood of the American public would brighten considerably with the end of the Vietnam war, poll findings revealed that the public's outlook was actually growing more pessimistic. Survey evidence suggested that the following were the important factors contributing to the growing pessimism regarding the future: Increased concern on the part of the public about the standards of honesty of the American people, widespread lack of faith in key American institutions, declining confidence in the way the nation is being governed, and frustration over national problems. The public's sense of frustration was further compounded by a feeling of impotence, caused by their inability

to influence legislation. Halberstam (1962) concluded that many Americans feel they can express their beliefs and identities, not so much in traditional political terms, but through life-styles that dissent from the country's norms--by wearing their hair longer, by engaging in various forms of mysticism, by taking jobs that have no functional value to society.

With a change in the values of a society, institutions need to re-examine their own structures and processes in order to avoid the strains that may arise from potential value conflicts. The viability of an institution depends to a considerable extent on the existence of an effective internal mechanism to deal with conflict. Rotter in his presidential adddress to the American Psychological Association - Division of Personality and Social Psychology stated,

> "At long last it seems that many thoughtful people have become aware that the strong value conflicts in our society can no longer be ignored and that radical change is necessary for survival. Many have also recognized that change in itself is not necessarily good and that change that will produce a better society must be controlled or planned,"

and later,

> "If our society is to be improved it will not come about because one group or another has seized or obtained power, but rather because social planners and people in power will have access to knowledge about how socially desirable traits or characteristics are developed and maintained, and will make use of that knowledge [1970, p. 443]."

The research was intended to provide the information needed to direct the course of most effective change. The investigations were aimed at the core of value conflict, namely, the use and misuse of power by leaders who are given authority. In addition, the nature of the motivational dynamics as it is related to group morale was examined. Leadership was investigated from four perspectives: the forms of influence, the allocation of rewards and punishment, the personal motivation of the leader, and the delegation of responsibility and authority. The objectives of the program were not only on the derivation of general principles (since much has already been offered in this direction) but also on

the factors responsible for individual differences on the part of the leader and subordinates for different patterns of leadership influence.

It was not the purpose of the present research to propose any radical changes in the power-structure of the military which would be next to impossible to implement. Rather it attempted to discover those conditions which would tend to enhance the legitimacy of military authority - that is, how can power be used most effectively? What forms of influence are preferred by different individuals in a leadership role? How effective are the forms of influence with different unit members in attaining organizational objectives and maintaining high group morale?

The direction of the research effort was channeled into six major areas. The specific areas of investigation were:

SECTION I - COERCIVE AND PERSUASIVE POWER: DETERMINANTS AND REACTIONS

An investigation of those personality and situational factors affecting the use of coercive and persuasive power and the reactions of members to the use of these forms of leader influence.

SECTION II - SELF- VERSUS GROUP-ORIENTED LEADERSHIP

An investigation of the effect of differential patterns of reward allocation on subordinates who differ in level of moral development.

SECTION III - INTERPERSONAL TRUST AND THE DELEGATION OF AUTHORITY

An investigation of the role of interpersonal trust in the delegation of authority.

SECTION IV - THE ATTRACTIVENESS OF THE MILITARY ORGANIZATION

An investigation of those personal variables which relate to the attractiveness of the military organization as reltated to the adjustment of freshmen cadets to the military setting in the academic community.

SECTION V - INTRA GROUP CONFLICT: INDIVIDUAL VERSUS UNIT OBJECTIVES

An investigation of the social dynamics which tend to produce intra-

group conflict

SECTION VI - VALUE CONFLICT AND THE LEGITIMACY OF AUTHORITY

An investigation of the relationships between usage of level of morally principled reasoning and respect for legitimate authority figures.

The present report is a delineation of each of the above six areas. Each presents the rationale, methodology, results, discussion and conclusions for each area of investigation.

SECTION I

COERCIVE AND PERSUASIVE POWER: DETERMINANTS AND REACTIONS

The significance of power in the study of social interaction and group behavior cannot be underestimated. Russell wrote that "the fundamental concept in social science is Power, in the same sense in which Energy is the fundamental concept in physics." Cartwright (1959) contended that such concepts as influence, power, and authority must be considered in any adequate treatment of social interaction wherever it may take place. Despite the importance of power, Shostak (1964), after surveying the textbooks, collections of readings, and journals, ruefully concluded that neglect of power as an area of research is as much a dereliction of industrial psychologists as it is of union leaders and managers.

French defines leadership as "a member's ability to influence others both directly and indirectly by virtue of his position in the power structure, including the structure of legitimate authority [1956, p. 191]." Power of position, however, is to be distinguished from authority of leadership (Barnard, 1938). The success of any attempt to use power may depend upon the position a person occupies or upon his own ability independent of his position. Tawney (1931) defines power as the capacity of an individual to modify the behavior of other individuals or groups in the manner he desires. Cartwright, using a Lewinian framework, states that "power is a relation between two agents, O and P. It is concerned with the maximum influence which O can exert on P at a given time to change in a given direction [1959, p. 194]." Classically, power was conceived as force or coercion, and its use was viewed in terms of governmental control, revolution, military effectiveness, diplomacy, etc. Not surprisingly, then, the study of power was more the concern of political and

military science than of social science until the 1930s. Russell proposed three processes of influence, two of which did not include the idea of physical force: by direct physical power, by rewards and punishments, and by influence of opinion.

The classic study of Lewin, Lippitt, and White (1939) considered three kinds of group leadership--authoritarian, democratic, laissez-faire. Use of absolute power aroused much greater hostility, aggressiveness, loss of independence and initiative than did democratic or laissez-faire leadership. Wright (1943) reported that as greater cohesiveness develops in a group, the more its members will react negatively to power attempts that are intentionally frustrating. Similarly, Coch and French's study (1948) on attempts to produce deviation from a group's position showed that the more important a group is to an individual, the less effective such power attempts will be. These studies illustrate the importance of group attractiveness on the effectiveness of power.

Power is not unilateral. Harsanyi (1962) postulated that, in any power attempt, the power holder will incur some cost in using his power, and therefore he must consider the cost of using it against the results he hopes to gain from the individual he wishes to influence. Exchange theory pointed to the importance of the cost-reward aspect of power. Thibaut and Kelley stated that "the power of A over B increases with A's ability to affect the quality of the outcomes attained by B [1959, p. 101]." The outcomes are, of course, assessed in terms of costs and rewards for the individual. Power is not usable to the degree that its use penalizes the possessor, either directly or indirectly because of counterpower held by the other person. In other words, the other person is not powerless; he too may have numerous power resources which he chooses to use or not to use. Unfortunately, too many

leaders and persons in management positions possessing considerable power by virtue of position or coercive resources overlook the potential counter-power of those in subordinate roles. Miller, Butler, & McMartin (1969) pointed to the limitations of punishment as a power resource. Use of greater amounts of punishment power elicit temporary acquiescence but also bring about a tendency for others to respond with punishing behavior.

French and Raven (1959) have proposed five bases as reasons for B's acceptance of a power attempt: reward, coercive, referent, legitimate, and expert power. Reward power is based on B's conception that A can mediate rewards for him and will do so it he (B) exhibits the correct behavior. Coercive power is similar to reward power, except that the power holder is perceived by B to have the power to punish him (B) if he does not conform to the power attempt. The use of coercive power will tend to decrease the attraction of B to A. Studies by French, Morrison, and Levinger (1960) and by Raven and French (1959) have confirmed these operations of coercive power. Kipnis (1958) reported greater liking for the power agent using reward power. Legitimate power is defined as follows: Legitimate power of O/P is the power that stems from internalized values in P which dictate that O has legitimate right to influence P and that P has an obligation to accept this influence. The bases of legitimate power are cultural values, acceptance of the social structure, and designation of O as a legitimate powerholder by some other legitimizing agent whom P accepts. It follows therefore that if the recipient of the power attempt does not accept the values inherent in the legitimizing process or rebels against the social structure then he would tend to reject the power attempt of the agent designated as legitimate by the social institution.

Which form of power is used by the leader of a group depends not only on the demands and structure of the organization, composition of the group, the urgency and nature of the mission but also on the personality of the leader and the needs of the group members. Thus Raven and Kruglanski (1970) proposed that the successful use of coercive power may serve to enhance the self-esteem of the leader. Also the use of coercive power may be influenced by the person's beliefs in his effectiveness or competency as a source of influence. Staub (1971) suggested that a high degree of confidence in ones abilities may be associated with a low need for the use of aggressive means to influence others. Goodstadt and Kipnis (1970) and Kipnis and Lane (1962) found that persons who lacked confidence in their ability to effectively influence others were more likely to employ coercive means of influence than individuals who expressed confidence in their ability to influence. Confident individuals were more apt to use persuasive means (giving encouragement, praise, admonishment). Goodstadt and Hjelle (1973) based their study of the use of power on social learning theory. According to this theory, internally controlled persons believe they are capable of controlling the occurrence of reinforcements while externally controlled persons believe that such reinforcements are determined by outside forces such as luck or the power of others. They found that in dealing with the problem worker, externally controlled subjects used significantly more coercive power than did internally controlled subjects. In addition, internals relied more on personal persuasive powers than did externals.

Two studies are reported in the present section and are of particular concern to the investigation of the manner in which subordinates reaction to the use of power. The first study was performed in the laboratory and was directed toward the role of locus-of-control as a personality variable which may moderate the reactions of a subordinate toward his leader's use

of reward and coercive power together with the use of success or failure feedback. The second study was a field study which was conducted on two university campuses with military cadets. An examination was made of the relationships between the locus-of-control of the cadet leader and the cadet subordinate's reaction to the degree to which the cadet leader is perceived as using a coercive leadership style.

STUDY I

COERCIVE AND PERSUASIVE POWER - DETERMINANTS AND REACTIONS: A LABORATORY STUDY

Two of the most significant factors determining the effectiveness of group behavior are (a) the locus of power and (b) the manner in which the powerholder exerts influence on the members of his group. Despite the numerous empirical and experimental studies demonstrating the limited effectiveness of any specific leadership behavior (Bass, 1960; Stogdill & Coons, 1957; Tannenbaum & Schmidt, 1958), theories still persist on the values of specific styles of leadership. Taking a broader view, Fiedler (1971), after demonstrating that leadership performances over different situations were uncorrelated, proposed a contingency model which argued that both leadership style and situations were important determinants of effective group behavior. Thus, most of the studies of leadership have focused directly on leadership behavior and/or situation and the effect of either or both on group effectiveness.

In contrast to the predominant view, Stogdill (1948) in his review of the leadership literature concluded that the personal characteristics of the leader should be relevant to the characteristics, activities, and goals of the followers. Sanford (1950) has also noted the importance of the reactions of group members:

> "There is some justification for regarding the follower as the most crucial factor in any leadership event and for arguing that research directed at the follower will eventually yield a handsome payoff. Not only is it the follower who accepts or rejects leadership but it is the follower who perceives both the leader and situation and who reacts in terms of what he perceives. And what he perceives may be, to an important degree, a function of his own motivations, frames of reference and readiness (p. 4)."

Although few studies have dealt with individual differences in reactions of group members to leaders, such studies have demonstrated the significance

of such personality variables as need for approval (McDavid, 1959; Moeller & Applezweig, 1957; Schroder & Hunt, 1958), need for individual security (Kelley & Thibaut, 1954), need for affiliation (Becker & Carroll, 1962), and self-confidence (Samelson, 1957) on the acceptance or rejection of power used by leaders. The present study deals with the reactions of followers to the exercise of reward and coercive power.

A central assertion of the present study is that power is manifested in the degree of constraint imposed on group members. The individual in the leadership position can set standards for quality and quantity of production, establish the procedures to be followed, determine the amounts and types of rewards or punishments to be distributed to group members, and who is to receive them. Power can be used to reward group members for behaving or coerce group members to behave in prescribed ways. The use of coercive power involves the threat of punishment and/or actual punishment for failure to conform to the leader's demands, whereas the use of reward power involves the offering of some valuable object or activity for conformance to the leader's demands (French & Raven, 1959). In the use of coercive power, an undesirable consequence is suffered if the group member fails to fulfill the leader's demands, whereas nothing other than avoidance of an aversive consequence is gained for conformity. With the use of reward power, a desirable consequence is gained if the group member fulfills the leader's demands, whereas nothing other than the omission of a desirable consequence is suffered for failure to conform. In other words, in coercive power much will be lost by not conforming, but no distinct improvement in the group member's future over present conditions will be gained by conforming; whereas in reward power no change in the group member's future over present condition will occur for failure to conform, while much will be gained for conforming. Under the assertion of

the present study, the use of coercive power is much more constraining and restrictive than the use of reward power. The greater the constraints imposed by the leader, the less control the group members have over their own behavior. Thus, locus of control would seem to be a relevant personality variable in assessing reactions to the exercise of such power.

The locus of control refers to a generalized expectancy concerning the control of one's life and was derived from Rotter's social learning theory (Rotter, 1966). Individuals with an internal locus of control believe that the reinforcements they receive are contingent upon their own behavior, whereas individuals with an external locus of control believe that the reinforcements they receive are a matter of chance or luck. In general, it has been observed, as predicted, that internals are more active than externals in their attempts to control or manipulate the environment in an effective way (Gore & Rotter, 1963; James, Woodruff & Werner, 1965; MacDonald, 1970; Seeman & Evans, 1962; Straits & Sechrest, 1963; Strickland, 1965).

There are a number of studies which suggest that internals and externals should react differently to leaders' attempts to control behavior. One line of evidence comes from studies of verbal conditioning. Getter (1966), Strickland (1970), Jolley & Spielberger (1973) and Alegre & Murray (1974) have all demonstrated variations on the same theme that awareness of attempts to reinforce specified word classes is not related to internality-externality, but that among aware subjects, externals conditioned better than internals. Apparently, externals accepted the social reinforcement whereas internals resisted the social reinforcement attempts.

A second line of evidence comes from studies of persuasion. Ritchie and Phares (1969) demonstrated that externals were more susceptible to attitude change under persuasion attempts from a high prestige source than from a low

prestige source, but that internals were influenced by the content of the communication rather than source prestige. Biondo and McDonald (1971) demonstrated that externals conformed to requested change under both low and high influence attempts where influence was manipulated by the strength of the statement of conclusion of a persuasive argument. Internals "were negatively influenced or showed reactance" to high influence but did not resist the low influence manipulation, yet they failed to conform. McGinnis and Ward (1974) studied attitude change as a function of source credibility and locus of control. They observed as did Ritchie and Phares that externals reacted more to a highly credible source than to a low credible source and that internals were not differentially affected by source credibility. However, they compared data across five cultures and found this relationship in American subjects only.

In contrast to these general conclusions about persuasibility and locus of control, Sherman (1973) showed that internals experienced greater attitude change when they were asked to engage in counterattitudinal behavior than did externals. This demonstration thus placed a limitation on the previous conclusions and suggested that internals are equally susceptible to influence attempts when the processes related to internal locus of control are used in the attitude change process.

With the exception of the strategy offered by Sherman (1973), the existing data suggest that externals will conform to direct attempts to control behavior through social reinforcement, but that internals would resist such attempts. Thus, these data generally suggest that internals might comply less readily with attempts by a leader to influence their behavior, whereas externals would readily comply. Consistent with these data, however, it may be further suggested that the type of leadership might differentially influence internals and externals. Externals might be amenable to strong attempts

to control behavior, such as would be the case with the use of coercive power, whereas internals would likely resist such attempts. On the other hand, internals and externals might not react differently to less restrictive attempts to control behavior, such as would be the case with the use of reward power.

From the theoretical formulation of social learning theory, it seems reasonable to also expect a relationship between locus of control and success or failure feedback on task performance. The relationship is derived from the conception that internals believing that they can control outcomes should act to adjust performance to maximize rewards, and therefore, react positively to task related feedback of success or failure. Phares has suggested that

> "an internal belief system should of course, lead to reactions of pride following success, or a variety of negative emotions following failure. In either case, the effects on subsequent achievement are likely to be positive. The belief system of an external, however, denies him either emotional experience, and thus provides him little basis for the pursuit of excellence (1973, p. 13)."

Indeed, Feather (1967) has shown that internals tend to adjust their aspirations upward after success and downward after failure to a greater extent than do externals. Both Pines & Julian (1972) and DuCette & Wolk (1973) have demonstrated that internals are attentive to task-related cues which provide information about success and failure. However, Pines and Julian have additionally shown that externals may be equally attentive to social cues rather than task-related cues. A striking confirmation of these differences was presented by Baron, Cowan, Ganz, and MacDonald (1974) who showed that internals learned to perform a form discrimination or concept attainment task better when they discovered the outcome of their efforts for themselves (intrinsic reinforcement) than when they were rewarded by others (extrinsic reinforcement),

whereas externals performed better under extrinsic than intrinsic reinforcement. Thus, the literature generally suggests attentiveness of both internals and externals to cues in the work situation but with the internals being concerned with task-related cues and externals being concerned with social cues on performance. The question as to the effectiveness of success or failure related feedback in a group situation where the leader dispenses rewards (extrinsic reinforcement) would best be answered by arguing that externals should react by adjusting performance better and reacting more intensely to the leader's feedback than internals.

In the present study, internals and externals participated in a group setting to build paper airplanes under the direction of a group leader. The design of the experiment was a 2 x 2 x 2 between-groups design in which reactions of internals and externals to the uses of reward and coercive power were assessed with the use or nonuse of success-failure feedback being manipulated as the third variable. The predictions were, stated at a very general level, that internals would react more negatively to the use of constraining coercive power than externals and that externals would react more positively to the leader's feedback of success and failure than internals.

Method

Subjects. Ninety-six male volunteers were selected to participate in the experiment for extra credit in introductory psychology and for an opportunity to simultaneously work for a share of a six-dollar bonus. Forty-eight subjects scored 9 or lower (first tertile) on Rotter's Locus of Control Scale (Rotter, 1966) and were classified as internals, while the remaining 48 subjects scored 12 or higher (third tertile) and were classified as externals. Because four externals and one internal were eliminated from the experiment for failing to respond to all dependent variables, additional

subjects were randomly eliminated from the experiment to provide equal numbers of subjects in all cells. Thus, data from 80 subjects were analyzed.

Apparatus and procedure. The subjects were assembled in groups of seven which were composed of three internals, three externals and one confederate. When each group was assembled, the experimenter read instructions to the group in which he told the subjects that the purpose of the study was to learn about patterns of leadership and communication in groups. The exercise was a paper airplane folding task (Kolb, Rubin, & McIntyre, 1971). He gave each subject a folder containing airplanes and modeled the folding procedure. Then, each subject folded his own plane for practice. The experimenter then suggested that a leader be selected by lot and passed a box containing slips of paper among the subjects. Although all slips contained the words "group member", the confederate professed to have a slip designated "leader."

After the leader was selected, the experimenter pointed to 6 visually-isolated cubicles in which subjects were to work individually and sent the members to the cubicles. The experimenter seated the leader at the leader's desk and then continued the instructions. The subjects were told that the experiment was a simulation of an industrial problem and that the promised $6.00 bonus did exist and would be distributed by the leader. The leader's task was described as being that of achieving quality production at a nearly uniform rate. The subjects were told that they would be building paper airplanes for four five-minute periods and that the leader would check their "products" and provide them with instructions on what to do after each five-minute period. The subjects were additionally told not to communicate with one another during the experiment. The experimenter answered all questions about procedure and then began the first five-minute period. After the first and each succeeding period, the subjects were given prearranged notes which

were designed to induce the effects of power (reward or coercive) and of (success-failure feedback versus no feedback). The messages designed to coerce subjects read:

(1st period) Your airplanes show your inexperience at this task. Try to make your folds cleaner and your points sharper. Also increase your rate by 25% in the next period or I shall decrease your bonus by 20¢.

(2nd period) I am not happy with your production quality. Increase your production by another 33% or I will reduce your bonus by 30¢.

(3rd period) We are ready for the last period. Our overall production rate is still below optimum. Increase your rate by another 25% or I will reduce your bonus by 50¢.

The messages designed to reward read:

(1st period) For your first period, you don't look too bad. I noticed some of your corners were not sharp, please try to improve this part of your work and make some of your folds cleaner. Also try to increase your rate of production by 25%. If you can do this, I will give you 20¢ of the bonus for starters.

(2nd period) You are progressing both in quality and quantity toward the goal. But we still have improvements to make. Your next increase in quantity will be a 33% increase in rate of production. If you can succeed at this, I will give you 30¢ of the bonus.

(3rd period) We are ready for the final adjustment period. This is the last chance I have to tell you what to do. We are

looking good, but we can do better. For the last period, please try to increase your rate of production by another 25%. If you succeed in reaching this goal, I will give you an additional 50¢.

The payoff for success was indicated after periods 2 and 3, respectively, by prefacing the leadership messages with the following:

Coercive "You did not lose 20¢, bu ..." and "You did not lose 30¢..."

Reward "You earned the 20¢ and you are progressing..." and "You earned 30¢..."

Failure and loss of bonus were indicated by prefacing the messages after periods 2 and 3, respectively, with:

Coercive "You lost 20¢ and..." and "You lost 30¢..."

Reward "You did not earn 20¢, but..." and "You did not earn 30¢..."

When the last experimental production period was completed, the leader collected the last set of airplanes, prepared envelopes in which he placed one dollar for each group member, deposited the data and envelopes with the experimenter, and then left the room. While the leader was completing his part of the experiment prior to leaving, the experimenter gave the subjects a questionnaire in which the subjects responded to the following items.

1. Would you be willing to work under your leader for another experiment? _____Yes _____No

2. How much of the $6.00 bonus would you give to the group leader and how much would you leave for the group members to share?

$_____for the leader $_____for the group members

After the subjects completed the questionnaire, they were given the envelopes containing the cash and were asked to sign a receipt for the money.

Results

Data from three dependent measures were evaluated. One measure was vote to retain the leader for another experiment, and a second measure was the amount of money subjects would allocate to the leader. Both of these variables were primarily verbal report in the written format and had no specific implications for future behavior. The third variable was the number of airplanes built during each period, which was converted to the number of successful compliances with the leader's requests. It was strictly behavioral with no verbal components and was expected by subjects to be used to determine how much of the reward each subject would receive.

The vote to retain the leader and the amount of money allocated to the leader would be expected to be related to each other. Although the vote to retain the leader is a direct measure of satisfaction with his behavior, the amount of money allocated to him is probably more complexly determined. In addition to satisfaction, the amount of money allocated is probably affected by the subject's perception of the leader's contribution to the achievement of task objectives. Thus, while a relationship between vote and allocation is expected, the degree of the relationship would not be so great as to rule out the influence of other variables. The point-biserial correlation is .33 ($p < .01$). In general, subject voting to retain a leader allocated more money to him ($\bar{X}$=\$.95) than those voting against the leader ($\bar{X}$=\$.67).

A relationship between success on the task and vote to retain the leader might also be expected; i.e., it would seem likely that those who succeed on the task would express greater favor toward retaining a leader than would those who failed. Phi correlation coefficients were calculated between number of successful compliances with leaders demands (0-1 successes, 2-3 successes) and vote to retain the leader (yes, no). Collapsing across all conditions the phi

coefficient was a nonsignificant .13 and collapsing across personality and power the phi coefficient was .19 for subjects given success-failure feedback and .07 for subjects not given success-failure feedback. Thus, no significant relationship between success and failure on the task and vote to retain the leader was observed. The number of votes to retain the leader as a function of number of successful compliances is shown in Table 1.1 .

Although success or failure (using the phi coefficient) was not related to the vote to retain the leader, it was still possible that number of successful compliances would be related to the amount of money allocated to the leader. However, the overall relationship between successes and allocation was very small with the point-biserial correlation of .01. The means for allocation of money was $.88 for 0 to 1 successes and $.87 for 2 to 3 successes.

An examination of these correlations suggests that data from the vote to retain the leader and allocation of money to the leader should be evaluated separately from the behavioral data on complaince with leader's requests. The first two could be loosely termed satisfaction with the leader, whereas number of successful compliances could be viewed as a performance variable.

Satisfaction variables. The first, general hypothesis predicted an interaction between power and locus control. Specifically, with regard to the satisfaction variables, it was predicted that internals would vote less frequently to retain a coercive leader and would allocate less money to him than externals. On the other hand, no specific differences in reactions of internals and externals to rewarding leaders were expected. Both internals and externals would be expected to be less satisfied with a coercive leader than with a rewarding one. Table 1.2 shows the frequency of "yes" and "no" votes to retain the leader as a function of feedback strategy, power, and locus of control. A chi-square test for independent samples for a three dimensional contingency table (Winer, 1962)

Table 1.1

The Number of Votes To Retain or Reject The Leader as a Function of Feedback Strategy and Number of Successes on Task Performance

Group		Votes	
		Yes	No
No Feedback	0-1 successes	18	6
	2-3 successes	13	3
Feedback	0-1 successes	13	8
	2-3 successes	15	4

was computed for power and locus of control collapsed across feedback strategy. A single four-way contingency table in which both the power and feedback strategy predictions could be evaluated simultaneously was not possible because 50% of the cells contained expected frequencies of less than five. A significant leadership by vote chi-square was observed ($\chi^2_{(1)} = 10.91$, $p < .001$) in which subjects under reward power voted more frequently to retain their leader than did subjects under coercive power. The chi-square value for the predicted power by locus of control by vote interaction did not reach statistical reliability ($\chi^2_{(1)} = 3.11$, $p < .1$). A summary table of the chi-square analysis is shown in Table 1.3.

The second, general hypothesis predicted an interaction between feedback strategy and locus of control. Specifically, with regard to the satisfaction variables, it was predicted that externals would vote more frequently to retain a leader who gave feedback and would allocate more money to him than would internals. On the other hand, no differences could be predicted between internals and externals under no feedback conditions. A chi-square test for independent samples for a three dimensional contingency table was computer for feedback strategy and locus control collapsed across power. The feedback strategy by locus of control interaction on votes was not significant ($\chi^2_{(1)} = 3.15$, $p < .1$). A summary table of the chi-square analysis is shown in Table 1.4.

The second satisfaction variable, allocation of money to the leaders, could be evaluated by an ANOVA so that the effects of all three independent variables could be assessed in a single analysis. The mean allocations of money as a function of feedback strategy, power, and locus on control are shown in Table 1.5. A 2 x 2 x 2 between-subject analysis of the allocations revealed a main effect for power ($F = 4.87$, $df = 1,72$, $p < .05$) and a Feedback Strategy x Locus of Control interaction ($F = 4.07$, $df = 1,72$, $p < .05$). A summary of the analysis of variance is shown in Table 1.6. An inspection of the means for the power

Table 1.2

The Number of Votes To Retain or Reject the Leader as a Function of Feedback Strategy, Power and Locus of Control

Group		Locus of Control	Vote	
			Yes	No
No Feedback	Coercive	Internal	4	6
		External	8	2
	Reward	Internal	9	1
		External	10	0
Feedback	Coercive	Internal	5	5
		External	6	4
	Reward	Internal	10	0
		External	7	3

Table 1.3

Summary Table of the Three-Dimensional Chi-Square Analysis of Votes to Retain the Leader as a Function of Locus of Control and Power

Source	df	Chi-Square
Total	4	14.60
Vote x Power	1	10.91**
Vote x Locus of Control	1	.58
Power x Locus of Control	1	.00
Vote x Power x Locus of Control	1	3.11*

** $p < .001$

* $p < .10$

Table 1.4

Summary Table of the Three-Dimensional Chi-Square Analysis of Votes to Retain the Leader as a Function of Feedback Strategy and Locus of Control

Source	df	Chi-Square
Total	4	4.31
Vote by Feedback Strategy	1	.58
Vote by Locus of Control	1	.58
Feedback Strategy by Locus of Control	1	.00
Vote by Feedback Strategy by Locus of Control	1	3.15*

*p < .10

main effect indicated that rewarded subjects allocated more money to their leaders than did coerced subjects ($.96 versus $.80, respectively). An evaluation of the interaction using Duncan's New Multiple Range Test (Klugh, 1970) indicated that externals who received success-failure feedback would give less money to their leaders than would internals who received feedback and both the internals and externals who did not receive feedback ($.68 versus $.99, $.92, $.93, respectively). Thus, the differences observed in votes were supported by parallel differences in money allocated to the leaders for the main effect of power. An interaction for feedback strategy and locus of control was observed, but was not in the predicted direction.

Performance variable. With regard to the performance variable, the numbers of trials in which the subjects successfully fulfilled the leader's production demands, the first, general hypothesis would lead to the prediction that internals would achieve fewer successful compliances under a coercive leader than externals, whereas no differences would appear under a rewarding leader. The second, general hypothesis would lead to the prediction that externals would succeed more frequently under a leader who gave feedback than internals, but that no differences in compliance would exist under a leader who did not give feedback.

Because the leader's requests for increases in production were always stated in percentages of increase over the previous trial, it was necessary to determine whether all groups produced approximately the same number of planes in the first period. If they had not, it would be unreasonable to expect groups starting with a higher level of production to be able to as easily meet later percentage requirements than those who had lower initial production. A 2 x 2 x 2 between-subjects analysis of variance showed no reliable differences between the groups in initial rates of production. The number of trials in which the subjects successfully fulfilled the leaders' production demands are shown in Table 1.7.

Table 1.5

Allocation of Bonus Money (in dollars) to the Leader by Group Members as a Function of Feedback Strategy, Power and Locus of Control

Feedback Strategy	Power	Internals	Externals
No Feedback	Coercive	.84	.85
	Reward	1.00	1.00
Feedback	Coercive	.83	.66
	Reward	1.15	.70

n = 10 per cell

Table 1.6

A Summary of the Analysis of Variance of the Money Allocated to the Leader

Source	df	Mean Square	F
Feedback Strategy (FS)	1	0.16	1.29
Power (P)	1	0.60	4.87*
FS x P	1	0.005	0.04
Locus of Control (IE)	1	0.45	3.69
FS x IE	1	0.50	4.07*
P x IE	1	0.12	0.95
FS x P x IE	1	0.11	0.89
Error	72	0.12	

*$p < .05$

Chi-square analyses for a three-way contingency table were computed for the number of successes for power by locus of control and for feedback strategy by locus of control. A single four-way contingency table was not possible, because 50% of the cells contained an expected frequency of less than five. In both analyses, the only reliable effect was a Success by Locus of Control interaction (both $\chi^2_{(1)}$'s = 4.11, $p < .05$) in which internals compiled 27 0-1 successes versus 13 2-3 successes whereas externals compiled 18 0-1 successes versus 22 2-3 successes. The chi-square summary tables are shown in Tables 1.8 and 1.9.

Because the expected frequencies of some cells were too small to allow a four-way chi-square analysis, a separate evaluation was undertaken to determine whether an interaction between feedback strategy, power, and locus of control might have occurred on the number of successful compliances. Specifically, the feedback by power by locus of control cells were studied, because they represented the maximal application of the treatment variables which were hypothesized to have an effect. In the feedback condition, coerced internals were less successful than rewarded internals (Fisher's exact probability = .06) and than coerced externals (Fisher's exact probability = .03).

Discussion

The dependent measures of votes to retain the leader, allocation of money to the leader, and number of successful compliances with the leaders' demands were found to be only partially related. Specifically, it was observed that votes and allocation were related but that the number of successful compliances was unrelated to either of the other dependent variables. Thus, the nature of the relationship between successful performance on a task and measures designed to assess satisfaction with the performance of the group leader remains unclear. Apparently, subjects form definite reactions to their leaders based on factors

Table 1.7

Frequency of Successful Compliance with Leader Demands

Feedback Strategy	Power	Locus of Control	0-1 Successes	2-3 Successes
No Feedback	Coercive	Internal	7	3
		External	5	5
	Reward	Internal	6	4
		External	6	4
Feedback	Coercive	Internal	9	1
		External	4	6
	Reward	Internal	5	5
		External	3	7

Table 1.8

Summary Table of the Three-Dimensional Chi-Square Analysis of Number of Successful Compliances as a Function of Power and Locus of Control

Source	df	Chi-Square
Total	4	6.66
Successes by Power	1	1.27
Successes by Personality	1	4.11*
Power by Personality	1	.00
Successes by Power by Personality	1	1.28

*$p < .05$

Table 1.9

Summary Table of the Three-Dimensional Chi-Square Analysis of Number of Successful Compliances as a Function of Feedback Strategy and Locus of Control

Source	df	Chi-Square
Total	4	5.81
Successes by Feedback	1	.45
Successes by Locus of Control	1	4.11*
Feedback by Locus of Control	1	.00
Successes by Feedback by Locus of Control	1	1.25

---

*$p < .05$

other than the ability to successfully comply with the demands of the leader. Post hoc, the absence of such a relationship does not seem too surprising because many instances can be cited in teacher evaluation reports, politics, management, and in other areas in which some individuals who are not highly successful on task-related criteria still hold great respect for their leaders whereas others who are highly skilled and successful on agreed upon criteria of task performance are highly critical of their leaders. It appears, therefore, that it is necessary to discuss the results of the present experiment in two different contexts.

Performance variable. With regard to performance in terms of successful compliances, the internals achieved reliably fewer successes with their leaders' demands with no interaction with power or feedback strategy being evident. Thus, with regard to performance, it must be concluded internals were less responsive to the demands of their leaders than externals regardless of the form of power or feedback strategy used by the leader. Such results are consistent with those on persuasion and verbal conditioning (Getter, 1966; Strickland, 1970; Jolley & Spielberger, 1973; Alegre & Murray, 1974; Ritchie & Phares, 1969; Biondo & McDonald, 1971; McGinnies & Ward, 1974) which have shown that internals are more resistant to direct manipulation attempts than externals. One possible objection to this conclusion is that the demands of the leaders were stated in percentages of increases and that internals might have initially had a higher rate of production, thus making it harder for them to meet the leader's demands. An evaluation of the number of airplanes built in the first period before any demands were made showed that there were no statistically reliable differences between the eight groups of subjects making this objection not viable.

Consistent with the theoretical underpinnings of previous research on the

locus of control was the observation of the performance of internals and externals in the success-failure feedback condition. Under those circumstances where the manipulation of power was direct and the consequences of successful compliance or failure to comply were made known to the subjects by the group leader, internals who were coerced succeeded fewer times than coerced externals or rewarded internals. The results of this particular cell support the general hypotheses of the present study, because it was proposed that the use of coercive power would be most constraining and reacted to more strongly by internals than externals, and because it would be under the use of success and failure feedback that the constraint would be maximally comprehended by the subjects. Thus, based on subject's behavioral performance on the task, it may be concluded that internals react less favorably to overt manipulation by a group leader than externals, regardless of the nature of the leaders interactions, and that internals are particularly resistant to conforming when the leader operates in a way to maximally constrain the freedom of the subjects (i.e., by using success-failure feedback while using coercive power).

Satisfaction variables. With regard to the subjects satisfaction with the leader as expressed in votes to retain him and monetary allocations to him, it was clear that the subjects were more favorably disposed to a rewarding than to a coercing leader, because they voted more frequently to retain him and they allocated more money to him. The hypothesis that internals would be less accepting of a coercive leader than externals and than rewarded internals was only marginally supported ($p < .1$) in the votes to retain the leader and was not supported in the allocations of the money. Thus, the predicted relationship between satisfaction of internals and externals to the use of reward and coercive power was not evident in any convincing manner.

The hypothesis that externals would be more satisfied by feedback from the

group leader was not supported in the vote to retain the leader. The unpredicted observation that externals who were given feedback allocated less money to their leaders than other subjects was puzzling. The reasons for this are not clear, but one possible reason is that the externals who were given success-failure feedback were accumulating enough successful compliances in comparison to internals receiving success-failure feedback that they were realistically calculating that their leaders could receive less reward if they assumed that other subjects were achieving the same way they were. Additionally, both internals and externals in the no feedback condition would have no basis upon which to calculate a distribution of rewards. This interpretation would provide support for the prediction of the present study that the feedback condition would be best suited to externals, because they would have better used feedback to reasonably determine allocations of money to their leaders than did internals. However, the complete validity of this explanation could not be determined from the data of the present experiment.

Several general conclusions may be drawn based on the present study. First, information relating to group members' satisfaction with their group leader may not reliably reflect the group members' performances. Second, internals do not perform well under leaders' direction compared to externals, and internals perform at a particularly low level when they receive feedback while being coerced. However, the internals' votes to retain the leader and allocations of money to him do not reflect this performance. Third, the relationship between feedback and personality is not clear, however, externals may have used their leaders' feedback more skillfully than internals in achieving greater numbers of successes and reasoned that if they had a large reward coming the leader must have less money coming.

STUDY II

COERCIVE AND PERSUASIVE POWER - DETERMINANTS AND REACTIONS: A FIELD STUDY

The purpose of the field study reported in Study II was to examine the relationships which exist between cadet subordinate satisfaction and perceived leader behavior in an actual field setting. Two samples were used to accomplish the following:

(1) From an empirical point-of-view, the first objective was to determine the nature of the relationship between Cadet Satisfaction and Perceived Leadership Style as measured on the Leader Behavior Description Questionnaire (LBDQ). To this end, freshmen cadets were required to assess their cadet leaders on the LBDQ and regression equations were computed that showed the best combination of perceived leader dimensions for predicting cadet satisfaction.

(2) Within the rationale developed in the Introduction to the present section, it was of interest to examine within the field setting whether a relationship might exist between Cadet Satisfaction, Cadet Locus-of-Control, and Perceived Coercive Leadership Style. The predicted relationship was that freshmen cadets with low internal control would react less negatively to coercive power than high internal cadets.

(3) Finally, the third objective was derived from social learning theory and again was concerned with the locus-of-control variable. The specific prediction being investigated was whether cadet leaders who were internally controlled would tend to rely more on a persuasive style of leadership than externally controlled cadet leaders. To this end, cadet leaders were required to complete the

Rotter Locus-of-Control questionnaire and were evaluated on the LBDQ by their cadet subordinates.

Method

Samples

The samples were selected from two southern universities. The description of the samples are as follows:

Sample A - The Corps of Cadets consisted of one regiment which was composed of two "battalions" and a regimental band company. Each battalion consisted of three companies. Each company contained four platoons, and each platoon consisted of three squads. Within each squad, there were approximately 10 men who were lead by a cadet corporal. During the academic year 1974-75, each squad received a different cadet corporal every six weeks.

Sample A consisted of 311 freshmen cadets of whom 206 returned useable questionnaires. A total of 37 leaders were administered the questionnaires and 35 questionnaires were useable. (It should be mentioned that the sample size varied throughout various aspects of the study for both samples as a consequence of missing data which may have existed for certain portions of the instruments).

Sample B - The Corps of Cadets consisted of one regiment which was composed of: (a) one "battalion" of four companies; (b) one "group" of four squadrons; (c) one regimental band company; and (d) one women's squadron. Each of the four squadrons and four companies was commanded by a cadet captain. The cadet captain was directly responsible for approximately 40 cadets in his unit.

In the present study, questionnaires were distributed to 86 freshmen cadets and to the nine leaders. Of these questionnaires, 80 freshman and eight leaders (including the woman cadet captain) were useable.

Instruments

1. Leader Behavior Description Questionnaire. The Leader Behavior Description Questionnaire (LBDQ) was modified from its original 100 items to a 50-item questionnaire and yielded scales related to:

(a) Persuasion - whether the squad or company commander uses persuasion and argument effectively. These items included the following:

Item Number	Statement
1.	He makes pep talks to stimulate the group.
6.	His arguments are convincing.
11.	He argues persuasively for his point of view.
16.	He is a very persuasive talker.
21.	He is skillful in an argument.
34.	He is an inspiring talker.
39.	He persuades others that his ideas are to their advantage.
44.	He can inspire enthusiasm for a project.

(b) Structure - whether the squad or company commander clearly defines his own role and lets members of his unit know what is expected. Items included are as follows:

Item Number	Statement
2.	He lets group members know what is expected of them.
7.	He encourages the use of uniform procedures.
12.	He tries out his ideas in the group.
17.	He makes his attitudes clear to the group.
22.	He decides what shall be done and how it shall be done.
26.	He assigns group members to particular tasks.

Item Number	Statement
30.	He makes sure that his part in the group is understood by the group members.
35.	He schedules the work to be done.
40.	He maintains definite standards of performance.
45.	He asks that group members follow standard rules and regulations.

(c) Freedom - whether the squad or company commander allows tolerance for the members of his group in initiative, decision and action. The items were:

Item Number	Statement
3.	He allows members complete freedom in their work.
8.	He permits the members to use their own judgment in solving problems.
13.	He encourages initiative in the group members.
18.	He lets the members do their work the way they think best.
23.	He assigns a task, then lets the members handle it.
27.	He turns the members loose on a job, and lets them go to it.
31.	He is reluctant to allow the members any freedom of action.
36.	He allows the group a high degree of initiative.
41.	He trusts the members to exercise good judgment.
46.	He permits the group to set its own pace.

(d) Consideration - whether the squad or company commander has regard for the comfort, well-being, status, and contributions of the followers.

Item Number	Statement
4.	He is friendly and approachable.
9.	He does little things to make it pleasant to be a member of the group.
14.	He puts suggestions made by the group into operation.
19.	He treats all group members as his equals.
24.	He gives advance notice of changes.
28.	He keeps to himself.
32.	He looks out for the personal welfare of group members.
37.	He is willing to make changes.
42.	He refuses to explain his actions.
47.	He acts without consulting the group.

(e) Production - whether the squad or company commander applies pressure and is insistent on greater effort and goal-reaching.

Item Number	Statement
5.	He insists on overtime duties when he feels it necessary.
10.	He stresses being ahead of competing groups.
15.	He needles members for greater effort.
20.	He threatens members who are not keeping up with requirements.
25.	He insists that members do better work.
29.	He puts pressure on the members to work harder.
33.	He permits the members to slack off in their work.

Item Number	Statement
38.	He drives hard when there is a job to be done.
43.	He pressures the group to beat its previous record.
48.	He criticizes members who are not working.

(f) Responsibility - whether the squad or company commander delegates responsibility for decision making and duties to members of his unit.

Item Number	Statement
49.	He delegates authority to make decisions to members of his unit who are responsible for carrying out a task.
50.	He keeps careful check on how members carry out their duties.

2. Coercive Leadership Style

In order to develop a measure of coercive leadership style, the 50-item questionnaire was given to both samples of freshmen cadets and a principal components factor analysis was performed on the data. The factor containing the highest loading for the item - "He threatens members who are not keeping up with requirements" (Item no. 20) - was then located and other items also loading on the factor were identified. For inclusion in the scale, an item was required to have a minimum factor loading of .40 and to be at least twice as large as a loading on any other factor. The consequence of this criterion was a scale of Coercive Leadership Style composed of the following:

Item Number	Statement
3.	He allows the members complete freedom in their work.
4.	He is friendly and approachable
19.	He treats all group members as his equals.

Item Number	Statement
20.	He threatens members who are not keeping up with requirements.
31.	He is reluctant to allow the members any freedom of action.

3. Locus of Control Scale.

Rotter's Internal-External Control scale was derived from a 29-item questionnaire which measured the extent to which the respondent felt that he was able to control or manipulate the contingencies of his environment. High scores reflected an individual who felt he had control over his environment. Low scores, on the other hand, reflected an individual whose locus of control was perceived to be dependent on external factors.

All freshmen cadets completed the LBDQ based upon how they perceived their leader. In addition, all freshmen cadets and leaders were required to complete the Locus-of-Control scale.

Criterion Measure

The criterion measure was the Leadership Satisfaction Index which was the Supervision Scale of the Job Descriptive Index developed by Patricia Cain Smith at Cornell University. Instead of evaluating - "supervision on the job", the freshman was asked to evaluate the squad leader or company commander by indicating the presence of each of the following 18 items.

1. Asks my advice
2. Hard to please
3. Impolite
4. Praises good work
5. Tactful
6. Influential
7. Up-to-date
8. Doesn't supervise enough
9. Quick tempered
10. Tells me where I stand
11. Annoying
12. Stubborn
13. Knows job well
14. Bad
15. Intelligent
16. Leaves me on my own
17. Lazy
18. Around when needed

Results

(1) Cadet Satisfaction as a function of Perceived Leadership Style as measured on the Leader Behavior Description Questionnaire (LBDQ)

The means and standard deviations of the LBDQ and the Leadership Satisfaction Index for the two samples are given in Table 1.10. In addition the intercorrelated matrix for LBDQ and Leadership Satisfaction Index are presented in Table 1.11 for Sample A and Table 1.12 for Sample B. The multiple regression equations relating the LBDQ scales to Leadership Satisfaction for Sample A and Sample B are shown in Table 1.13.

From Table 1.13 it is apparent that the combination of predictors of leadership satisfaction in freshmen cadets for both samples were the scales of Consideration and Persuasion. Using a .05 level for inclusion into the equation, a backward multiple regression solution for the best combination of predictors yielded a R = .614 for Sample A and a R = .490 for Sample B. Interestingly, from Table 1.13, it may be seen that the magnitude of the beta-weights revealed that Consideration was slightly more important than Persuasion in both samples.

(2) Cadet Satisfaction as a function of Cadet Locus-of-Control and Perceived Coercive Leadership Style.

To assess whether freshmen cadets with low internal control would respond less negatively to coercive leadership style than high internal control cadets, analyses of variance were performed separately on the Satisfaction Index for Sample A and Sample B. The results of these analyses together with group means are presented in Tables 1.14 and 1.15 for Samples A and B, respectively.

The size of the Sample A allowed a 2 x 3 factorial design in which

Table 1.10

Means and Standard Deviations for the Leader Behavior Description Questionnaire (LBDQ) and the Leadership Satisfaction Index (LSI) for Sample A and Sample B Freshmen Cadets.

	Sample A (N=206)		Sample B (N=80)	
LBDQ	Mean	S.D.	Mean	S.D.
Persuasion	22.43	7.13	27.29	4.55
Structure	31.90	8.53	37.76	5.33
Freedom	31.07	7.25	35.53	4.73
Consideration	32.00	7.30	36.99	6.22
Production	30.26	8.72	34.08	6.23
Responsibility	5.83	1.38	6.18	1.06
LSI	39.94	8.44	44.63	7.23

Table 1.11

Correlational Matrix of Leader Behavior Description Questionnaire (LBDQ) and Leadership Satisfaction Index (LSI) for Sample A Freshmen Cadets. (N=206)

	Persuasion	Structure	Freedom	Consideration	Production	Responsibility	LSI
Persuasion	1.00	.74	.47	.66	.57	-.23	.52
Structure		1.00	.25	.42	.81	-.36	.35
Freedom			1.00	.67	-.07	.25	.40
Consideration				1.00	.13	.00	.59
Production					1.00	-.39	.16
Responsibility						1.00	.00
LSI							1.00

Table 1.12

Correlational Matrix of Leader Behavior Description Questionnaire (LBDQ) and Leadership Satisfaction Index (LSI) for Sample B Freshmen Cadets (N=80)

	Persuasion	Structure	Freedom	Consideration	Production	Responsibility	LSI
Persuasion	1.00	.70	.45	.56	.56	-.19	.43
Structure		1.00	.39	.41	.63	-.10	.25
Freedom			1.00	.75	.11	.13	.37
Consideration				1.00	.10	-.02	.44
Production					1.00	-.28	.22
Responsibility						1.00	.10
LSI							1.00

Table 1.13

Final Regression Equations and Multiple Correlations for Prediction of LSI from LEDQ Variables using Stepwise Regression Procedure with .05 significance Level for inclusion.

Sample A (N=206)

$$\hat{Y}_{LSI} = .430\ Z_{consideration} + .240\ Z_{persuasion}$$

$$R = .614$$

Sample B (N=80)

$$\hat{Y}_{LSI} = .284\ Z_{consideration} + .272\ Z_{persuasion}$$

$$R = .490$$

Table 1.14

Means and Summary of Analysis of Variance Performed on LSI scores for Sample A Freshman Cadets

Cadet Locus-of-Control	Coercive Leadership Style (CLS) High (5-15)	Medium (16-19)	Low (20-25)
Low (3-10)	39.10	42.72	41.78
High (11-21)	34.21	41.81	43.64

Source	SS	df	MS	F
LOC	50.10	1	50.10	
CLS	1256.23	2	628.12	10.69**
LOC x CLS	359.99	2	179.99	3.06*
Error	9694.43	165	58.75	

Table 1.15

Means and Summary of Analysis of Variance Performed on LSI scores for Sample B Freshmen Cadets

Cadet Locus-of-Control	Coercive Leadership Style (CLS) High (7-17)	Coercive Leadership Style (CLS) Low (18-25)
Low (1-8)	42.17	48.33
High (9-19)	41.17	46.17

Source	SS	df	MS	F
LOC	30.09	1	30.09	
CLS	374.09	1	374.09	7.05*
LOC x CLS	4.08	1	4.08	
Error	2281.68	43	53.06	

one independent variable was the Locus-of-Control Scale (high and low) and the other independent variable was Coercive Leadership Style (high, medium, and low). An analysis of variance performed on the Leadership Satisfaction Index scores (Table 1.14) reveals that the Coercive Leadership Style variable was statistically significant, $F(2,165)=10.69$, $p<.01$ as well as the Coercive Leadership Style X Locus-of-Control interaction, $F(2,165)=3.06$, $p<.05$. The Locus-of-Control variable was not found to be statistically reliable, $F<1$.

To assess the Coercive Leadership Style X Locus-of-Control interaction, Scheffé tests were performed between cell means and indicated that the low locus-of-control cadets (internally controlled) showed no significant differences ($p>.05$) in level of satisfaction between leaders with low, medium, and high coercive styles. Furthermore, no significant differences were detected between the low and high locus-of-control levels at each level of the Coercive Leadership Style variable. It was found that high locus-of-control (externally controlled) cadets were significantly more satisfied with low coercive leaders than high coercive leaders ($p<.01$) or medium coercive leaders ($p<.05$).

The small size of the Sample B prohibited a similar 2 x 3 factorial design and consequently a 2 x 2 factorial design was applied to Sample B. One independent variable was the Locus-of-Control of the freshmen cadet (high and low) and the other variable was the Coercive Leadership Style (high and low). The results of an analysis of variance performed on the Leadership Satisfaction scores (Table 1.15) indicated that Sample B freshmen cadets, regardless of their Locus-of-Control level, were more satisfied with low coercive leaders than high coercive leaders, $F(1,43)=7.05$, $p<.05$. The Locus-of-Control variable and the Locus-of-Control X Coercive Leadership Style interaction failed to achieve statistical reliability, $F<1$.

Table 1.16

Correlations between Sample A Leader Locus-of-Control and Cadet scores on the LBDQ scales and the LSI

	Correlation (N=33)
LBDQ Scales	
Persuasion	**-.13**
Structure	**.00**
Freedom	**-.12**
Consideration	**-.04**
Production	**.01**
Responsibility	**-.01**
LSI	**-.09**

(3). Relationship of Leader Locus-of-Control to LBDQ as Perceived by Freshman Cadets

Table 1.16 presents the correlations of Leader Locus-of-Control scores with the scales of the LBDQ and also the Leadership Satisfaction Index for the Sample A. It should be mentioned that the scores for the scales of the LBDQ and Leadership Satisfaction Index were mean scores of the particular group which selected that leader for evaluation. The groups varied in size from N=1 to N=9. A total of 33 leaders were included. Because of the small sample of leaders in Sample B, that data was not included in this analysis.

It may be seen from Table 1.16 that the Locus-of-Control for the Leader was not significantly related to any of the LBDQ scales nor to the Leadership Satisfaction Index. The correlation of -.13 for the Persuasion Scale would cast doubt upon the prediction that the leaders who were high on internal control will tend to rely more on a persuasive style than low internal control leaders.

Discussion

(1) Cadet Satisfaction as a function of Perceived Leadership Style

From the present data, it may be seen that the perceived leadership styles that were most instrumental in determining cadet satisfaction were Consideration and Persuasion. In casual interview with several cadets, this finding is not surprising. At military/college settings, the leader does not occupy a position which necessitates a great deal of planning, organization, and execution as would be the case in the military. The regulations and standard operating procedures within the Corps are well defined and a "good" leader is one "who stays off our back" and "lets us get our homework completed". He also doesn't "hassle us". In this spirit, the data are indicative of exactly what might be expected on a college campus.

A major question is whether these traits are sufficient to insure successful leadership in the actual military field setting. In conversation with retired military personnel, it has been remarked that the styles of persuasion and consideration are important but also the ability to adequately assess a problem and efficiently organize implementation for its solution. The potency of these latter abilities cannot be evaluated within the present data and remain speculative.

(2) Cadet Satisfaction as a function of Cadet Locus-of-Control and Perceived Leadership Style

The prediction that freshmen cadets with low internal control would react less negatively to coercive power than high internal cadets failed to be supported. The Sample A data indicate on the other hand, that low internal cadets are more satisfied with low coercive style than with either medium or high coercive style. With high internal cadets, the data indicate that

the extent of perceived coercive leadership style does not affect their satisfaction level.

Sample B yield results which indicate that regardless of Locus-of-Control level, cadets are more satisfied with low coercive leadership style.

(3) Relationship of Leader Locus-of-Control to Perceived LBDQ by Freshmen Cadets

The data do not support the prediction that leaders who are high in internal control will tend to rely more on a persuasive style than low internal control leaders. The nature of the leadership structure in Sample B allows a leader only six weeks with a particular squadron. Under these conditions, it is likely that the locus-of-control of the leader would not enter into the nature of leadership style since the low internal control leader would not need to utilize coercive means for power control over such a short duration.

Based upon the results obtained from both the laboratory and field studies of the present section, certain conclusions may be made concerning the reactions of subordinates to the use of coercive and reward power and to different leadership styles.

(1) The laboratory study indicated that subjects were more favorably disposed toward a rewarding than a coercing leader. This finding is in agreement with the field study finding that cadets were generally more satisfied with leaders who were perceived as less coercive in leadership style.

(2) For the laboratory study, the locus-of-control of the subordinate was found to be related to the performance measure but not to the satisfaction measure. To this end, internals were less responsive to the demands of the leaders than externals.

For the field study no differences in satisfaction were found between internals and externals. However, in one sample, externally controlled cadets were more satisfied with low coercive leaders than high or medium coercive leaders. In addition, internally controlled cadets failed to show differential satisfaction with various degrees of perceived coercive leadership.

In the other sample, the only significant finding was that regardless of the level of locus-of-control, cadet subordinates were more satisfied with low than high coercive leadership style.

(3) Finally, in considering those dimensions on the LBDQ which were most predictive of a cadet subordinate's satisfaction with leadership, the predominant areas were Persuasian and Consideration.

SECTION II

SELF- VERSUS GROUP-ORIENTED LEADERSHIP

McClelland (1970) in describing the "two faces of power" distinguishes between the positive and negative uses of power. The positive use of power is characterized by a concern for group goals in which power is exercised for the benefit of group members. The negative use of power, on the other hand, is characterized by the manipulation of group members for the satisfaction of the leader's personal needs or desires. The negative use of power has occasionally resulted in retaliation against the group leader by the group members; however, the more common consequences of negative uses of power are destructive though less dramatic. For example, Worchel and his colleagues (1967) is a study of South Vietnamese peoples reported that unjust decisions and corruption by those in authority were among the most important factors producing low commitment of the South Vietnamese to their government. Though it is obvious that the negative uses of power can arouse resentment in the group members, little is known of the personality factors that predispose a leader to use power for self-gain. Additionally, little attention has been given to possible personality factors which might moderate reactions of group members to the negative uses of power. Thus, the purpose of the present study was to evaluate the relationships between group-oriented and personalized uses of power and one personality factor, level of moral development (Kohlberg, 1958), which might influence the use of power by a leader and the reactions of group members to the uses of power.

The level of moral development as discussed by Kohlberg (1958, 1967, 1969b) is an invariant sequence of reasoning on moral problems through which individuals pass. Stage 1 of moral development is the punishment and obedience orientation. The consequences of action determine the goodness and badness of the action, regardless of the meaning of these consequences. Avoidance of punishment and

unquestioning deference to power are valued in their own right. Stage 2 is the instrumental relativist orientation. Right action consists of that which instrumentally satisfies one's own needs and occasionally the needs of others. At the conventional level, which includes the next two stages, maintaining the expectations of one's own family, group, or nation is perceived as valuable in its own right, regardless of immediate and obvious consequences. The attitude is not only one of conformity, but also includes an attitude of loyalty. Emphasis is upon actively maintaining, supporting, and justifying the social order and identifying with the persons or group in it. In Stage 3, good behavior is that which pleases, helps, or is approved by others. Stage 4 is made up of law-and-order orientation. Here the orientation is toward authority, established rules, and the maintenance of the social order. Right behavior consists of doing one's duty, showing that one respects authority, and maintaining the social order because it is the given social order. The post-conventional, autonomous, or principled level comprises Stages 5 and 6. At Stage 5 (the social-contract-legalistic orientation), right action tends to be defined in relation to general individual rights and with respect to standards that have been critically examined and agreed upon by the whole society. Although the legal point of view is accepted, the possibility of changing the law in light of what seems best for society is emphasized (this approach contrasts with the fourth stage, which accepts law as right and does not seek to change it). The highest stage of development, Stage 6, is the orientation of universal ethical principles. What is morally right is defined not by laws and rules of the social order but by one's own conscience, in accordance with self-determined ethical principles. The stages are conceptualized to be similar to those of cognitive development discussed by Piaget. The descriptions of the characteristics of moral reasoning

at some stages provides a basis for speculation that the level of moral development of an individual might determine his use of power or his reaction to the use of power. For example, Kohlberg has described the Stage 2 individual as possessing the instrumental relativist orientation for whom (at a level of reasoning) "... right action consists of that which instrumentally satisfies one's own needs and occasionally the needs of others. Human relations are viewed in terms like those of the market place. Elements of fairness, or reciprocity, and of equal sharing are present, but they are nearly always interpreted in a physical pragmatic way. Reciprocity is a matter of 'you scratch my back and I'll scratch yours,' not of loyalty, gratitude, or justice (Kohlberg, 1971, p 164)." In contrast, Kohlberg has described Stage 4 as the "law and order" orientation in which "... there is orientation toward authority, fixed rules, and the maintaining of social order. Right behavior consists of doing one's duty, showing respect for authority and maintaining the given social order for its own sake (Kohlberg, 1971, p 164)." The uses of such descriptions to predict behavior suggests that Stage 2 leaders would be more likely to use power in a personalized manner than Stage 4 leaders. On the other hand, given that a leader of a group represented a socially legitimate power figure, such descriptions suggest that Stage 4 group members would be less likely to react negatively to the personalized use of power by the group leader than would Stage 2 group members.

Elaboration of the moral development construct and experimental studies by several investigators have indicated that such a straightforward use of the stage descriptions does not result in accurate predictions of behavior (Rest, 1974). Rather the indications are that the relationships between moral development and behavior are both subtle and complex. A detailed reading of the theoretical

literature of moral development reveals such comments as the following:

> "Finally, what we are looking at is moral reasoning or moral judgment and not moral conduct, or conduct in general. We will not find out what a person would do in a certain circumstance but only what he thinks he should do in that circumstance. Of course the two things are related in one sense. But we all know that we do not always do what we should...What we are trying to get at is not the reasons why people do what they do but the reasons they think are moral for doing what they do. This can be an important distinction (Moral Education Project, Kohlberg and Turiel, 1971, p. 7)."

Also, "Kohlberg's framework does not require a relationship between moral reasoning and moral action. Theoretically, individuals at different stages can exhibit the same behaviors using different types of reasoning, whereas individuals at the same stage can exhibit different behaviors using the same type of reasoning (Kurtine & Grief, 1974, p. 459)."

Although any relationship between moral reasoning and moral action certainly cannot be direct, Kohlberg has indicated that a relationship between reasoning and action does exist. "The research cited in this section supports this contention, suggesting that reasoning and behavior are linked because mature moral action requires mature forms of moral thought as prerequisites. A particular kind of moral behavior becomes relevant only in the range of development where the child can have a reason or idea adequate to support moral action (Kohlberg & Turiel, 1971, p. 457)." Whereas psychologists typically prefer to predict task behavior from test behavior, other comments made by Kohlberg and Turiel indicate that it is easier to predict moral reasoning on tests from certain task behaviors. "That is, we cannot predict the later moral behavior of the adolescent who does cheat, but we can predict quite a lot about the moral behavior of the adolescent who does not cheat. The adolescent who consistently refrains from cheating on every available opportunity has acted upon mature moral judgment. In other words, he

has assimilated reasons not to cheat, indicating that he has reached an advanced level of moral maturity (Kohlberg & Turiel, 1971, p. 458)." Thus, both bases of predicting behavior using the moral development construct which have been discussed are uncertain and unwieldy procedures for predicting behavior. A key proposition of the present study is that there is a third alternative for predicting behavior using the moral development construct which has been implicitly present in previous discussions of moral development and which can be supported by evidence from previous studies. The central assertion of the present section is that the basic relationship between moral reasoning and behavior exists in the identity of the source of values to which an individual conforms. The postconventional or principled Stage 5 or Stage 6 individual as described by Kohlberg has internalized a set of values which are held to be valid and applicable in all times and places regardless of the prevailing conditions of specific situations or the presence or absence of socializing agents or authorities. The set of values articulated by a Stage 5 individual focuses on the society and the social contract as the reference for thought, whereas the Stage 6 individual articulates universal ethical principles as a reference for thought. The conventional Stage 3 or Stage 4 individual accepts the family, group, or nation as a reference for the articulation of values. The Stage 3 individual specifically demonstrates reasoning which focuses on approval from close others, where the Stage 4 individual focuses on the law of the land which must be upheld. Thus, at the conventional level, a set of individuals can be identified who act as authorities or representatives of the institutions upon which values are centered, even though these institutions may be relatively abstract entities in themselves.

The preconventional Stage 1 or Stage 2 individual focuses upon culturally accepted norms of right and wrong, but construes moral action in terms of the consequences of action or in terms of the rewarding and punishing power of socializing agents. Thus, the reference for moral action for the preconventional individual is the very concrete presence or absence of rewarding and punishing agents.

In summary, the range of sources of reference for moral action is from the presence or absence of specific individuals who reward and punish (preconventional level) through the presence or absence of representatives of an institution (conventional level) to highly abstract principles which are internalized and which require no external agent at all for enforcing conformity (postconventional level). Thus, one can argue, as Kohlberg (1969b, pp. 386-397) has, that in cases where counternormative or unprincipled action is possible and no socializing agents are present (or are not attentive if they are present) only the post-conventional subject will resist temptation or if counternormative or unprincipled action is demanded by an authority, then only the postconventional individual will refuse to obey the demand. The following citations from Kohlberg are illustrative of this point.

> "As an example, in the ordinary experimental cheating situations, the critical issue is whether to follow the norm when conventional expectations of the adult and the group are not upheld. The experimenter explicitly leaves the child unsupervised in a situation where supervision is expected. Not only does the experimenter indicate he does not care whether cheating goes on, he almost suggests its possibility (since he needs cheating for his study). While the conventional child thinks 'cheating is bad' and cares about supporting the authority's expectations, he has no real reason not to cheat if he is tempted, if the authorities don't care and if others are doing it. In contrast, a principled (stage 5 or stage 6) subject defines the issue as one involving maintaining an implicit contract with the adult and reflects that the general inequality or taking advantage implied by cheating is

> still true regardless of the ambiguity of social expectations in the situation. As a result, it is not surprising to find that principled subjects are considerably less likely to cheat than conventional or premoral subjects (p. 395)." Later, when discussing an evaluation of the levels of moral reasoning of subjects in the Milgram study, Kohlberg notes that 75% of the stage 6 subjects refused to conform to the demands of the experimenter in comparison to only 13% of the remaining subjects and says "... when fear of authority leads to strong temptation to violate conventional rules against hurting others, conventional subjects will comply (1969, p. 396)."

Thus, the specific proposal of the present paper is that if the moral development construct is truly a continuum, then the following hypotheses on conformity to authority may be made. Preconventional subjects would be most likely to violate norms if punishing agents were absent and would be most conforming if punishing agents were present. Conventional subjects would be less likely to violate norms in the absence of institutional representatives and somewhat less conforming to the demands of institutional representatives for the commission of counternormative behaviors when requested by a leader. Principled subjects would be least likely to violate norms either in the absence of or at the request of authority. An alternative but less discriminative proposal would be to dichotomize into postconventional versus conventional and preconventional subjects as Kohlberg seems to have done (see discussion above) and to argue that only postconventional subjects would be likely to resist temptation in the absence of socializing agents or would refuse to comply with counternormative demands of authority. Indeed, Saltzstein, Diamond, and Belenky (1972) have presented evidence which partially supports the present analysis. In a study of seventh grade students, Saltzstein et al found that Stage 3 subjects conformed most frequently, Stages 2 and 1 conformed next most frequently, and Stages 4, 5, and 6 conformed least frequently in an Asch-type conformity experiment.

In order to test the bases for predictions discussed in the present paper, an experiment was designed in which subjects' reactions to positive and negative uses of power were evaluated when the experimenter, as a socially accepted

authority, was present and condoned the actions of the leader whom he had appointed. The predictions based on the application of Kohlberg's descriptions of moral reasoning were that preconventional (stage 1 or 2) group members would react negatively to the personalized use of power, whereas conventional (stage 3 or 4) group members would be more accepting of authority-condoned personalized uses of power. Alternatively, the predictions based on the proposals of the present paper were that preconventional subjects would be most likely to accept counter-normative or personalized use of power by the group leader, whereas conventional subjects would be less accepting of such personalized uses of power.

An additional evaluation built into the experiment was designed to determine the degree to which preconventional and conventional leaders would use their power in a personal manner. Based on Kohlberg's descriptions of moral reasoning, it was predicted that preconventional leaders would be more likely than conventional leaders to use power to benefit themselves.

Method

Design and rationale. If the relationship between moral development and behavior is based on conformity to external authority versus conformity to internalized standards, then many types of ethical and normative behaviors can be predicted from a knowledge of the level of moral development. The present study was designed to assess the conformity of leaders to the strong norms of equity and equality in American society and to test the reactions of group members varying in level of moral development to normative and counternormative leader-behavior.

A 2 x 2 between-subjects design was used in which low principled and moderately-principled subjects were given feedback that their group leader had either distributed a bonus equally among all group members, including himself, (normative behavior) or had kept more than half of the money for himself and distributed the remainder equally among the group members (a counternormative behavior). Additionally, the actual distribution of bonus money by the group leaders was evaluated, thus, allowing both group leaders and group members to be assessed simultaneously.

Subjects. Male introductory psychology students were given the Defining Issues Test (Rest, 1974) for extra credit. From the tested pool of subjects, 83 subjects were brought into the lab for participation in a small group problem-solving study. Subjects were promised both extra credit and a chance to earn part of a monetary bonus for their participation. Subjects were classified and assigned to specific treatment conditions on the basis of their "P" scores on the Defining Issues Test which represent the extent to which subjects emphasize principled reasoning characteristic of postconventional individuals. The mean principled scores of subjects who participated in the study was 25.1 with a standard deviation of 6.7. The range of the principled scores was from 8 to 43.

The subjects were divided into two groups based on the mean. Thus, one group consisted of subjects with scores of 25 or lower and the second group consisted of subjects with scores of 26 or higher. These groups were designated low-principled and moderately-principled subjects, respectively, because the distribution of all subjects appeared to represent the lower one-half to two-thirds of the distributions which Rest (1974) has observed at midwestern and eastern universities.

Apparatus and procedure. The subjects reported to an experimental room which contained two tables placed together with seven chairs for the discussion phase of the experiment and six booths in which subjects received written feedback following the group discussion and in which they rated their leaders. The booths were constructed so that subjects could not see one another.

The subjects were assembled in groups of 5 or 7 which consisted of 3 or 4 subjects (subset 1) from one principled level and 2 or 3 subjects (subset 2) from the second principled level, respectively. Prior to the arrival of the subjects, the experimenter randomly selected one of the subjects in the Subset 1 to be the group leader, and he also filled out bogus Bonus Distribution Sheets in which one half or two thirds of the subjects within each subset received information that the leader had distributed the bonus equally to all members including himself, whereas the remaining subjects received information that the leader had kept half of the bonus for himself and had distributed the remaining money equally to all other group members.

When the subjects arrived at the experimental room, they were read the following instructions:

> We are studying the processes by which groups make decisions and the ways in which leaders and followers interact. Therefore, this experiment involves group discussion and decision-making as its basic task. You will be discussing a problem relating to lunar exploration. In order to proceed most efficiently, we need to appoint a leader for your group. _____ will you please be the leader for this group? [After the chosen subject accepted leadership, the

experimenter handed out sheets describing the NASA problem, which is shown in Appendix 2.1. The experimenter then explained the problem and added the following instructions.] In order for this experiment to take on a more lifelike character in terms of potential consequences as made in business, industry, or government, we are adding a payoff or bonus of $__.00 which is intended to simulate consequences of real life decisions. [The bonus to be distributed was based on $1.00 for each group member including the group leader. An appropriate figure was reported in the blank spaces.] It is the responsibility of your leader to keep the discussion orderly, to see that all group members have their chance to speak, and to make sure that the group reaches a consensus decision within the time limit of 20 minutes which has been set. At the end of this 20 minute period, your leader will make a decision as to how the $__.00 bonus will be distributed among you and what part of the bonus he shall keep. Are there any questions?

The experimenter answered all procedural questions, recorded the time, and told the leader to begin.

When the group had reached a consensus decision or at the end of 20 minutes, whichever came first, the experimenter took the leader to the experimenter's desk and gave him a number of Bonus Distribution Sheets (shown in Appendix 2.2) which were separated by carbon paper. The experimenter explained to the leader and to the group members that the leader was going to distribute the money by writing down his bonus assignments. The group members were placed in cubicles and were asked to wait until the leader had assigned the money. When the leader completed his assignment of the money, he was escorted into the hallway where he was asked to wait until the experimenter returned. The experimenter then went back to the room and replaced the leader's bonus distribution sheets with his own prearranged feedback. The experimenter gave his own sheets to the group members along with a Group Participation Questionnaire (shown in Appendix 2.3) and instructed the subjects that they could take the bonus distribution into account in evaluating the leader. The group members were additionally instructed to place an "L" (in question 2) before the name of the person they would most like to have as a group leader in a new group. When all group members had completed their evaluations, the experimenter brought the leader back into the room, debriefed all of the subjects together and asked them not to tell others about the experiment.

The experimenter then gave each subject $1.00 and had each sign a receipt for the money and let them go.

Results

Distribution of money by the appointed group leaders. An evaluation of the money kept by the group leaders for themselves revealed that all leaders (n = 15) except two kept $1.00 and gave $1.00 to each of the group members. The exceptions were that one low-principled leader kept $1.15 and one moderately-principled leader kept $1.40. Thus, there were no reliable differences in personalized use of power as a function of the level of moral development of group leaders.

Reactions of the group members. The reactions of group members to the leaders were assessed three ways. First, the subjects were asked how they would distribute the money if they had been the leader. A 2 x 2 analysis of variance of the amount of the money given by group members to the group leaders did not reveal a main effect of moral reasoning, but did reveal a main effect of leader's distribution ($F = 4.37$, $df = 1, 64$, $p < .05$) in which group members whose leader kept half of the bonus gave more money to their leaders than did group members whose leaders shared equally. Additionally, a Moral Reasoning by Leader's Distribution interaction was observed ($F = 5.13$, $df = 1, 64$, $p < .05$). An evaluation of the interaction by Duncan's New Multiple Range Test indicated that low-principled subjects whose leader kept half of the bonus gave their leader reliably more money than any other group. Means and standard deviations of the amounts of money are shown in Table 2.1.

A second assessment of reactions to the leader's behavior was made by observing whether subjects voted to keep the same leader again for a new problem. A summary of the votes is shown in Table 2.2. Several X^2 tests for two independent samples in which comparisons relevant to the hypotheses were made failed to reveal any reliable differences as a function of moral reasoning, leader's

Table 2.1

Money Given to Group Leaders by Group Members

	Leader Kept Half	Leader Shared Equally
Low Principled Subjects	$1.29 ± .45	$1.00 ± .00
Moderately Principled Subjects	$1.07 ± .16	$1.08 ± .26

n=17 per cell

Table 2.2

Summary of Votes For Leadership

During A New Problem

	Keep Same Leader	Want New Leader
Low principled		
Leader kept half of bonus	**3**	**14**
Leader shared equally	**7**	**10**
Moderately principled		
Leader dept half of bonus	**6**	**11**
Leader shared equally	**8**	**9**

distribution, or combination of the two variables.

A third evaluation of group member's reactions was undertaken by asking subjects to rank their fellow group members in order from the one with whom they would most like to work again to the one with whom they would least like to work again. A summary of the data with respect to ranking of the old leader is shown in Table 2.3 with the data dichotomized for the X^2 test to show whether the leader was ranked upper third or below the upper third. Several X^2 analyses were done with the only reliable difference being for leaders who kept half of the money to be ranked below the upper third more frequently than leaders who shared equally ($X^2_{(1)} = 6.07$, $p < .02$).

Discussion

The tendency for group members to give money to their leaders when the bonus distribution sheets indicated that the leader had kept half of the bonus for himself than when he had shared the bonus equally with all group members indicated that both low and moderately principled subjects supported the negative or personalized use of power by a group leader when the group leader was an appointee of the experimenter who condoned the activity of the group leader. Although the group members whose leaders used power for personal gain supported their leaders by giving their leaders more money than did group members who were treated equitably, the group members in the two different conditions did not differ in the frequency with which they voted to keep the leaders for a new experiment. The group members who were treated inequitably did, however, place their leaders in the low two thirds of the rank order of preferred coworkers more frequently than did group members who were treated equitably. Thus, the data supported the hypotheses proposed in the analysis of the present paper as opposed to the predictions based on the descriptions of moral reasoning presented by Kohlberg (1971). The fact that low principled group members gave more money to their leaders who had kept

Table 2.3

Ranking of Leader For Participation In A New Group

	Ranked in upper third	Ranked below upper third
Low principled		
Leader kept half of bonus	**6**	**11**
Leader shared equally	**14**	**3**
Moderately principled		
Leader kept half of bonus	**9**	**8**
Leader shared equally	**11**	**6**

half of the money than did moderately principled subjects supported the usefulness of distinguishing between low, moderate, and high principled subjects rather than simply dichotomizing into unprincipled and principled subjects.

Although the data of the present experiment are consistent with and support the hypotheses proposed in this paper, it is clear that strong support for the proposals of this paper is yet lacking, because several implications of the present analysis have yet to be tested. For example, it will be necessary to seek out highly principled subjects to be included in the experiments to confirm that principled subjects do act independently of authority and do not conform as easily to the negatively or personalized use of power as did moderate and low principled subjects. Additionally, it will be necessary to the test the prediction that if the experimenter does not condone the action of the leader or if the group members themselves elect the leader, then neither the low or moderately principled subjects would accept the personalized use of power. It could further be predicted and must be tested under the present proposal that low and moderately principled leaders might be much more likely to use the power for self-gain if the experimenter as a legitimate power either encourages such use of power or places himself in a position where he would not learn about the leader's response. This latter possibility would be especially enhanced, it is predicted, if the leader was also physically isolated from his group members. Such a situation is analogous to the chain of command of the military in which some military leaders make decisions for people they never see directly.

The purpose of the future studies will be to further test the implications of the analysis proposed in the present paper. Such progress is currently expected to occur through a redesigning of the proposed experiments remaining to be run as part of the current project, so that where possible the already existing predictions can be contrasted to the predictions of the present analysis.

Appendix 2.1

NASA Exercise

NAME_____

GROUP_____

DECISION FORM

Instructions: You are a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Due to mechanical difficulties, however, your ship was forced to land at a spot some 200 miles from the rendezvous point. During re-entry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200 mile trip. Below are listed the 15 items left intact and undamaged after landing. Your task is to rank order them in terms of their importance in allowing your crew to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important, and so on through number 15, the least important.

_____ **Box of matches**

_____ **Food concentrate**

_____ **50 feet of nylon rope**

_____ **Parachute silk**

_____ **Portable heating unit**

_____ **Two .45 calibre pistols**

_____ **One case dehydrated Pet milk**

_____ **Tow 100 lb. tanks of oxygen**

_____ **Stellar map (of the moon's constellation)**

_____ **Life raft**

_____ **Magnetic Compass**

_____ **5 gallons of water**

_____ **Signal flares**

_____ **First aid kit containing injection needles**

_____ **Solar-powered FM receiver-transmitter**

APPENDIX 2.2

Bonus Distribution Sheet

Please indicate how much of the $_____ you wish to keep for yourself and how much you wish to give to each of the group members.

1.

2.

3.

4.

5.

6.

7.

APPENDIX 2.3

Group Participation Questionnaire

Instructions: Please indicate your feelings about your group experience on the questions below.

1. If you were responsible for dividing the bonus, how much would you give to each member of the group?
   1. (leader)
   2.
   3.
   4.
   5.
   6.
   7.

2. For the next group problem, we may not be able to use all of the individuals who participated with you in the present experiment. Please rank the members of your present group in order, such that the person you list first is the one with whom you would most like to work again and the person you list last is the one with whom you would least like to work again.
   1.
   2.
   3.
   4.
   5.
   6.

3. How important do you feel your contribution to the present group was in comparison to that of other group members?
   _____ My contribution was more significant than that of other group members.
   _____ My contribution was equal to that of other group members.
   _____ My contribution was less significant than that of others.

SECTION III

INTERPERSONAL TRUST AND THE DELEGATION OF AUTHORITY AND RESPONSIBILITY

In any task-oriented group, the leader with or without the participation of members (or of lower echelon units in hierarchiacal organizations) establishes plans for the achievement of objectives. The next step is to organize the group in such a way that the tasks to be undertaken are accomplished at the least cost to the unit. If one man can do the job, then no organization is required. On the other hand, if a number of men are needed, then someone has to combine and relate all the members into an effective working team. Three basic relationships are involved in the process of organizing, namely, responsibility, authority, and accountability (Flippo, 1966). The leader's ability to develop these relationships often spells the difference between the success and failure of a mission. The purpose of the experiments in the present section is to assess the significance of interpersonal trust on the part of the leader in the delegation of responsibility and authority.

"Responsibility is defined as the obligation to execute functions or work (Flippo, 1966, p. 121)." The source for assigning responsibility is the leader or manager of the organization. Delegation only allows for someone else to do the task; it does not relieve the leader of any portion of the original responsibility. Thus, delegation creates a risk for the leader. He is ultimately responsible for the outcome of an operation. As a result, some leaders avoid the risk of refusing to assign responsibility and perform all the tasks themselves. Though the job may be considerable in lowered morale, apathy, and even hostility reflected in such behaviors as obstructionism, sabotage, and withdrawal. Others believe that they assign responsibility but their actual

behaviors are perceived differently by subordinates. Mann (1954) in a study of a large utility reported a frequency of 48 per cent from supervisors in the response "very often" in giving more responsibility as recognition for good work while the employees responded only with 10 per cent in the same category. Apparently supervisors "know" the appropriate answer but have difficulty in implementing their knowledge in practice. It is hypothesized that reluctance in delegating responsibility to others is probably due to the leader's distrust that others will do the job as well as he expects. The typical rationalization of such leaders is that "If you want the job done well, do it yourself."

Along with responsibility, one must feel that he has the authority to make decisions, to command, and to perform the required functions. As Flippo suggests, "Since authority is a derivative of responsibility, its division should be along the same lines. This is made evident in a widely accepted basic guide, the concept of 'parity of responsibility and authority'. This guide indicates that a delegation of responsibility should carry with it a commensurate amount of authority to allow for its fulfillment. If one has an obligation and no legal justification for it, certain obvious difficulties would ensue. The concept as stated is a truism. Yet one of the most common complaints of first-level supervisors is that they have more responsibility than authority (1966, p. 127)." Reluctance to delegate authority is probably due, among other factors, to the fear of loss of power by the leader. Trust is also involved in the willingness to delegate authority. The leader may not have confidence in the ability of the members of his unit to make the "best" decisions. Also, subordinates differ in their readiness to accept responsibility

and authority and to participate in the decision-making process. Tannenbaum (1954) found that the orientation of about one-sixth of the employees involved in the participative program of an experiment was toward dependent rather than participative behavior, and these workers reacted adversely to the sudden substantial increase in participation in decisions about their work. Vroom (1960) reported that workers who were more authoritarian responded less favorably to participation while those who had great "need for independence" reacted more favorably. Thus, an individual's response to an act by his supervisor will be conditioned by the individual's personality, interpersonal skills, and expectations.

The studies reported in this section center upon the role which interpersonal trust plays in a leadership setting. Study I was a laboratory experiment which specifically investigates the relationship between interpersonal trust and the delegation of responsibility.

Study II was a field study performed with cadet leaders and cadet subordinates in university settings. The basic questions which were investigated were:

(1) Will the cadet subordinate's satisfaction and perceptions of leader behavior be related to the interpersonal trust level of the cadet leader and/or the interpersonal trust level of the cadet subordinate?

(2) Will cadet satisfaction with cadet leaders vary as a function of the cadet subordinate's perception of the leader's delegation of freedom and responsibility and the cadet's locus-of-control.

STUDY I

INTERPERSONAL TRUST AND DELEGATION OF RESPONSIBILITY: A LABORATORY STUDY

Rotter (1971) has stated that the entire fabric of our day-to-day living rests on trust in that nearly all of our decisions involve trusting someone, whether we are making a purchase, going to a doctor, or eating in a restaurant. In Rotter's research, trust is viewed from the perspective of social learning theory (Rotter, 1954) and is defined as "an expectancy held by an individual or a group that the work, promise, verbal or written statement of another individual or group can be relied upon (Rotter, 1967, p. 651)". A key concept in understanding interpersonal trust is the concept of expectancy. Expectancy has been defined as "a subjective probability or contingency held by the individual that any specific reinforcement or group of reinforcements will occur in any given situation or situations (Rotter, Chance, & Pahres, 1972, p. 24)". A distinction is made between generalized and specific expectancies. Specific expectancies refer to subjective probabilities produced by experiences in specific situations involving reinforcement, whereas generalized expectancies are subjective probabilities for the same or similar reinforcements to occur in other situations for the same or functionally related behavior. Generalized expectancies develop when one experiences repeated response-reinforcement contingencies in similar situations (Rotter, 1954). Generalized expectancies are the sole determinants of expectancy when an individual is placed in a novel situation (Schwarz, 1972). Thus, interpersonal trust is a generalized expectancy and asserts that high trusting individuals tend to believe that others will follow through on their statements, even though the others are not known to them.

In an effort to provide a method of studying individual differences in levels of interpersonal trust, Rotter (1967) developed a theoretically based measure of interpersonal trust called the Interpersonal Trust Scale (ITS).

Rotter sampled a wide variety of social objects in such a way that the high scoring or high trusting person was required to express a generalized trust of parents, friends, politicians, physicians, teachers, and others (Rotter, 1967). Since the publication of the ITS in 1967, there have been numerous research studies which have used the ITS in investigations of trust. Many of these studies have attempted to establish the validity of the scale (e.g., Fitzgerald, Pasewark, & Noah, 1970a, 1970b; Kaplan, 1973; Pasewark, Fitzgerald, Sawyer, & Fossey, 1973; Rotter, 1970; Sawyer, Pasewark, Davis, & Fitzgerald, 1973; Schlenker, Helm, & Tedeschi, 1973). Other studies have used the scale to investigate the relationship between trust and self-disclosure (e.g., MacDonald, Kessel, & Fuller, 1972; Vondracek & Marshall, 1971). Investigations of the relationship between interpersonal trust and belief in the Warren Commission Report (Hamsher, Geller, & Rotter, 1968) and the Walker Report on the democratic convention disorders (Lotsof & Grot, 1973) have also been conducted. One study related interpersonal trust to students' attitudes toward colonialism (Alker, 1971). Other studies have compared levels of interpersonal trust of college students over a six-year period (Hochreich & Rotter, 1970), trust scores of college students and their parents (Katz & Rotter, 1969), trust and academic achievement (Massari & Rosenblum, 1972) and trust and two types of externals as measured by the Rotter (1966) Internal-External Locus of Control Scale (Hochreich, 1974). Still other studies have focused on trust and birth planning (Fischer, 1972), trust and altruism in college women (Walker & Mosher, 1970), trust and orientation to seeking professional help (Fischer & Turner, 1970), and trust and activism in black and white college students (Switkin & Gynther, 1974).

Although a large amount of research involving the Rotter Interpersonal Trust Scale has been generated in recent years, little of this research has related trust to interpersonal behaviors. It seems logical that if the ITS

can be used to assess individual differences in trust and if these differences could be used to predict differential behavior patterns, then a useful tool would be available to both researchers and others who might need to predict behavior of individuals in industrial, business, social, or governmental organizations.

Specifically, interpersonal trust might be an important construct to consider when attempting to understand and predict the outcome of group processes. A survey of the literature on trust as a broader concept than as defined by Rotter does reveal that trust influences a wide range of communication behaviors which would, in turn, influence the group process. For example, high trusting has been associated with group accomplishment, group dynamics, and organizational change (Friedlander, 1970), cooperative behavior (Loomis, 1959), and efficient problem solving by a group (Zand, 1972). Recent studies have shown that low trusting is related to the distorting or withholding of information when passed from one individual to another (O'Reilly & Roberts, 1974), and to aspects of communication of messages in an organization (O'Reilly & Roberts, 1975).

If a group is task-oriented and has a leader, the task is usually accomplished by the establishment of objectives and the organization of the group for the most expedient completion of the group's task. If more than the leader is needed to complete the task, the process of organization will involve three basic relationships: responsibility, authority, and accountability. The group's effectiveness is related to the leader's ability to develop these relationships (Flippo, 1970, 1971). Thus, the manner in which the group leader delegates and the group members accept responsibility is an important element of the group process, and an investigation establishing the relationship between interpersonal trust and the leader's delegation of responsibility would be useful in predicting group success.

In the psychological literature there is an abundance of articles which have dealt with both the theoretical implications of responsibility and the experimental investigations of the concept. Responsibility has been construed as meaning causality, legal accountability, and moral accountability in these previous studies. However, the concept of responsibility can also be viewed in other ways. In line with the preceding introduction, Flippo's definition of responsibility as "the obligation to execute functions or work (Flippo, 1970, p. 151)" was selected for this study. Under this definition, a relationship based on obligation between the group leader and group member is created when the group leader delegates responsibility to the group member. By such delegation of responsibility the group leader does not relieve himself/herself of any portion of the original accountability but only allows for someone else to assist by physically executing the task (Flippo, 1970). Thus, delegation of responsibility involves risk and implies trust.

The purpose of the Study I was to assess the relationship between interpersonal trust and the delegation of responsibility. The methodology used was adapted from that of earlier research of O'Reilly and Roberts (1974) who evaluated some of the processes by which information is selectively filtered before it is transmitted to others. One variable shown to be related to the total amoung of information passed from one individual to another and to the types of information passed was trustworthiness of the individual to whom the information was to be passed. The passing of information may be viewed as the delegation, because in the O'Reilly and Roberts' method, subjects were to be held accountable for outcomes of their group members' work but were to pass information to group members who were to complete the job.

The demonstration by O'Reilly and Roberts that the passing of information is influenced by the trustworthiness of the person to receive the information allows for the design of a methodology in which reactions to both specific and

ambiguous situations can be assessed. This is particularly important because generalized expectances as conceived by Rotter are maximally operative under ambiguous circumstances. However, in order to demonstrate that the experimental materials and procedures used are sensitive, it is necessary to show that subjects across all groups can respond appropriately to differences in the treatments. Thus, a treatment condition in which the behavior of all subjects can be accurately predicted is highly desirable. The use of manipulation of trustworthiness as one cell of the design of the present experiment allowed for the utilization of specific expectancies by all subjects and allowed a replication of previously existing work to demonstrate that the procedure, as adapted, was potent. The design of the experiment was a 2 x 2 between subjects design in which high and low interpersonal trust subjects were asked to role play a senior partner in a law firm and were to decide whether to delegate items to members of their staff or whether to keep the items for themselves for investigation. In the specific expectancy condition, information was given about the trustworthiness of the members of the staff and about the nature of the items in the case. In the ambiguous condition, neither information about the staff other than their roles nor about the relationship of the items to the case was given. It was predicted that subjects high in interpersonal trust would delegate more items to their staff in the ambiguous condition than would low interpersonal trust subjects and that no differences would be observed between the interpersonal trust groups in the specific condition. It was further predicted that all subjects, in the specific expectancy condition, would assign more items to the staff member who was identified as being trustworthy than to be the staff member identified as having made errors of judgment.

Method

Subjects. Male and female undergraduate students enrolled in Psychology

of Personality classes at Virginia Polytechnic Institute and State University served as subjects. A total of 175 students completed the questionnaires used to create eight different treatment conditions, only two of which were relevant to the hypotheses of the present study. High trust subjects were identified as those whose trust scores were at or above the 70th percentile, whereas low trust subjects were those whose trust scores were at or below the 30th percentile. Using these criteria, ten high and ten low trust individuals were identified in each of the expectancy conditions. The mean interpersonal trust score of the 20 high trusters was 77.9 with a range of 20 (72 to 92), and the mean score of the 20 low trusters was 58.1 with a range of 21 (43 to 64).

Within the sample of 40 subjects, in the two treatment cells of the present study, 25 were females and 15 were males. The proportion of females to males was representative of the total class present on the day the study was conducted in each of the classes. The numbers of male and female subjects in the different treatment cells did not differ significantly.

Questionnaires and procedure. In the specific expectancy condition, information as to the relevance of the items for the case and as to the role and capabilities of the staff were given. To make the conditions of item relevancy as appropriate and realistic as possible, eighteen raters were used to categorize 60 initial items. Each rater was given specific instructions to code the item on dimensions which were clearly defined for the raters. Eight of the raters independently judged items on the basis of favorable and irrelevant, while ten raters independently judged items to be important, unimportant, or irrelevant. In order for an item to be included in a given classification, at leaast 70 percent of the raters had to agree on that classification. Also, for an item to be included as a separate category, the item could not overlap another category. Only 37 of the 60 items met these criteria. Samples of the items are shown in Table 3.1. Staff differentiation was achieved

Table 3.1

Sample of Items Which Could Be Delegated

To Staff With Classification

1. **I first came into contact with Mr. X in March 1960 at which time he was convicted of petty larceny (shoplifting) and placed on probation. (unfavorable item).**

2. **On his first conviction of petty larceny, Mr. X was released to the custody of his parents. (unimportant item).**

12. **Mr. X enjoyed playing softball and table tennis while at the detention center. (irrelevant item).**

14. **Mr. X was always polite, never made noise, and was always willing to help me or anyone else who needed help. I believed he would have done anything in the world for me. (favorable item).**

20. **I didn't hear Mr. X say anything for about ten minutes, but that other guy just kept on yelling almost as if he wanted Mr. X to say something so he could start a fight. (favorable-important item).**

25. **Mr. X was carrying something in his hand and it looked a lot like a knife. (unfavorable-important item).**

by identifying the role of a staff member and then by briefly describing this individual. One member was described as "a recent law school graduate who lacks experience." A second was described as "a legal aide who has been known to make errors of judgment." And the third was "a legal researcher who is highly skilled and competent." The legal researcher was the highly trustworthy character for whom the predictions were made.

In the ambiguous condition, the items were given without the ratings of relevance or importance to the case. The staff were simply identified as a recent law school graduate, a legal aide, and a legal researcher.

At the beginning of the experimental session, the experimenter randomly distributed envelopes containing instructions, the experimental test booklet containing the case history and 37 items, the California F Scale, the Interpersonal Trust Scale, and a semantic differential to the subjects. The subjects were instructed to complete the materials in the order given in the envelopes. Thus, all subjects were unidentified to the experimenter by treatment condition or personality when the study was run.

The experimental instructions informed the subjects of the importance of decision making processes in society. Since the legal system involves various types of decisions, the subject was asked to imagine that he/she was a senior partner in a law firm. He/she was informed that the law firm had recently obtained an interesting case and was asked to handle the case study. The subject was also informed that as with many law firms, he/she had a staff available to whom various aspects of the case could be assigned for further investigation. These aspects were the 37 items. The task of the subject was to decide which items, if any, should be investigated by the staff and which he/she should investigate himself/herself. The staff and items were identified with instructions appropriate to the treatment condition.

After the subjects had completed the experiment, they were completely debriefed at which time all questions about the study were answered.

Results

The total number of items subjects delegated to others were analyzed in a 2 x 2 between-subjects ANOVA. A main effect of treatment expectancy was observed ($F = 6.17$, $df = 1, 36$, $p < .025$) in which more items were delegated to others in the specific expectancy condition where staff and nature of items was identified than in the ambiguous condition where nothing was identified. Neither a main effect for personality nor an interaction were observed. Thus, the hypothesis that high trusters would delegate more items than low trusters under ambiguous condition was not confirmed. The means and standard deviations of the total numbers of items delegated and summary table of the analysis of variance are shown in Tables 3.2 and 3.3, respectively.

The assignment of items to individual staff members was also analysed in order to evaluate the hypothesis that all subjects in the specific expectancy condition would delegate more items to a trustworthy staff member than to an untrustworthy one. Because the assignment of an item to one staff member influenced the assignment of that item to another staff member, an analysis of variance was not possible on this data. Therefore, the data were analyzed in a three dimensional χ^2 contingency table (Winer, 1962) as frequencies of subjects who had delegated more items to the trustworthy than untrustworthy staff member or more items to the untrustworthy than to the trustworthy staff member. A three-way interaction between expectancy condition, personality, and pattern of vote was the only reliable effect ($\chi^2_{(1)} = 8.21$, $p < .01$). Subsequent analysis of the specific expectancy condition revealed that high trusters delegated more items to the untrustworthy member than the trustworthy member whereas, low trusters delegated more items to the trustworthy member than the untrustworthy

Table 3.2

Means and Standard Deviations of the Total Numbers of Items Delegated

	Ambiguous Information Condition		Specific Information Condition		Overall	
	Means	SD	Means	SD	Means	SD
High Trusters	24.0	4.7	25.6	2.3	24.8	3.5
Low Trusters	19.7	7.6	26.4	4.0	23.1	5.8
Overall	21.9	6.2	26.0	3.2		

Table 3.3

Summary Table of the Analysis of Variance

For Total Numbers of Items Delegated

Source	df	Mean Square	F-ratio
Expectancy	1	172.22	6.17*
Trust	1	30.63	1.10
Expectancy x Trust	1	65.02	2.33
Error	36	27.91	

* $p < .025$

member ($\chi^2_{(1)} = 5.05$, $p < .05$). A similar analysis to check the distribution in the ambiguous condition revealed no significant difference. Thus, contrary to prediction, personality influenced the delegation of responsibility in the specific expectancy condition. The frequencies of patterns of assignments to the legal researcher (trustworthy) and legal aide (not trustworthy) and a summary table of the three-dimensional χ^2 analysis are shown in Tables 3.4 and 3.5, respectively.

Discussion

The results revealed a series of facts which had not been expected. First, high trust subjects did not delegate more responsibility in terms of numbers of items in the ambiguous condition than did low trusters. Thus, the hypothesis derived from social learning theory was not supported. Interestingly, subjects, regardless of personality, were more willing to delegate responsibility in the condition in which some information about the staff was known than in the no information condition.

The second and unexpected result was that interpersonal trust did moderate delegation of items to staff members in the specific expectancy condition. In this condition, low trusters performed as it was predicted that all subjects would perform, i.e., they delegated more responsibility to a trustworthy staff member than to an untrustworthy one; whereas, high trusters delegated more responsibility to an untrustworthy staff member than to a trustworthy one. Thus, it appears that one meaning of interpersonal trust as conceptualized by Rotter is not that the high truster risks more under ambiguous circumstances, but rather risks more when it is clear that one is dealing with an untrustworthy person.

The data bear an interesting correspondence to data of Garske (1975). Garske evaluated high and low trusters' cognitive complexity for positive and negative social stimuli and found that low trusters showed reliably greater cognitive

Table 3.4

Frequencies of Patterns of Assignment of Items to the Legal Researcher and Legal Aide

	Ambiguous Information Condition		Specific Information Condition	
	More items to legal researcher (no information)	More items to legal aide (no information)	More items to legal researcher (trustworthy)	More items to legal aide (untrustworthy)
High Trusters	8	2	3	7
Low Trusters	4	6	8	2

Table 3.5

Summary Table of the Three-Dimensional Chi-Square Analysis of Patterns of Delegation of Item as a Function of Information and Interpersonal Trust

Source	df	Chi-Square
Total	4	8.41
Information by Pattern	1	.10
Information by Trust	1	.00
Pattern by Trust	1	.10
Information by Pattern by Trust	1	8.21 *

* $p < .01$

complexity for both positive and negative social stimuli, thus indicating that low trusting expectancies might not be as maladaptive as they were once thought to be. The data of the present study substantiated this position by showing that high trusters failed to respond to statements indicating that a staff member was untrustworthy and indicated that the possession of a high trusting expectancy might easily lead to counterproductive behaviors. Thus, the positive social value attached to high trusting expectancies are further challenged by the data of the present study.

In summary, the present study demonstrated that the interpersonal trust construct best predicted behavior under conditions of specific expectancies and not at all, contrary to prediction, under ambiguous conditions. When staff members were described as experienced and reliable or as having made errors of judgment, high trusters defied common sense and delegated more items to the person having made previous errors than to the person described as reliable and trustworthy. The data supported Garske's (1975) conclusion that low trusting might lead to more adaptive behavior than high trusting.

STUDY II

INTERPERSONAL TRUST AND THE DELEGATION OF AUTHORITY AND RESPONSIBILITY: A FIELD STUDY - PART I

On the basis that interpersonal trust is a generalized expectancy that should pervade a leader's behavior toward subordinates, Study II represented a field study designed to determine which of the perceived leader behavior dimensions of the Leader Behavior Description Questionnaire (LBDQ) would be related to the interpersonal trust of both college military cadet leaders and/or their cadet subordinates. Using 43 cadet leaders and 153 freshmen cadets from two southern universities, it was expected that cadet leaders who were high in interpersonal trust should be perceived by their subordinates as being more considerate and more tolerant of freedom than cadet leaders who were low in interpersonal trust.

Since it has been demonstrated that attitudes and perceptions toward leaders are determined not only by the personality characteristics of the leader but also the personality characteristics of the subordinates (Foa, 1957; Vroom, 1959), an additional aim of the study was to examine whether the subordinate's satisfaction and perceptions of the leader would be related to the interaction of leader interpersonal trust and subordinate interpersonal trust.

Method

Subjects. The cadet subordinates were 153 college freshman enrolled in military cadet programs at two southern universities. The cadet leaders were enrolled in the same programs. Of an original sample of 293 freshmen cadets, 39 returned incomplete questionnaires and 101 were discarded because their cadet leaders failed to complete the questionnaires. Of an original sample of 58 cadet leaders, 43 returned usable questionnaires.

Procedure. The cadet leaders and cadet subordinates were administered the

Rotter Interpersonal Trust Scale (Rotter, 1967, 1971) which consisted of 40 statements, each rated for agreement on a 5 point graphic basis. According to Rotter, the scale reflects the degree of generalized trust that an individual has in political, social, and economic institutions.

In addition to the trust scale, cadet subordinates were administered a modified version of the Leader Behavior Description Questionnaire (LBDQ) (Stogdill, 1973). The dimensions of the LBDQ which were used were Persuasion, Initiating Structure, Freedom, Consideration, and Production. The Persuasion scale consisted of 8 items which indicated the degree to which a leader is perceived as using persuasion and argument effectively. The Structure scale consisted of 10 items which reflected the degree to which a leader is perceived as clearly defining his own role and letting subordinates know what is expected of them. The Freedom scale consisted of 10 items indicating the degree to which leader is perceived as allowing freedom of initiative, decision and action. The Consideration dimension was a 10 item scale that indicated the degree to which leaders are perceived as having regard for the comfort, well-being, status, and contributions of their subordinates. Finally Production consisted of 10 items indicating the degree to which the cadet leader applies pressure and is insistent on greater effort and goal-reaching.

The cadet subordinates also indicated the level of satisfaction with their leaders by completing the Supervision Scale of the Job Descriptive Index (JDI) obtained from Patricia Cain Smith of Bowling Green University. Instead of evaluating "supervision on the job", the cadet subordinates were asked to evaluate their cadet leader. The JDI scale required that the cadet subordinates rate the leader on an 18 item adjective check-list.

The experimental design consisted of a 3 x 3 factorial in which leader interpersonal trust (low, medium, high) was combined with subordinate interpersonal

trust (low, medium, high). The cut-off scores for defining the levels of interpersonal trust were: low (L) trust (42-64), medium (M) trust (65-72), and high (H) trust (73-97).

The factorial arrangement resulted in nine groups of cadet subordinates which rated their leaders on the six response measures. Along with sample size, in parenthesis, these groups were designated LL-LS (15), LL-MS (13), LL-HS (15), ML-LS (15), ML-MS (14), ML-HS (20), HL-LS (10), HL-MS (16), and HL-HS (35) in which the first pair of letters referred to the level of leader (L) trust and the second pair of letters referred to the levels of subordinates (S) trust.

Results

The means for the six LBDQ measures across the nine groups are given in Table 3.6. A multivariate analysis of variance performed over the six measures revealed that: (a) cadet leader trust was statistically significant, Hotelling-Lawley Trace = .247, $F(12, 276) = 2.84$, $p < .01$; (b) cadet subordinate trust failed to achieve statistical significance, Hotelling-Lawley Trace = .069, $F < 1$; and (c) the Cadet Leader Trust x Cadet Subordinate Trust interaction was significant beyond the .05 level, Hotelling-Lawley Trace = .289, $F(24, 550) = 1.66$.

To assess the significant interaction, univariate tests were performed on each response measure. The significant results of these analysis were that: (a) leaders who were high or medium in interpersonal trust were perceived to be more persuasive than leaders who were low in trust ($p < .05$); (b) leaders who were high on trust were perceived to allow more freedom than leaders who were either medium or low in trust ($p < .05$); (c) leaders who were high in trust were perceived to be more considerate than leaders who were either medium or low in trust; and (d) cadet subordinates were more satisfied with leaders who were high in trust than leaders who were low in trust.

Table 3.6

Mean scores for LBDQ dimensions as function of Leader and Subordinate Interpersonal Trust

Mean Structure Score
Leader Interpersonal Trust

Subordinate Interpersonal Trust	Low (42-64)	Medium (65-73)	High (73-97)	Total
Low (42-64)	23.80	24.30	23.80	23.97
Medium (65-72)	19.47	29.07	25.35	24.63
High (73-97)	26.90	26.69	27.17	26.92
Total	23.39	26.69	25.44	25.17

Mean Tolerance of Freedom Score
Leader Interpersonal Trust

Subordinate Interpersonal Trust	Low (42-64)	Medium (65-73)	High (73-97)	Total
Low (42-64)	18.13	22.54	25.53	22.07
Medium (65-72)	20.87	20.64	25.45	22.32
High (73-97)	21.30	23.19	23.66	22.72
Total	20.1	22.12	24.88	22.37

Mean Consideration Score
Leader Interpersonal Trust

Subordinate Interpersonal Trust	Low (42-64)	Medium (65-73)	High (73-97)	Total
Low (42-64)	17.80	21.38	26.13	21.77
Medium (65-72)	20.60	22.14	27.95	23.56
High (73-97)	23.60	23.06	25.09	23.92
Total	20.67	22.19	26.39	23.08

Table 3.6 (cont.)

Mean scores for LBDQ dimensions as function of Leader and Subordinate Interpersonal Trust

Mean Production Score
Leader Interpersonal Trust

Subordinate Interpersonal Trust	Low (42-64)	Medium (65-73)	High (73-97)	Total
Low (42-64)	23.07	21.38	20.13	21.53
Medium (65-72)	20.40	25.50	21.20	22.37
High (73-97)	22.60	24.19	23.51	23.43
Total	22.02	23.69	21.61	22.44

Mean Satisfaction with Leadership (LSI)
Leader Interpersonal Trust

Subordinate Interpersonal Trust	Low (42-64)	Medium (65-73)	High (73-97)	Total
Low (42-64)	37.33	38.15	43.47	39.65
Medium (65-72)	39.07	41.57	45.00	41.88
High (73-97)	40.20	43.88	42.85	42.31
Total	38.87	41.2	43.77	41.28

Mean Persuasion Score
Leader Interpersonal Trust

Subordinate Interpersonal Trust	Low (42-64)	Medium (65-73)	High (73-97)	Total
Low (42-64)	14.80	14.08	16.27	15.05
Medium (65-72)	13.20	19.50	17.90	16.87
High (73-97)	15.70	19.19	17.43	17.44
Total	14.57	17.59	17.2	16.45

The data indicate quite clearly that interpersonal trust serves as a factor in the communication process between cadet leaders and their subordinates. Most important was the finding that the critical determinant is the interpersonal trust of the leader and not the subordinate. Mellinger (1956) has indicated in laboratory settings that a communicator who lacks trust in the recipient of the communication tends to conceal attitudes concerning the communication. In this manner, the accuracy of the recipient's perceptions are impaired.

The present data reveal that cadet subordinates perceive cadet leaders who are low in interpersonal trust as being less persuasive, less considerate, and tolerating less freedom than cadet leaders who were high in interpersonal trust. In addition, cadet subordinates were less satisfied with cadet leaders who were low in interpersonal trust.

STUDY II

INTERPERSONAL TRUST AND THE DELEGATION OF AUTHORITY AND RESPONSIBILITY: A FIELD STUDY - PART II

The second part of the present study was concerned with whether the locus-of-control of the cadet subordinates would be related to the cadet's attitude toward leaders who were perceived as allowing freedom of responsibility and authority. According to social learning theory, internally controlled subordinates should be more willing to accept responsibility and excessive authority and therefore should be more satisfied with leaders who are perceived as delegators of responsibility and authority. Externally controlled cadets, on the other hand, should be more dissatisfied with leaders who are perceived as delegators of responsibility and freedom since they believe that outcomes in their environment are determined by external forces such as luck or the power of others and that they have less influence over their events.

Method

Subjects. The subjects were sampled from the military programs of two southern universities. Sample A consisted of 35 cadet leaders and 163 cadet subordinates. Sample B consisted of 8 cadet leaders and 59 cadet subordinates.

Procedure. The freshman cadets were also required to complete the Rotter Locus-of-Control scale. In addition, an index of perceived delegation of authority and responsibility was calculated based upon six items selected from the Freedom scale of the LBDQ and two items dealing with delegation of responsibility. The eight items used in this index were as follows:

Item	Statement
3	He allows the members complete freedom in their work.
8	He permits the members to use their own judgment in solving problems.

Item	Statement
18	He lets the members do their work the way they think best.
23	He assigns a task, then lets the members handle it.
41	He trusts the members to exercise good judgment.
46	He permits the group to set its own pace.
49	He delegates authority to make decisions to members of his unit who are responsible for carrying out a task.
50	He keeps careful check on how members carry out their duties.

Results

The analysis assessed whether freshmen cadets who were high on internal control would be more dissatisfied toward leaders who were not trusting in the assignment of cadet duties than freshmen cadets who were high on external control.

The experimental design involved a 2 x 2 factorial design with Locus-of-Control of cadet (high vs. low) and the Delegation of Authority, Responsibility and Freedom Index (high vs. low). The means and analysis of variance performed on the Leadership Satisfaction Index are presented in Table 3.7 for the Sample A and in Table 3.8 for the Sample B.

From Table 3.7 it is clear that the freshmen cadets in Sample A were more satisfied with cadet leaders who were perceived to delegate greater authority, responsibility and freedom, $F(1, 159) = 15.42$, $p < .01$. No significant difference were found for the Locus-of-Control x Delegation of Authority, Responsibility, and Freedom interaction, $F < 1$.

As may be seen in Table 3.8, freshmen cadets in Sample B showed the same results. The Delegation Authority, Responsibility, and Freedom variable resulted in statistical significance, $F(1,55) = 4.99$, $p < .05$, with cadets being more satisfied with leaders who were perceived to allow more authority, responsibility and freedom. Neither the Locus-of-Control nor the interaction term were significant, $Fs < 1$.

Table 3.7

Means and Summary of Analysis of Variance Performed on LSI scores of Freshmen Cadets in Sample A

Cadet Locus-of-Control	Delegation of Freedom and Responsibility: Low (8-26)	Delegation of Freedom and Responsibility: High (27-38)
Low (3-10)	38.74	43.59
High (11-21)	37.52	42.45

Source	SS	df	MS	F
Cadet LOC	53.57	1	53.57	
Dele. of Respon. (DR)	973.27	1	973.27	15.42**
LOC x DR	2.43	1	2.43	
Error	10,034.19	159	63.11	

Table 3.8

Means and Summary of Analysis of Variance Performed on LSI scores of Freshmen Cadets in Sample B

Cadet Locus-of-Control	Delegation of Freedom and Responsibility: Low (19-29)	Delegation of Freedom and Responsibility: High (30-37)
Low (1-8)	44.27	48.13
High (9-19)	43.07	47.13

Source	SS	df	MS	F
Cadet LOC	18.15	1	18.15	
Del. of Respon. (DR)	236.02	1	236.02	4.99*
LOC x DR	4.82	1	4.82	
Error	2599.33	55	47.26	

Discussion

The data indicate that Cadet Locus-of-Control was not a significant determinant of cadet satisfaction with their leader. All freshmen cadets were more satisfied with leaders who were perceived to delegate a greater amount of authority and responsibility and to allow more freedom.

The nature of the military setting within academic institutions would seem to account for both the lack of significance of the cadet locus-of-control variable. If locus-of-control is to be a potent variable, the leader must be perceived as being instrumental to the achievement of the cadet's goals. It is clear that such is not the case in the military settings of the present study. The general goal of cadets is to acquire a college degree. As has been pointed out in interviews, a primary personal fear of the cadet is that of flunking out of college and not being able to get a satisfying job. Furthermore, in both samples, the cadet leader is capable of issuing demerits to his squad but usually is reluctant for a number of reasons among which was a fear of losing ranking when his squad is compared to other squads. Consequently, demerits are given by other leaders and normally from a variety of higher ranked individuals. The primary role of the squad leader was to lead his squad in rifle drills, guard mounts, parades and marching. The negative reaction which is usually given by the squad leader is excessive yelling and verbal abuse. It is interesting to note that the cadet leaders with whom cadets who are satisfied are seen as considerate, persuasive, allowing freedom and who, as one cadet related it, "treats me as a human being." In essence, the squad leader is almost powerless and serves a minimal role in determining the future of the cadet at his institution. For these reasons, it may be expected that locus-of-control would not be a pertinent variable when related to perceived delegation of authority.

The entire concept of a young person at a military setting within an academic

institution is one of a person who is using the military to achieve a good job upon completion of his obligation. While only about 15% of the graduating class will actually become career military, one primary reason for selecting the military is to avoid the low probability of having a job upon graduation.

SECTION IV

THE ATTRACTIVENESS OF THE MILITARY ORGANIZATION

The present section represented an attempt to identify those personal variables which were responsible for the attractiveness of the military organization. As a field investigation, the major empirical effort was directed toward an investigation of those variables which related to the cadets' self-perceptions and their attitudes toward the military. In addition to the above effort, the present section also describes an attempt which was made to follow a line of reasoning which evolved from the definition of ego identity status by Marcia (1964, 1966).

Ego identity and identity diffusion (Erikson, 1956, 1963) refer to the polar outcomes of the psychosocial crisis thought to occur in late adolescence. This period is characterized as one of occupational and ideological commitment. To assess ego identity, Marcia (1964, 1966) used a semi-structured interview and an incomplete-sentences blank to determine which of four concentration points along a continuum of ego-identity achievement best characterize the individual. The criteria to establish identity status consisted of two variables, crisis and commitment, applied to occupational choice, religion, and political ideology. Crisis refers to the period of choosing among meaningful alternatives; commitment refers to the degree of personal investment manifested by the individual. An identity-achievement subject expresses a strong degree of commitment to occupational and ideological choices arrived at after a fairly extensive period of examining alternatives. These subjects appear fairly stable, able to establish realistic objectives, and capable of dealing with sudden changes in the environment. Subjects in the moratorium stage are currently in the identity crisis and commitments are vague. They have contradictory needs for both rebellion and guidance manifested by somewhat ambivalent views toward authority (Podd, Marcia, Rubin, 1968). Foreclosure

subjects are committed to an occupation and ideology but these have not been attained by them. Rather they have accepted whatever identity their parents had planned for them. They are the most authoritarian of the statuses (Marcia, 1967) and generally impress one with their rigidity. They operate quite satisfactorily so long as they remain in the type of situation in which their identity has been given to them but when the situation changes, they seem to be at loss. Subject in the identity diffusion may or may not have had an identity crisis experience. Regardless they are not committed and their lack of commitment may be manifested in a "playboy" life style. They actively seek non-commitment, shunning really demanding situations, or it may take the form of a schizoid personality where the individual is aloff, drifting, and seems aimless. These subjects are either uninterested in ideological matters or jump from one outlook to another--one is just as good as another. Recent work by Bob (1968) and Orlofsky (1970) suggested a fifth stage, the alienated achievement. They express a lack of commitment as subjects in the identity diffusion stage but they seem to have a consistent rationale for it. Bob (1968) describes these subjects as the ones who do most thinking or philosophizing at some point, and hence, become diffuse out of cynical refusal to make commitments. Orlofsky, Marcia, and Lesser (1973) and Marcia (1966) have provided evidence for the validity of the various conceptions of identity status.

STUDY I

THE ATTRACTIVENESS OF THE MILITARY ORGANIZATION: FIELD STUDY

Based upon the above views it was originally intended that Marcia's Ego Identity Status procedure would be used and classifications be made with freshmen cadets. Unfortunately, pilot data indicated that Marcia's interview technique was not reliable and consequently a change in direction was necessary. As a result, Study I was aimed directly at assessing the attractiveness of the military organization and especially at gaining insights into the attitudes which prevailed within the military-college setting. The perceptions of cadet's personal life, the reaction to the military and the reasons for their opinions were examined. After two years, data were collected to determine which of the cadets had withdrawn from the program.

Freshmen cadets in two samples were administered the Self-Anchoring Scale of Cantril (1965) and Semantic Differential Scales concerning the attractiveness of the military and various authority concepts. The former instrument allowed an assessment of the present, past, and future judgment of the military and also of the personal life of the cadets. Included were semi-structured questions which allowed the cadets to individually express their feelings toward themselves and the military (See Appendix 4.1 and 4.2).

Method

Instruments

Cantril Scale - The Cantril Self-Anchoring Scale consisted of two sections. The first part involved ratings on an eleven point ladder scale of the following:

(1) Where on the ladder do you feel you personally stand at the present time?

(2) Where on the ladder would you say you stood five years ago?

(3) Where do you think you will be on the ladder five years from now?

(4) Where would you put the military on the ladder at the present time?

(5) Where did the military stand five years ago?

(6) Just as your best guess, where do you think the military will be on the ladder five years from now?

The second portion of the Cantril measurement involved the following:

(1) All of us want certain things out of life. When you think about what really matters in your own life, what are your wishes and hopes for the future? In other words, if you imagine your future in the best possible light, what would your life look like then, if you are to be happy?

(2) Now taking the other side of the picture, what are your fears and worries about the future? In other words, if you imagine your future in the worst possible light, what would your life look like then?

(3) Now what are your wishes and hopes for the future of the military? If you picture the future of the military in the best possible light, how would things look, let us say, ten years from now?

(4) And what about your fears and worries for the future of the military? If you picture the future of the military in the worst possible light, how would things look?

Semantic Differential - Authority Concepts

The Semantic Differential instruments consisted of having the cadet rank each concept on a seven point bi-polar scale over the following bi-polar adjectives: Clean-Dirty, Honest-Dishonest, Just-Unjust, Selfish-Unselfish, Sympathetic-Unsympathetic, Unbiased-Bias, Good-Bad, Polite-Impolite, Kind-Cruel, Genuine-Hypocritical. The six concepts which were evaluated were: Teacher, Father, Judge, Policeman, Military Officer and Army.

Sample

The samples consisted of 311 freshmen cadets in Sample A and 102 cadets in Sample B.

Results

Comparison of the Samples

The means and standard deviaions for the six Cantril Scales and the six authority concepts measured by the Semantic Differential are given in Table 4.1. Also, Tables 4.2 and 4.3 presents the intercorrelations of these measures for Sample A and Sample B, respectively.

It may be seen in Table 4.1 that the Sample A showed significantly lower mean self ratings than Sample B on their present and future status in their personal life and also lower ratings on the present and future status of the military. The samples did not differ significantly on their past personal status or the past status of the military.

It is also evident from Table 4.1 that the Sample A showed more positive (lower mean scores) attitudes toward the six authority concepts measured by the Semantic Differential.

To assess the general descriptions of the samples, a principle components factor analysis were performed on each sample and the factor matrix was rotated using a Varimax solution. The results of these analyses are given in Table 4.4 for Sample A and Table 4.5 for Sample B.

Observation of Table 4.4 reveals that Factor I represents a semantic differential dimension and yields high loadings (> .40) on each of the six authority concepts. Since each of the concepts were both authoritative in quality and measured by the same technique, it would be safe to

Table 4.1

Means and Standard Deviations for the Cantril Scales and the Semantic Differential scores of the Sample A (N=311) and Sample B (N=102)

	Sample A		Sample B		P
	Mean	Standard Dev.	Mean	Standard Dev.	
Cantril Scale					
Present-Personal Life	4.10	3.18	4.74	2.60	<.05
Past-Personal Life	3.63	3.18	3.82	2.74	N.S.
Future-Personal Life	5.70	3.97	6.79	3.26	<.05
Present-Military	3.60	3.04	4.57	2.83	<.05
Past-Military	3.12	3.30	3.64	3.18	N.S.
Future-Military	4.31	3.63	5.78	3.38	<.01
Semantic Differential					
Teacher	17.35	15.49	21.35	13.11	<.05
Father	13.89	13.18	18.35	11.81	<.01
Judge	18.41	17.14	21.76	13.68	<.05
Military Officer	18.18	16.33	21.43	13.89	<.05
Army	21.68	19.70	25.68	16.02	<.05
Policeman	17.81	16.92	21.07	12.70	<.05

Table 4.2

Correlational Matrix for the Cantril Scales and the Semantic Differential scores of the Sample A

	Present-Personal	Past-Personal	Future-Personal	Present-Military	Past-Military	Future-Military	Teacher	Father	Judge	Military Officer	Army	Policeman
Present-Personal	1.00	.74	.87	.72	.61	.71	.40	.36	.35	.39	.38	.35
Past-Personal		1.00	.77	.64	.56	.64	.40	.36	.31	.42	.36	.35
Future-Personal			1.00	.75	.58	.78	.46	.42	.42	.47	.45	.42
Present-Military				1.00	.66	.84	.36	.30	.30	.34	.34	.31
Past-Military					1.00	.54	.27	.26	.24	.28	.25	.27
Future-Military						1.00	.34	.28	.31	.34	.37	.31
Teacher							1.00	.80	.83	.83	.76	.78
Father								1.00	.72	.74	.70	.69
Judge									1.00	.83	.80	.78
Military Officer										1.00	.88	.87
Army											1.00	.86
Policeman												1.00

Table 4.3

Correlational Matrix for the Cantril Scales and the Semantic Differential scores of the Sample B

	Present-Personal	Past-Personal	Future-Personal	Present-Military	Past-Military	Future-Military	Teacher	Father	Judge	Military Officer	Army	Policeman
Present-Personal	1.00	.66	.80	.60	.49	.54	.40	.38	.37	.38	.43	.46
Past-Personal		1.00	.63	.61	.62	.55	.37	.29	.37	.42	.45	.42
Future-Personal			1.00	.66	.42	.66	.53	.52	.53	.49	.58	.51
Present-Military				1.00	.58	.81	.46	.44	.46	.39	.42	.43
Past-Military					1.00	.49	.35	.32	.39	.34	.35	.32
Future-Military						1.00	.61	.52	.53	.47	.49	.53
Teacher							1.00	.81	.88	.80	.72	.85
Father								1.00	.77	.70	.68	.74
Judge									1.00	.82	.72	.81
Military Officer										1.00	.78	.81
Army											1.00	.72
Policeman												1.00

Table 4.4

Varimax Rotated Factor Matrix for Sample A

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	h^2
Present-Personal	.189	.534	.260	.318	.705	.084	.036	.030	.019	.057	.008	.002	.999
Past-Personal	.197	.429	.224	.821	.207	.078	.033	.011	.015	.050	.008	-.001	.999
Future-Personal	.261	.626	.204	.347	.397	.106	.031	.045	-.003	.452	.012	.004	.999
Present-Military	.154	.840	.313	.172	.138	.057	.043	.014	.344	-.005	.006	-.004	.999
Past-Military	.113	.360	.894	.179	.142	.052	.018	.015	.014	.037	.009	-.001	.999
Future-Military	.169	.930	.151	.183	.113	.038	.017	.019	-.185	.019	.003	.009	.999
Teacher	.798	.160	.076	.118	.091	.255	.487	.081	.016	.026	-.002	-.014	.999
Father	.662	.106	.085	.106	.086	.718	.075	.045	.007	.034	.007	.001	1.000
Judge	.844	.127	.067	.046	.090	.143	.087	.475	.005	.040	-.024	-.009	1.000
Military Officer	.930	.147	.083	.160	.083	.106	.004	-.020	.019	.039	-.128	-.207	1.000
Army	.923	.192	.051	.082	.080	.079	-.076	-.060	-.002	.037	-.094	.261	1.000
Policeman	.912	.120	.106	.092	.073	.063	-.006	-.061	.006	.029	.345	-.019	1.000

Table 4.5

Varimax Rotated Factor Matrix for Sample B

	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	h^2
Present-Personal	.199	.900	.214	.196	.229	.071	.047	.063	.019	.012	.032	-.001	.999
Past-Personal	.164	.350	.240	.312	.819	.111	.012	.067	.036	.070	.026	.002	.999
Future-Personal	.281	.627	.356	.103	.214	.197	.116	.081	.033	.533	.004	.004	.999
Present-Military	.190	.303	.663	.294	.204	.071	.087	.533	.030	.080	.019	-.005	.999
Past-Military	.159	.186	.215	.913	.219	.065	.043	.064	.019	.030	.009	.000	.999
Future-Military	.319	.229	.875	.181	.161	.093	.081	-.014	.018	.073	.026	.007	.999
Teacher	.889	.126	.270	.105	.080	.110	.135	.011	-.073	.080	-.035	.245	.999
Father	.702	.140	.203	.095	.014	.152	.636	.056	.016	.072	.021	.007	.999
Judge	.906	.178	.169	.155	.068	.106	.062	.077	-.041	.073	-.130	-.211	1.000
Military Officer	.817	.119	.110	.107	.159	.239	.038	.045	.454	.050	.012	-.008	.999
Army	.607	.176	.148	.111	.149	.720	.112	.036	.060	.088	.031	.003	.999
Policeman	.840	.202	.175	.071	.141	.131	.066	.039	.014	.009	.418	.006	1.000

attribute this dimension to the presence of a common measuring procedure. Factor II interestingly represents high loadings on each of the Cantril scales with the exception of the Past-Military. This factor presumably would describe an internalization of the military within the Sample A cadets. Finally, Factor III is a specific factor dealing with the past status of the military.

For Sample B, Table 4.5 presents a similar first factor dealing with the semantic differential measurement of the authority concepts. Factor II, however, shows high loadings on the self-ratings of the present and future. Factor III presents high loadings on the present and future status of the military. To the degree that cadets show separate dimensions for their perceptions of their own present and future status and for their perceptions of the present and future status of the military, it would be assumed that they do not internalize the military to the extent that was observed in the Sample B.

In general, these data could be explained on the basis of situational differences. Sample A reside in an institution in which the students have elected to structure their academic pursuits within a military setting. Withdrawal from the Corps would mean resignation from the institution. It would seem that students who elect to enter have shown a dramatic committment to the military way of life and therefore could be expected to internalize military values together with their own personal values and also to respect authority concepts.

A puzzling finding, however, was the fact that Sample A cadets showed lower ratings than Sample B cadets on the Cantril scales for the present and future status of themselves and the military. These differences could

be attributed to the indoctrination given to freshmen in Sample A. As has been commented by one of the student commanders, the first year consists of "attempting to strip the student of civilian identity and make a soldier out of him." It is quite conceivable, therefore, that the reference level for Sample A cadets is lower than Sample B as a consequence of this treatment.

The content analysis of the expressed feelings toward the hopes and fears of the personal life of the cadets and of the military are presented in Appendix 4.1 and in Appendix 4.2. These responses together with the factor analytic data comprise some insight into the freshmen who selects the military as a variable in his life-style. In general, the predominant wish for the personal life of the cadet is that he be happily married, have a family, and a secure job or military career. The predominant fear is that the cadet will flunk out of college and not be able to achieve his goals. To this end, the presence of high unemployment in the existing economy creates the possibility that the dropout will not be able to select a satisfying job and will be required due to financial pressure to occupy a job which is boring and not interesting. This latter possibility reflects one of the prime reasons that these students have selected the military, i.e., to secure a good job upon termination and completion (if career bound) of the military obligation.

With regard to the hopes and fears <u>of the military</u>, many cadets confused this question with what their hopes and fears were with regard to <u>their role</u> in the military. Despite this interpretation, the predominant hope was that the military would be strong enough, both in quality and quantity, to defend the United States. It seems from observation of Appendices 4.1 and 4.2 that the affective tone of responses to these questions were more intense for

Sample A than for Sample B. In general, the cadets fear a nuclear holocaust, military takeover and dictatorship, and being killed in a war. The responses depict individuals who want a career in the military for security and adventure but have no trust in the military structure. Overtones of the military past are evidenced in a number of responses which fear another Viet-Nam and lack of trust in political activity which may subvert the strength and respect which the military may deserve. These would be reflected in cutbacks in appropriation and a military which is involved in fighting for no purpose and creating a world war.

Evaluation of Withdrawals

At the conclusion of the sophomore year (Summer, 1976), data were recorded regarding resignations from the military programs. Of the 311 cadets given the measuring instruments in Sample A, 61 had withdrawn and of the 102 tested in Sample A, 34 had resigned. Table 4.6 presents the means and standard deviation on the Cantril Scales and Semantic Differential instruments for freshmen cadets who remained and withdrew in Sample A. Table 4.7 presents similar data for Sample B.

From Tables 4.6 and 4.7, it is interesting to note that Sample A cadets who withdrew showed significantly lower present and future personal self-ratings than those cadets that remained. Since the Cantril scales were given early in the freshmen year, strong support may be made for the contention that high self-concept is a necessary condition for survival in the Corps of Cadets at a military institution as Sample A. No differences were observed for Sample B or on any other measures for Sample A.

Table 4.6

Means and Standard Deviations for Freshmen Cadets Who Remained and Withdrew in Sample A

	Remained (N=250)		Withdrawals (N=61)		P
	Mean	Standard Deviation	Mean	Standard Deviation	
Present-Personal	4.30	3.17	3.30	3.12	$< .05$
Past-Personal	3.75	3.08	3.11	3.56	N.S.
Future-Personal	5.96	3.84	4.62	4.32	$< .05$
Present-Military	3.74	2.97	3.00	3.28	N.S.
Past-Military	3.27	3.29	2.49	3.27	N.S.
Future-Military	4.50	3.56	3.52	3.84	N.S.
Teacher	17.40	15.12	17.15	17.06	N.S.
Father	14.25	13.18	12.43	13.16	N.S.
Judge	18.83	16.95	16.69	17.92	N.S.
Military Officer	18.22	15.89	18.07	18.18	N.S.
Army	21.90	19.60	20.80	20.24	N.S.
Policeman	17.86	16.47	17.61	18.81	N.S.

Table 4.7

Means and Standard Deviations for Freshmen Cadets who Remained and Withdrew in Sample B

	Remained (N=68)		Withdrawals (N=34)		
	Mean	Standard Deviation	Mean	Standard Deviation	P
Present-Personal	5.04	2.52	4.12	2.68	N.S.
Past-Personal	4.03	2.78	3.41	2.66	N.S.
Future-Personal	7.04	3.13	6.29	3.49	N.S.
Present-Military	4.78	2.75	4.15	2.99	N.S.
Past-Military	3.96	3.42	3.00	2.56	N.S.
Future-Military	6.06	3.20	5.24	3.69	N.S.
Teacher	21.06	12.19	21.94	14.96	N.S.
Father	17.68	10.45	19.71	14.23	N.S.
Judge	22.21	13.43	20.88	14.33	N.S.
Military Officer	21.24	13.38	21.79	15.07	N.S.
Army	25.96	15.53	25.11	17.19	N.S.
Policeman	21.06	13.19	21.09	14.86	N.S.

At this point it would be of value to examine the data in Appendices 4.1 and 4.2 with regard to those who withdrew from their cadet programs.

One of the striking findings was that 33 of the cadets who withdrew in Sample A refused to fill out the open-ended questions regarding their personal wishes and fears and their wishes and fears for the military. Of those cadets who withdrew and did answer the questions, the predominant responses were: (1) an open acknowledgement that they disliked the military; (2) no opinion concerning their own self-image; and (3) not wanting to kill or be killed.

In the sample of Sample A, the most evident characteristic of withdrawal was an overt indication of living in a world based upon high Christian principle. In addition, the same responses of "no need for the military" and open dislike of the military were evident as in Sample A. In many cases, cadets indicated a need for peace, no wars, and a devotion to "helping mankind".

In terms of Kohlberg's conception of moral development, it would be expected that in our present society, few individuals if any, of the highest level of moral development would voluntarily enlist into a "traditional" military organization, or, if they were inducted, would be most likely to withdraw, refuse to re-enlist, or defy orders if such orders violated their principles. These individuals define what is morally right not by laws and rules of the social order but by conscience in accordance with self-determined ethical principles. In light of this reasoning, it could be assumed that students at this level would be less inclined to enroll at an all-military institution such as in Sample A. Furthermore, observation of Appendix 4.2 indicates

that those Sample B cadets who cited a need to live according to high Christian principles and a refusal to inflict pain on others showed an extremely high probability of withdrawal.

Finally, the pre-conventional level of Kohlberg relates to those persons who will be members of the military system if the system is made attractive in terms of rewards but who will leave if assigned unpleasant tasks or are asked to accept orders which may endanger their lives. To an extent, the predominant response of "not taking orders" or "not wanting to be killed or in combat" would seem to confirm this position.

Appendix 4.1

Sample A

First Column - Hopes and wishes for the cadet's own personal life

Second Column - Fears of cadet's own personal life

Third Column - Hopes and wishes for the military

Fourth Column - Fears of the military

*** W means withdrew from the Corps**

1	wife, children, income, etc.		spend time in military	caliber of military people now low
4	marry, income	flunk out		enlisted man in middle of losing war
5	family, income	flunk out	civilian	getting killed
8	family, income		in only for money for farm	nuclear fallout covering earth
7	family		be in military	war
9	family, income		Peace	using military to destroy the world
10 W	family, income		intends to leave the military	military stinks!
11	family, income	die	professional chemist in military	commies will overthrow military and take over country
13	family, military career	failure	career - Lt. Com. in Navy	Continued cutback
14	career in service model is his father			
15 W	family, income	no job	n/o	n/o
16 W	no idea	war	small	large
17	help the world be at peace		n/o	n/o
20 W	world no longer offers anything worthwhile	no job		
21 W	married, colonel rank	flunk out	major, married	no communism
22	married	sickness	offer opportunity	politics & power play take over everything.
25	what pleases my Lord & God	early death	Air Force career no war	military will take control of country and will destroy the world
26	enjoy life	being restricted	devotion to the advancement of U.S.	corruption

27 W	be a civilian	dead	so-so	dead
30	comfort & security	failure	regular army - I deserve it	failure
36	AF pilot & then school teacher	flunk out	school teacher	no commission
37	married & travel career AF	take a civilian job	military will always do good	take over the country & lead to a nuclear war
38 W	Army career	work at menial job & no promotion	better & stronger	decline in morale & quality and increase in prejudice
40	Easy life, minimum of hardship	everything will turn out wrong	Excellent position 20 years w/o worry	if things between me and military do not work out
41	helping people	a poor job - not financially secure	career - to defend my country	war - but I would give it complete effort
42 W	marriage	not sure		
43	marriage, peace	war, separation	navy fighter pilot	flying in combat
44	AF Commission marriage	flunk out	good officer - Major in AF	killed before can prove myself
45	marriage, rich, powerful	no respect or responsibility broken home	military will become powerful with cream of crop	poor selection - disgrace - no tradition
46	marriage, chemical engineer	failure of marriage	I will be out and a civilian	killed
47	medical school - captain, marriage 3 children, farm	breaking up with my fiancée not being admitted to med. school	Colonel & pediatrician	being a 2nd Lt. in the Army
49	marriage, decent job	destruction of country	high position if I am in military	major war struggle
50	Army career	bad job	no war	war
52	marriage & family	being alone	not sure about career	don't know
54	family & security	dying young not in right job	I just want to fly	I got stuck in missles
55	executive job & family	no job; no friends	military career - good future	defense cuts - & low education of troops

56	happily married	lack of job being away from wife	career in military	unpopular war no support from U.S. public
58	fighter pilot	garbage man	fighter pilot	desk job
60	female companion secure	penniless	no military	military state in world
61	marriage	nuclear war	military career	killed in the line of duty
63 W	marriage & good paying job	not married & out of work	all-volunteer force	a military dictator & government
64	secure financial and good provider	in a job I hated	out of military & working	to be at bottom of sea
66	marriage & money	lack of M & M	do justice to military & it be fair	killed in war
69	family & job	bum on skid row	reservist	"Awful" - hard to imagine
70	marine career married	divorce	career in marines	killed or busted because someone didn't like me
73 W	marriage - If I can make my fiancee happy, I will be happy	my fiancee dies	progression in rank and security for family	war - and being away from family
74	graduate with a commission	not graduated	eliminate dead wood and make it elite	volunteer army with untrained rabble
76	married after graduation Marine Corps commission	killed shortly after entering Marines	major in infantry & alive	dead
77	Satisfied with my accomplishment	dreary	successful tour	everyone including me would be dead
78	to be a professional man	no room for advancement - no control over personal matters	strong military efficiently maintained and with more force in politics	weak military, internal strife, controlled by politics
79	security & material possessions	no security or possessions	strong flexible	overcomplicated to the point of degrading effectiveness
83	being successful professional	not being successful	get started well off in life	Bad - not to depend on Uncle Sam to keep me alive

84	find enjoyable work	having no work and having to have a career in military	the military becomes less impersonal and more receptive to change and suggestion	military becomes a large secret police type organization & independent & irresponsive
85	married & wealthy	?	retired in 6 years	?
86 W	wife, kids, security	divorce, no money	Physical Therapist in Army Hospital	In military jail
87	graduate & become a career officer	that I might die	be a Major	War
88	Married, graduate, commission	flunking out - having to go to a 1/2 bit civilian school no marriage	reduced force picked troops high specialization	manned by imbeciles underpaid poor leadership & equipment
89	Travel, friends	to do something against my will	officer in combat & traveling around the world	to be stuck in a heavy combat zone for an indefinite time
90 W	to be a minister and to spread the Good News	not being ordained and not being able to serve God to the fullest	serve my commitment as a Chaplain and then to get out.	That I will not be allowed to go to seminary school
91 W	AF wings & to enjoy women	Flunking out of school	messed up	not much worse than now
97	Kill Gooks & Iranians	being killed	all communists are dead	All Americans are dead
98	Marriage, a job and left alone	out of work	Impressed with military but want to be a Biologist	none
100	Respected top man of an international corporation	Struggling accountant in a small business	more modern military & more reliable anti-communist policy.	obsolete weapons, undisciplined personnel & a pro-communist policy.
101	career in service	no job and a world war	larger military force	no organization, poor equipment & small numbers
103	Air Force Pilot	Not being able to fly	being a career officer, pilot & astronaut	not flying & being in Air Force
104	Marriage & being a Pediatrician	working on a job I don't like	fulfill my obligation and get out	being a private after graduation

189	Marriage & security	war, no job no marriage	no wishes or hopes no war	war
106	Marriage & security	ugly wife & no security	Peacetime army with good pay	war
109	Job & family Career in army	bad family & bad job	Gets rid of Viet Nam image & become respectful	congress will strip it of its fighting career
110	Marriage, family & satisfying job	dropping out of school no job Communist take over & War	Captain rank	America loses prestige as superpower wife leaves me because of military.
111	Married with a job	terminal sickness and no girls	return to way it was before Viet Nam	unable to defend U.S. & attempts a takeover of the Government
113 W	to be a civilian civil engineer & married	be a traveling salesman	I want no military obligation. need control in the world	no military or weak military
114	family, security	broken marriage no job or security	career in military	another Vietnam or another Nixon as Commander-in-Chief
115	Marriage & a good job	doing a job which is a bore & being a failure	Peace - as an organization to work out problems at home	another VietNam
116	Marriage, family and a respected position and income	blasted to hell on the battlefield	peaceful force	like the Luxemborg Army
119	Marriage, AF pilot	mediocre or no job	Remain in an "inactive" period & tolerated by public	General public mistrust and strong feeling against military
120	Family, security & good profession	bad job & no security	Naval Aviator Career	No advancement in the military
124 W	marriage & money	Army life with no money		
127	military career	can't say	well-functioning	A bomb-out
128	Air Force pilot			
129	Be a dentist	no job	Army Officer - no war	War

130	Regular Army Commission Family	No job	Active duty in a 3rd WW	In the Reserves
131	Peace, Love, and Happiness	famine, over-population, nuclear holocaust	Small efficient fighting force	Prejudice, hatred & inefficiency
132	Regular Army Commission, Family	Bad wife & no R. A. commission	A-1 Army	No A-1 Army
133 W	Marriage and Security	no job - and possibility of Middle East war	Peace	War & getting killed
134 W	Family, Success, Businessman	Poor family; not successful	AF Colonel Pilot	Dishonorable discharge
135	Doctor in Army	Famine due to over-population depletion of Wilderness	highly trained with spirit and togetherness	Military takeover
137	In tune with God; secure	not being successful	strong defense of United States	becoming second-rate to USSR
138	Marriage, Friends and security	flunk out & no job	finished with the military and in "fat city"	War
139	Marriage, security	no job, no assets		
140	Marriage, good job	doing a job I do not enjoy no marriage	well-respected & effective	ineffective & not respected
142	Marriage, excitement & adventure	through God, Reason & help of others, I have no fears		
144	graduate and get R. A. commission	being a vegetable	career in military	not getting commissioned
145	Biologist working in a National Forest	no job or one I don't like	Major in army infantry	getting killed
146	graduating high in class, good job and marriage	taking a job I don't like because of the economy	stay voluntary	that it will gain too much control over people-nuclear war

149	comfort & security	no job - no adequate support	commission, rank of captain	I will be in combat in a war
150	security as an Infantry Commander	no security	respected, highly trained, ready	no discipline and extremely reduced in numbers
153	wealthy & a beautiful wife	poverty stricken no job	airborne qualified Major	get killed in another Viet Nam
155 W	Beautiful wife, security	another world war	the military is abolished	a dictatorship with a powerful military
156	steady job-with time to hunt & fish	stuck in a job I dislike and will not be able to quit because of my financial situation		
157	to help my fellow man	being incapable of helping people	hope it will never be used again	government will let it decay to the point of not being useful
158	free from hangups and totally self-confident	poor & insecurity	no war-strongest military in world, no problems at home - used as a bluff against foreign nations	nuclear war which destroys the earth
159 W	play pro football - be financially secure and help my family	flunking out of college	military will change. nuclear warheads will vanish. Military will function better during peace	military will run the government. It will step up nuclear arms and then destroy world.
160	good job, money love, health	poor & sick	I will be out of it.	To be a POW
161	marriage, financially secure	recession, bad marriage job I dislike or no job at all	volunteer military. good economy so that I can afford to be a civilian	war with Russia in the Middle East
162	to be able to be conservative in politics, in the marine Corp. Married to eliminate people from my life who are antagonistic	no military career. Fear of the USA going to the left	battlefield commission member of the Marines who are fighters, <u>not babies</u>!	no war - service cutbacks where a larger military is needed

163	family & financial security	no family	out of the service with honor	making the military a career
164	family	chronic disease, no friends	through with the military and a citizen	POW; fighting for something I don't believe in
166	working with the Lord and doing his will	the worst is being separated from God.	out of military I do not want it	Combat & going into war
168	job and family	no job & no family	I have no wishes or hopes	to be shot on the front line
169	Marriage, successful in business have a loving mate	no job - poverty	no military	military state, secret police & war
172 W	Healthy & peaceful life	death of close friends or family	fighter pilot in minor combat	war and military dictatorship
173	leisure time to enjoy with friends	dull existence	flying	dull, unimaginative duty
174	respected member of community lots of friends and good times - marriage	flunking out	high ranking officer in Navy	war; stuck at one rank
175	doing things that are satisfying; helping others	doing things I don't like. Like destroying life in the Mid East	used as a deterrent to war	military is sole way of life. We are headed in this direction.
176	doing something worthwhile	having no ability to influence my life	respected and never needed	not respected and needed
177	family, friends, a good job	getting a poor job due to the way things are going	higher than a captain if I did go into military	I am not too worried about it.
178	live out west with horses and an Indian girl	living in N. Y. City or suburbs with a brainless blonde committeewoman	to be a Green Beret or Marine	being assigned to the Pentagon
179 W	marriage, health and happiness	loss of health and happiness	none	military <u>has no</u> future
181	career in army	war	very prosperous	none

182	marriage, family, business or management career	becoming an alcoholic or pothead	progresses to the point that all military have at least 2 yrs. of college	falling below standards
183 W	married to fantastic chick, money, no hassles	no family or friends and broke	I personally dislike military	A dictatorship with military in total control
184	wealthy, & good job	death before I achieve my goals	use military to get a better civilian job	getting killed in some idiots war
185 W	marriage, family, good job	I will flunk out and have no job and not find right woman	maintain its standards and values	military will go down and we will lose our role as world power
186	having a good job	getting started in life; military will help	career	I have none yet!
187	happiness with job and family	not happy with job or family	become more efficient and disciplined	no discipline. The Army is an example of loss of discipline.
191	married, health helping others	War and Communist control of world economy	less manpower and more nuclear weapons. Less involvement in economic stability	nuclear wars. Cold war with nuclear wars.
194	marriage; commission	not get a commission and not get married	to be a major in USMC	to have a regular commission in the USMC
196	marriage; good job	life in POW camp	I prefer to be a civilian	military dictatorship or spying
198	good job; money	no money & no job	no future in the Army	going off to war
199	financial security family, good health	poor health, no job or money	like they are now	small force; lazy bums in it
200	married & family	flunk out, no job	get knee or shoulder injury so that I get out of military service	I am still in military and we are at war
201 W	AF pilot	not enjoying what I'm doing	AF pilot	killed
202 W	Physician, married family	not going to Med school	only will enter service as a physician	I do not like the thought of killed or killing

204	head of joint Chiefs of Staff; A war hero with political inclinations upon retirement	working in an enormous corporation as an engineer	well-organized & technologically advanced	small, poorly organized - lacking proper funds
205	to live a successful life	being a failure	stay close to what they are now. Less politics in the military	military will have little say against politicians
206	R.A. commission married; secure	flunk out of school - no chance for good life	Army captain	failure to get R.A. commission & <u>not</u> be in Army
208	to be a doctor and treat ill & suffering	losing the grace of God in my life	to be Colonel in the Medical Corps	military takeover and dictatorship
213 W	not sure; I have a lot of choices	not sure; I want a good life	not sure; I might make it a career	not sure; can't say
215	Astronaut and commercial pilot	a poor job in a building or factory	defense of earth	escalation of military power above human concern
219	Career, Wife, Security	failure in career unhappy marriage	small professional Army Free of Red Tape	continuation of present enlargement military becoming a corrupt bogged-down bureaucracy
223	wealth and happiness	death, poverty failure in marriage & work	more say in combat do everything to win no more VietNam	weak in arms and leadership
227	marriage, family wealth	death	stay out of war	War
228	married to a cute chick	fighting a war I disagree with	no career unless I am D.V.M. in Vet. Corps.	low ranking soldier
231	flying, married, and no financial worry	no job; no girl	that military will have good public relations & be respected	military will disband and become apathetic
235	free; cabin in Rocky Mts; happily married	war & loneliness	I want to stay out of military; I hate war and killing	war and killing that is coming soon
236	married; family, pilot	no job; no family	a strong military system	weak and a takeover by communists
237 W	happy, married family	World War III		

239 W	unmarried; navy; submarines; travel and invest money	no job and not allowed in Navy	command of my own submarine	a chicken shit assignment
241 W	a happy job in the military	a loner in a boring job	a major in a military career	a dead-end job in the Army
242	good job and social life	mass depression and war	no war	nuclear war
243	success in everything	dead	a good place to work	a military takeover of everything
245	career after graduation business work	unending uncertainty as right now	better than now. Stable peacetime service	another Viet-Nam
247	fulfillment of my personal goals	living in uncertainty with no purpose	serve my required time and then to get out. It does not offer the things I want in life	military will make me do things I do not want to do.
248	job, married, family	death	responsible position	war
249	graduate and be a truck driver	flunk-out	out of military	
251	active life in church and youth groups	job failure	peacetime; small token force	World War III
253	good job and prosperous	world destruction by thermonuclear war	simply on standby	non-activity due to fear of nuclear holocost
254 W	happy and satisfied	alone and working at a job I don't like	passive position. No aggressive signs	a military system geared for war
257	graduate & have a successful military career; family	flunk out	to be secure in military	nuclear war
259	military career and exciting life	insecure and economically poor	a strong military with adequate defense budget	no more de-escalation a defenseless country
268	family, captain in Navy	no commission	Lt. Com. in Navy	being passed over.
280 W	be happy	no job; uncertainty		

Appendix 4.2

Sample B

First Column - Hopes and wishes for the cadet's own personal life

Second Column - Fears of cadet's own personal life

Third Column - Hopes and wishes for the military

Fourth Column - Fears of the military

* W means withdrew from the Corps

1 W	get the "gusto" in life and achieve all possible goals	not achieving my goals	It must meet needs of a changing society especially youth	loosely organized not with the times and not appealing to the "right guy"
2	commission in the Air Force	Messing up in college or Air Force career	respecting and aiding my country	return to civilian life
3	successful position of leadership	a job or non-leadership and one I didn't enjoy	more positions for variety of skills	more restrictive in jobs
4*	family, happy secure	flunking out; moving about unsettled	successful officer in Air Force	
5* W	fulfilling life	flunking out	to be successful	The American public turning against it
6 W	wife & happiness	bad job	I'll be out after flying and visiting world	I would be a failure as a leader and still be 1st lt.
7	Family and good job	flunking out; unhappy marriage	voluntary military	reinstitution of the Draft
8 W	good job; adventure; marriage	bachelor; bad job	increase overseas bases. Stop the spread of communism	spread of communism more Viet-Nams cutback of military money and manpower
9	astronaut	no job	pilot	money and manpower
10*	security a good job and a rich husband	death and not being able to achieve my goals	a good position	fear of not being to cope with various types of people
11	family & marriage and good life	divorce; poor job; die as alcoholic	Lt. Col; traveling the world w/ wife	stuck in missle silo; away from family for long periods of time.
12 W	commission, family, no need for military	nuclear destruction; old man w/o family	no need for military and weapons	nuclear destruction of world in a large scale war.
13	family & financial security	being alone in life	united military which is for not only defense but helping develop the US economically and technologically	poor leaders, corruption, decay and a struggle for control of the government
14	marriage and good job	flunking out of college; being crippled	marine pilot and stationed where I WANT	not being a pilot and a boring job

15	family; good job security	wife who is a bitch; no money or friends	not sure I want to go into the military	
16	career or AF pilot MS degree; family	bad marriage; flunk out; and alcoholic	Lt. Col.; AF pilot	disqualified for flight; passed over
17	family & security	hard to say	successful officer	being kicked out
18 W	marine officer, family; time to spend with parents	dying tonight	war to boost economy that I am not killed	peace forever & no jobs
19 W	to be ONE with my FATHER and Lord Jesus Christ	that I would reject HIM and HELL would be my future	no military	that the military will take over everything
20	married and Vet. practice	leaving school and taking job I don't like	none; I have kidney transplant and will not enter	same
21 W	young, wealthy powerful	poor and digging ditches	jet fighter pilot	sitting behind a desk
22*	commission; happy marriage and good children; a useful job	not being useful; not reaching capabilition	a commission; a good leader	no commission; stuck in a position; no fulfillment of potential
23 W	nice family life	drafted; fighting Chinese in Malayan jungle. No job upon return	no need for fighting military	world war
24 W	well-paying job	living & working according to someone else's rules	large & competent: puts down trouble in a short time span	military back on draft system
25	married; security	rearing of children	not planning to have career. Use Army to develop leadership	
26*	good husband who works hard; together money will come in	no job and no husband loneliness and indecision	do not feel that I would like to be in the military	conflict; moving constantly and being married to man who has steady job in one location
27	secure; friends and being my own boss	being rejected by people	maintenance of standards	too civilian; discipline may drop low
28	AF Commission and good job	no commission and no responsible and prosperous job	not many changes	a lot of useless changes

29	good job and family	bad marriage bad job	no career; just fulfill obligation	war and being killed
30 W	health, family commission, job	flunk out	good position; flying	light job openings; wars low pay; poor quality in personnel
31	flying, married astronaut	desk job, divorced	no need for military peace	increased military because of war; research solely for weapons
32	marriage, family good job	broken home poor job	a responsible position; helping others	not being to make it into the army
33 W			constant growth new weapons	cutback in funds, manpower and weapons
34	free time live in peaceful place	no idea	traveling; around world in SAC or MAC	washed out of pilot training or being an NCO
35	wealthy and a lover	getting killed and being poor	chief of staff	messing up
36*	career in engineering and a family	a boring job & not enjoying life	it will be respected and have strength and status	the military will be cutback and will be a token force
37	good job; marriage	unsteady job; poor marriage	more money for federal defense	cutback in funds
38	married, job with FAA	flunking out; no commission	more funding & more jobs	jobs will be strictly regular 8-5 type.
39	----	----	----	----
40*	commission and happy marriage	not getting a RA commission	senior officer in Army	no RA commission
41*	Doctor, family home	not doing that which I like	only plan on 4 yrs. service unless I marry a military man	unable to get promoted or in a stifling job
42 W	good job, family a Christian life	no or sorry job no family	working on Major rank	being passed over
43* W	good job; secure married	flunk out; not fulfill my athletic goals	military - no hopes I do not wish to continue in it	no fears or hopes
44	good job; security	dull job with little time to do things I like	to be in exciting and rigorous physical work	dull and boring desk job

45*	good job; family	working in a job I don't enjoy	A good job serving people of U.S.	I see only good things ahead
46 W	security; good job family	no job; a loner or a bad job and no commission	no wars	no commission
47 W	good job and family	wandering looking for a job	voluntary service	making people fight who don't want to fight
48	security and to do what GOD wills	flunking out; no job	officer	world war or corrupt military
49 W	no idea	being unsuccessful and fear of parental disapproval	strong military leaders with the times. Voluntary Army	Americans lose faith in military draft back in
50 W	pilot; marriage; family wealth, "God in our hearts"	flunk out; sickness and disharmony in family; sentenced to hell by God	major; pilot full commission; based in beautiful place	being riffed or put behind desk
51	be at peace and able to help others live a life that they enjoy	to be at war, hungry and fighting for my life	no military or need for it	wars continually
52	life full of adventures	I don't know	Just as it is	no military
53	military career; own judo club; send parents on European tour home for my family	flunk out; unable to enter military; not married	Major in line for Lt. Col.	"Lifer" as a 2nd Lt.
54	graduate; married pilot; wealth; go into racing	flunk out; insecure financially; not be qualified for flight	Pilot; rank; pay; furthering education	not getting in the military
55 W	no opinion	no opinion	captain of a ship	full scale world war
56	being proud of myself; respect from others	being a failure and having no friends	a leader who is well liked and respected	stuck behind a desk
57	family; do much good in world	doing wrong and making harm; being away from family	I will not be in the military	leading men who are dying in a helpless situation

58	family and happy with my job	total failure and my wife leaving me	being a good leader; being promoted	getting riffed or making a bad decision which will hurt my men
59	good job; flying family; simple life	stuck in a desk job; being a bachelor	military used for peaceful purposes	war
60	no opinion	no opinion	not planning on a military life	"Zilch"
61	happiness; being able to earn respect of my men	not being able to achieve my goals; to be a failure in my dealings with my men	upgrading in equipment and military	public opinion and disinterest will stagnate our readiness
62	marriage; family military job	flunk out; not being able to have a motor cycle	in the military and a high position	no opinion
63 W	educated; married; wealthy	flunk out; poor; lonely; living in a city	no military or a small powerful and efficient force	US turns anti-military a weakening of the Armed Forces
64	successful & wealthy	losing my scholarship not being able to fly	Flying a B-1 bomber high rank	little rank & sitting behind a desk.
65	security; decent job; family	not being able to support a family	major in an important job	I don't know if I am going to like the Army
66	no opinion	no opinion	not sure that the military is for me	not being able to do the job I like.
67	education; fulfilling my obligations; marriage	flunking out; no commission	strong civilian controlled military to fight communism	conventional ground war that the US would surely lose.
68	success; family; happiness	failure in job; no children; unhappy wife	military superiority to all countries	military so weak we can not defend ourselves
69	in the field; adventure	being behind a desk being bored	mighty; able to control communism	going down the drain
70	commission; pilot marriage	not being able to get commission or fly	flying fighters	forced out or lose commission
71 W	go to West Point	that I may never reach my goals	we will still be one of the best armies in the world	cutbacks will weaken our military
72	graduate work & 15 years in AF	----	job in Air Force in Engineering	desk job not in engineering
73	good life & no worries	life full of death	pilot; AF Capt.	family pilot training

74 W	happy life; active	no fear; I can achieve	flight instructor	teaching ROTC
75	happy; family; job in NASA or AF	flunk out or marrying wrong girl	I am not sure I want the military	no opinion
76* W	husband to love and children	what the world is coming to. No support for family	I don't want military	military is not for me
77	military officer	flunk out	public respect and discipline	no respect and continual public criticism
78	pilot, family, health	no job; problem in family health	major; flying	desk job; low rank
79	become self-sufficient	having someone stop me from reaching my goals	major with command	no promotion
80	AF officer and good Christian	falling out of God's will	Lt. Col. in AF well-liked	not liked and of low rank
81*	good job; family	bad job; poor marriage	help people; not hurt them; prevent wars	a military gov't or dictatorship
82	AF pilot; good job family; retire at 40	being separated from family; bad job	maintain present strength; be best in world and not as political	decrease in public support. cut-backs and low quality in personnel
83 W	my girl	taking this dumb test	none	---
84	to love and be loved; set goals and try to accomplish them	no one loves or appreciates me	respect from others	being led by someone I had no respect for
85 W	develop scientifically something to benefit human race	flunk out and leading a purposeless life	volunteer army with the best professional training	decrease in size; poorly organized totally disorganized

STUDY II

THE ATTRACTIVENESS OF THE MILITARY ORGANIZATION: FIELD STUDY

Study II was an attempt to borrow certain theoretical concepts from Marcia's definition of ego-identity status to identify the underlying factors responsible for the attractiveness of the military. In particular, the present investigators attempted to use the concepts of "crisis" and "commitment". It was reasoned that perhaps the concept of commitment could be defined in terms of multiple choice items which reflected answers that differed in levels of commitment. The items were written to closely resemble the coding used by Marcia in his interview procedure. The items referred to the degree of personal investment manifested by an individual with reference to occupational choice, religion, and political ideology. The investigators in an earlier pilot study found that the measurement of "crisis" produced such unreliable responses in interviews that a redefinition of the concept was necessary. Crisis was defined by Marcia as referring to a period in life during which an individual is involved in choosing among meaningful alternatives. To this end such a period should involve the examination of topics which are felt to be of major concerns and importance to the individual. On this basis, it was expected that the degree to which an individual has spent time in concentrated thought on certain issues may be an effective variable in predicting the attractiveness of the military organization. Based upon the data gathered from the semi-structured questions of Study I, a core of twenty factors which were predominant in the wishes and fears of freshmen cadets were extracted. In general the factors ranged from items of concern for personal future (having a family, choice of a spouse) to concern for the welfare of society (having a nuclear war, having a military takeover by the government). For the twenty factors, respondents in Study II indicated the extent to which each factor was of concern and importance

to them.

Using a new sample of freshmen cadets and freshmen civilians from three major universities, Study II involved an examination of the extent to which the two redefined processes of commitment and concern were related to the attractiveness of the military. The latter concept was measured with a Semantic Differential Scale.

Method

Sample

The samples were obtained from three major universities. Two were located in the South and one in the Southwest. Of a total sample of 405 freshmen, 356 returned useable data. There were 252 freshmen cadets and 104 freshmen civilians. Of these, 44 cadets and 46 civilians were from one southern university and 119 cadets from the other southern university which had an all military population. From the southwestern university, there were sampled 89 cadets and 58 civilians.

Instruments

The questionnaire was composed of three parts and is shown in Appendix 4.3. Part I required the subject to indicate the degree of concern and importance given to each of twenty factors regarding various aspects of his personal life and of society. Part II involved responding to thirteen multiple choice questions which measured degree of commitment. Of these questions, only items 1, 2, 3, 5, 8, 10, 11, and 12 were used in deriving the Commitment scale. Part III involved four Semantic Differential Scales related to the concepts of military, religion, college, and government. Of these four, only the assessment of military was used in the present analysis.

To reduce Part I to subscales, the twenty factors were subjected to a multi-dimensional scaling program (POLYGON II) in which scales were constructed based upon the percentage of agreement across the four response alternatives between each and every factor. On the basis of this analysis, the following six scales involving eighteen factors were derived:

I. World Orientation

1. Belief in God
7. Going to war and being killed
13. Having a nuclear war
18. Corruption in positions of authority

II. Self-Orientation

16. Flunking out of college

19. Changing your present career plans after college

20. Being unemployed

III. Future Personal

2. Choice of a spouse

5. Having a family

IV. Future Military

3. A career when you graduate

11. Living in a society that is weak in national defense

13. Having a nuclear war

17. Being a Leader

V. Negative Personal

8. Having to take a job that you did not like

9. Taking a job or position that did not offer any advancement

10. Having an unhappy marriage that might develop in a divorce

14. Having a military takeover of the government

VI. Positive Personal

1. Belief in God

3. A career when you graduate

4. Being financially secure

6. Choice of curriculum major

Data Analysis and Experimental Design

The military attractiveness scores were computed for freshmen cadets and freshman civilians on the Semantic Differential Scale and a 2 x 2 factorial design was used with two levels of Status (Cadets vs. Civilians) and two levels

of Military Attractiveness (Low vs. High). The levels of Military Attractiveness were based upon military attractiveness scores which fell below (Low) or above (High) the mean military attractiveness score of 42.30 for the entire sample. There were 101 cadets in the low attractiveness group and 151 cadets in the high attractiveness group. For the civilians, there were 69 persons in the low attractiveness group and 35 persons in the high attractiveness group.

Results

Table 4.8 presents the means for the six derived response scales and the commitment scale for the four groups. A 2 x 2 factorial MANOVA was performed across the seven response variables and yielded a significant Status variable effect, Hotelling-Lawley Trace = .238, $F(7,346) = 11.75$, $p < .01$. The Status x Military Attractiveness interaction failed to reach statistical reliability.

Separate univariate analyses performed on each response variable indicated that: (a) cadets were significantly more concerned with issues related to World Orientation ($p < .01$), Self-Orientation ($p < .05$) and Future-Military ($p < .01$) than civilians; (b) civilians had significantly ($p < .05$) higher commitment scores than cadets; and (c) persons who perceived the military as low in attractiveness were more concerned with Future-Personal factors ($p < .01$) than persons who had high military attractiveness scores. Finally, a check was made to determine whether the larger sample of all-military cadets might possibly have biased the above findings with regard to comparisons between cadets and civilians. Subsequent analyses revealed that with the exception of commitment this was not the case since the means of the cadets from the all-military institution were, in fact, slightly lower than other cadets. The all-military cadets showed significantly lower commitment scores than the other cadets and the civilians.

Since a specific purpose of the present study was to examine the differences within the cadet sample and because cadets were significantly ($p < .01$) higher than civilians in the mean Military Attractiveness score, an additional analysis

Table 4.8

Means for the Six-Derived Scales and Commitment Measure as a Function of Status and Attractiveness of the Military

	Cadets		Civilians	
	Low Military Attractiveness	High Military Attractiveness	Low Military Attractiveness	High Military Attractiveness
World Orientation	10.87	10.80	10.07	9.20
Self Orientation	6.82	6.68	6.07	6.49
Future-Military	11.75	12.37	9.81	9.83
Future-Personal	4.55	3.85	4.32	4.26
Positive Personal	12.49	12.69	12.31	12.06
Negative Personal	7.88	7.95	7.51	6.97
Commitment	27.55	28.58	29.28	29.71

was computed on the differences between cadets who scored below and above the mean cadet Military Attractiveness score of 44.94. A Hotelling T^2 analysis was performed between the Low Military Attractiveness group (N=125) and the High Military Attractiveness group (N=127) and indicated that the two groups differed significantly over the seven measures, Hotelling-Lawley Trace = .083, $F(7,244) = 2.88$, $p < .01$. With regard to the individual response comparisons, it was found that the cadets with Low Military Attractiveness scores were significantly more concerned ($p < .05$) with Future-Personal factors and lower ($p < .05$) in Commitment than cadets who had High Military Attractiveness scores.

A check for sample bias was made by repeating the analysis with cadet status (all-military institution vs. mixed institution) as a second variable in a 2 x 2 MANOVA design. The results indicated that cadet status failed to interact significantly with military attractiveness for any of the response variables. The main effects of Military Attractiveness were found to be the same as observed in the original analysis.

Discussion

The data reveal several striking results concerning those variables which underlie the attractiveness of the military. First, as expected, the sample of freshmen cadets showed higher Military Attractiveness scores than the freshmen civilians. Secondly, as a group, freshmen cadets attributed more concern and importance to factors dealing with: (a) war, being killed, belief in God, and corruption in positions of authority (World Orientation); (b) flunking out of college, changing career plans, and being unemployed (Self-Orientation); and (c) a career upon graduation, a society that may be weak in national defense, and being a leader (Future-Military). Third, freshmen civilians showed a significantly higher commitment to expressed religious and political ideology and also a career than did freshmen cadets. Finally, in determining factors which relate to the attractiveness of the military, those individuals, whether civilian or

cadet, who placed importance and concern in choice of a spouse and having a family (Future-Personal) perceived the Military to be lower in attractiveness. Furthermore, cadets who were low in commitment also expressed lower Military Attractiveness scores than cadets who were high in commitment.

In its entirety, the above results clearly reflect a situation in which the freshmen cadet attributes importance and concern to a different constellation of factors than civilians. Those cadets who find the military to be high in attractiveness also are high in personal commitment and low in concern for personal factors such as choosing a spouse and having a family. Cadets show a higher attraction to the military and have less concern for the above personal factors than civilians.

Based upon Marcia's conceptualization of ego-identity status, high commitment is interpreted as indicating that an individual is committed to an occupational goal and also a religious and political ideology. Whether this commitment has occurred from a series of crisis and decision-making events or a direct manifestation of parental influence is problematic. The present data indicate clearly that attractiveness to the military is directly related to commitment and negatively related to concern for personal factors such as choice of a spouse and having a family.

Finally, the finding that the lower commitment scores for the cadets from the all-military institution biased the commitment comparison of cadets and civilian is puzzling. A possible reason could be that the demands and pressures placed upon a cadet at an all-military institution may infact result in lower commitment. At the present time, the authors feel that any hypothesis for this relationship would be speculative and that further research is needed to better understand the finding.

APPENDIX 4.3

Dear College Student:

You have been randomly selected to be part of a research project involving an attempt to understand how the typical college student views things like religion, education, politics, the military, marriage, and other institutions in society.

The project involves your completing a questionnaire which is ANONYMOUS and therefore we would really appreciate your frank and honest response. This questionnaire is being given in various parts of the country to a large sample and your responses will be grouped in with this sample.

It should take you approximately 35 minutes to complete the questionnaire. Please be sure to answer every item.

Thank you for your cooperation.

P.S. It is hard to overstress the importance of <u>your</u> responses for the validity of this survey. Unless you answer each item thoughtfully and completely, we cannot find meaningful answers to how college students feel about their past, present, and future environment.

<u>PART I</u>. General Data (Answer Yes or No)

_____ 1. Are you a member of a fraternity or sorority?

_____ 2. Do you live on-campus?

_____ 3. Are you a member of ROTC or a Cadet Corps?

_____ 4. Are you a full-time student?

_____ 5. Age

_____ 6. Sex

PART II. Choose one of the following four REACTIONS for each aspect:

a. Over the past few years, I have spent considerable time thinking and worrying about this topic and it is extremely important to me.

b. Over the past few years, I have thought about it but I am not worried about it.

c. I have just this year begun to seriously think about it and I suspect that it will be given deeper thought over the next year since it is important to me.

d. I have never really given it any deeper thought because I feel that it is not very important or really pertains to me at this time.

ASPECT

_____ 1. Belief in God

_____ 2. Choice of a spouse

_____ 3. A career when you graduate

_____ 4. Being financially secure

_____ 5. Having a family

_____ 6. Choice of a curriculum major

_____ 7. Going to war and being killed

_____ 8. Having to take a job that you did not like

_____ 9. Taking a job or position that did not offer any advancement

_____10. Having an unhappy marriage that might develop in a divorce

_____11. Living in a society that is weak in national defense

_____12. Living in a society in which there is a communist takeover

_____13. Having a nuclear war

_____14. Having a military takeover of the government

_____15. Becoming physically disabled

_____16. Flunking out of college

_____17. Being a leader

_____18. Corruption in positions of authority

_____19. Changing your present career plans after college

_____20. Being unemployed

PART III. Please choose that answer that best describes you.

_____ 1. With respect to the extent of my political involvement, the following statement best describes me:
a. I actively take part in at least one political group or organization and help campaign during elections.
b. I am a member of a political party, contribute to campaign funds, and vote.
c. I don't contribute to campaign funds but I do vote.
d. I do not vote because I am just too busy.
e. I do not vote because it does not matter whether an individual votes or not.

_____ 2. When I am a member of a group in which political issues are being discussed, I:
a. actively take part and express my political views, sometimes actually reaching the point of becoming angered during the course of the discussion.
b. actively take part and express my views but seldom become involved enough to get excited or angered over the discussion.
c. will answer questions when asked my but do not express my views unless asked.
d. as a rule do not discuss politics regardless of how I feel.
e. do not actively take part in discussion because I do not feel very strongly about any political issues.

_____ 3. To change my political beliefs:
a. would be almost impossible.
b. would be difficult but not impossible.
c. no more possible than impossible.
d. would be fairly easy.
e. would be very easy.

_____ 4. Since leaving high school, my political beliefs have:
a. changed considerably.
b. changed somewhat.
c. not sure how or if they have changed.
d. remained basically the same.
e. remained almost exactly the same.

_____ 5. With respect to religion, I would classify myself:
a. devoutly religious.
b. athiest; I deny that a God exists.
c. somewhat religious.
d. I do not know how I would classify myself.
e. agnostic; I do not know whether a God exists.

_____ 6. The statement, "Religious beliefs, including the denial of God, are not important anyway." would be:
a. very inconsistent with my philosophy of life.
b. somewhat inconsistent with my philosophy of life.
c. neutral or irrelevant to my philosophy of life.
d. somewhat consistent with my philosophy of life.

_____ 7. If someone asked me about the development of my religious beliefs from childhood, I would most likely state that:
a. I have gone through periods of very deep thought concerning my religious beliefs, and through this process I have developed my present beliefs.
b. my beliefs have changed but with little deep thought.
c. there has been little or no change in my beliefs.
d. my beliefs have simply become less important to me.
e. my beliefs are in a process of change at this time.

_____ 8. If I were in a group discussing religious beliefs I would:
a. express my view and try to encourage others to accept it.
b. defend my beliefs but not encourage others to believe them.
c. remain silent because I seldom take part in group discussions regardless of how strong my beliefs are.
d. remain silent because I am not exactly sure of what my religious beliefs are and I do not feel confident enough to discuss them.
e. remain silent because the subject is not important anyway.

_____ 9. In selecting a partner for marriage:
a. I would change my religion or denomination if my partner wished me to.
b. I would <u>not</u> change my religion or denomination if my partner wished me to.
c. both my partner and I would change to a different religion or denomination.
d. I would change my denomination but not change to a different religion such as changing from Protestant to Jewish.

_____ 10. Five years from now:
a. I very likely will be pursuing a career or further studies in the major field I am studying now.
b. I probably will be pursuing a career or further studies in the major field I am studying now.
c. I am not sure that I will be pursuing a career or further studies in the major field I am studying now.
d. I most likely will <u>not</u> be pursuing a career or further studies in the major field I am studying now.
e. I do not know nor care what I will be doing with respect to a career five years from now.

_____ 11. If I were offered a chance to earn a substantially greater salary in an entirely different field or career (assuming such factors as job location, job difficulty, etc. remained the same), I would:
a. reject the offer without hesitation.
b. reject the offer but probably with a certain degree of regret.
c. probably encounter a great deal of vacillation and doubt.
d. accept the offer but certainly have some doubt about changing majors or careers.
e. accept the offer with no doubts.

_____ 12. If I could find an easier major in which I could succeed, I would:
a. definitely <u>not</u> change majors.
b. probably <u>not</u> change majors.
c. not sure what I would do.
d. probably change majors.
e. definitely change majors.

____13. I know that I can depend on myself in times of personal stress:
a. because I have previously gone through periods of personal stress and after much personal reflection resolved the problem and felt better prepared to cope with similar situations.
b. because other people told me I could.
c. I am not sure that I can because I have never been in a very stressful situation without help from my family.
d. I am not sure that I can but I would say that I am at a point in my life that I shall soon find the answer.

PART IV.

We are trying to find a way of measuring the meanings college students associate with certain concepts. Each of the following pages has two different names printed and underlined above 10 pairs of words. Each pair of words is separated by seven numbered spaces. We call these numbered spaces a scale.

You are requested to rate each of the concepts as they appear on the page using the scales which appear under the underlined word. For example, if you feel that a particular concept is best characterized by one or the other ends of the scale, or somewhere in between, you would circle that number that best describes what the concept means to you.

SAMPLE

DEMOCRACY

A.	Freedom (1) : 2 : 3 : 4 : 5 : 6 : 7	Slavery
B.	Rich 1 : 2 : 3 : (4) : 5 : 6 : 7	Poor
C.	Few 1 : 2 : 3 : 4 : 5 : 6 : (7)	Many
D.	High (1) : 2 : 3 : 4 : 5 : 6 : 7	Low

If each of the circled scale numbers best described what the concept democracy meant to you, you would mark 1 for item A, mark 4 for item B, mark 7 for item C, etc.

Please work at a fairly high speed through the test. Do not worry or puzzle over any item. It is your first impression that we want.

Please answer all items.

RELIGION

Clean	1 : 2 : 3 : 4 : 5 : 6 : 7	Dirty
Honest	1 : 2 : 3 : 4 : 5 : 6 : 7	Dishonest
Unjust	1 : 2 : 3 : 4 : 5 : 6 : 7	Just
Selfish	1 : 2 : 3 : 4 : 5 : 6 : 7	Unselfish
Sympathetic	1 : 2 : 3 : 4 : 5 : 6 : 7	Unsympathetic
Unbiased	1 : 2 : 3 : 4 : 5 : 6 : 7	Biased
Bad	1 : 2 : 3 : 4 : 5 : 6 : 7	Good
Polite	1 : 2 : 3 : 4 : 5 : 6 : 7	Impolite
Cruel	1 : 2 : 3 : 4 : 5 : 6 : 7	Kind
Hypocritical	1 : 2 : 3 : 4 : 5 : 6 : 7	Genuine

MILITARY

Clean	1 : 2 : 3 : 4 : 5 : 6 : 7	Dirty
Honest	1 : 2 : 3 : 4 : 5 : 6 : 7	Dishonest
Unjust	1 : 2 : 3 : 4 : 5 : 6 : 7	Just
Selfish	1 : 2 : 3 : 4 : 5 : 6 : 7	Unselfish
Sympathetic	1 : 2 : 3 : 4 : 5 : 6 : 7	Unsympathetic
Unbiased	1 : 2 : 3 : 4 : 5 : 6 : 7	Biased
Bad	1 : 2 : 3 : 4 : 5 : 6 : 7	Good
Polite	1 : 2 : 3 : 4 : 5 : 6 : 7	Impolite
Cruel	1 : 2 : 3 : 4 : 5 : 6 : 7	Kind
Hypocritical	1 : 2 : 3 : 4 : 5 : 6 : 7	Genuine

COLLEGE

Clean	1 : 2 : 3 : 4 : 5 : 6 : 7	Dirty
Honest	1 : 2 : 3 : 4 : 5 : 6 : 7	Dishonest
Unjust	1 : 2 : 3 : 4 : 5 : 6 : 7	Just
Selfish	1 : 2 : 3 : 4 : 5 : 6 : 7	Unselfish
Sympathetic	1 : 2 : 3 : 4 : 5 : 6 : 7	Unsympathetic
Unbiased	1 : 2 : 3 : 4 : 5 : 6 : 7	Biased
Bad	1 : 2 : 3 : 4 : 5 : 6 : 7	Good
Polite	1 : 2 : 3 : 4 : 5 : 6 : 7	Impolite
Cruel	1 : 2 : 3 : 4 : 5 : 6 : 7	Kind
Hypocritical	1 : 2 : 3 : 4 : 5 : 6 : 7	Genuine

GOVERNMENT

Clean	1 : 2 : 3 : 4 : 5 : 6 : 7	Dirty
Honest	1 : 2 : 3 : 4 : 5 : 6 : 7	Dishonest
Unjust	1 : 2 : 3 : 4 : 5 : 6 : 7	Just
Selfish	1 : 2 : 3 : 4 : 5 : 6 : 7	Unselfish
Sympathetic	1 : 2 : 3 : 4 : 5 : 6 : 7	Unsympathetic
Unbiased	1 : 2 : 3 : 4 : 5 : 6 : 7	Biased
Bad	1 : 2 : 3 : 4 : 5 : 6 : 7	Good
Polite	1 : 2 : 3 : 4 : 5 : 6 : 7	Impolite
Cruel	1 : 2 : 3 : 4 : 5 : 6 : 7	Kind
Hypocritical	1 : 2 : 3 : 4 : 5 : 6 : 7	Genuine

SECTION V

INTRA-GROUP CONFLICT: INDIVIDUAL VERSUS UNIT OBJECTIVES

One of the most significant and challenging problems in the socialization of the individual is the development of social sensitivity and an awareness of the importance of group loyalty and group welfare. Early preoccupation with self-indulgence must gradually give way to social concern. The resolution of the conflict between individual and group needs is essential to the survival and integrity of the group. It determines to a great extent the effectiveness of group behavior. One of the major tasks of all leaders is to integrate these different objectives with a view toward reasonably satisfying all the demands. Each person must recognize the needs of others as well as the overall objectives of the group in which he is a participating member. Yet our knowledge on how to affect this resolution has been handicapped by the paucity of research data on the nature of the antecedent conditions determining the relative strengths of these objectives (Phillips and Devault, 1957).

A general knowledge of the nature of human needs is prerequisite to the specific task of management. As an infant, the individual is passive dependent, and unaware of self. As he matures he tends to become more independent and seeks to satisfy higher needs according to Maslow's hierarchy of needs. Flippo contends that "this process of maturation, as well as certain fundamental assumptions as to the basic nature of man, have a profound effect upon a manager's approach to his personnel. Sociologists, psychologists, and anthropologists differ as to the basic nature of man, whether he is essentially good and cooperative, or indolent and in conflict. Various practicing managers are also in conflict on these points; the point, however, is that their respective philosophies inevitably and drastically affect their managerial approach [1966, p. 177]." The process of merging individual and group needs has been

called the fusion process. Bakke defines this term as "the simultaneous operation of the socializing process by which the organization seeks to make an agent of the individual for the achievement of organizational objectives, and of the personalizing process by which the individual seeks to make an agency of the organization for the achievement of his personal objectives [1955, p. 5]." If both the unit and the person are satisfied, there is successful fusion. If either one is dissatisfied, there is a lesser degree of fusion. Flippo (1966) points out that perfect fusion is both impossible and undesirable since growth is enhanced by conflict as well as by cooperation. Argyris (1954) applied this fusion model to a study of a bank organization. He found that in the bookkeeping department fusion was low. The demands of the job did not meet the desires of the groups of young girls in the department. Their work restricted their desire to talk, visit, etc. The turnover in this department was very high compared to the tellers in the same bank who worked in a situation with high fusion. Obviously, workers will quit jobs where conflicts are most experienced if opportunities are available for higher fusion in other job situations. Perhaps this might be one cogent reason for resignations and refusals to re-enlist in the Army. If freedom of movement does not exist because of pension arrangements, seniority system, and family ties, conflict and low fusion may be forced upon the organization and the person.

The proposed study attempts to assess some of the conditions leading to low fusion and high conflict between individual and group needs. In particular, the investigation focuses on personality (the level of moral development) and the organizational reward structure, promotive and contrient interindependent. In a conflict between self- and social-interest it would be expected that one's level of moral development would be relevant to the

resolution of such dilemmas. Morality has been conceptualized as conscience, as a set of standards for social action which has been incorporated by the individual. Three different aspects of internalization have been indicated by various theories: the behavioral, emotional, and judgmental aspects of moral action. The behavioral criterion stresses intrinsically motivated conformity or resistance to temptation. The second criterion of internalization is the existence of guilt, that is self-punitive, self-critical reactions of remorse and anxiety following violation of social standards. In Kohlberg's conception of the six stages of moral development, Stages 2 and 4 imply definite reactions to self- versus social-interest. Stage 2 is characterized by a naive egoistic orientation. Right action is that which instrumentally satisfies the self's needs and occasionally others'. Stage 4, on the other hand, is characterized as authority and social order maintaining orientation. Orientation to doing one's duty and showing respect for authority and maintaining the social order for its own sake. Regard for earned expectations of others is important. It is therefore predicted that Stage 2 subjects are more likely to be concerned for their own needs than for needs of the group while Stage 4 subjects will be more concerned with the needs of the group.

The reward structure of the organization is also most important in facilitating fusion. All too often, higher authority has used incentives of one sort or another to increase productivity. Competition has been the keynote of extracting maximum individual effort. Prizes, honors, bonuses, promotions, and symbolic rewards of one sort or another have been promised to those individuals who excel all others in the group. In situations where output depends on the individual's effort this rewarding procedure may increase production, particularly if conducted in an equitable manner,..

but sometimes these procedures may be counterproductive. Particularly, in situations where the individuals have to work cooperatively, it is most doubtful whether emphasis on individual effort is beneficial, as for example, in a football team or military unit. Morton Deutsch (1949) has defined contrient interdependence as a condition in which the success of one person leads to the inevitable failure of another person (zero-sum game). In promotive interdependence, the interaction of participants is mutually beneficial. A cooperative motive is a mutual or shared one; the person who possesses a cooperative motive seeks the outcome that is beneficial to all participants. A competitive motive seeks an outcome that is most beneficial to oneself and most detrimental to the other participants. A reward structure of contrient interdependence ("competitiveness") places a greater premium on self-satisfaction and tends to decrease fusion while a reward structure of promotive interdependence ("cooperation") in a group situation tends to increase fusion. The purpose of the present study was to determine whether a relationship exists between level of moral development and satisfaction with various strategies for distributing rewards in small groups. Two strategies for distributing rewards were evaluated: a competitive strategy (contrient interdependent) and a modified competitive strategy (modified contrient) in which all members of the group got some part of the reward, but the most influential member got more reward. Two levels of moral development were assessed: preconventional and conventional. It was predicted that preconventional subjects would be more satisfied with a strategy emphasizing reward of individual efforts, whereas conventional subjects would be more satisfied by a strategy emphasizing reward based on group efforts.

Method

Subjects. Seventy-eight males from Introductory Psychology classes at Virginia Polytechnic Institute and State University volunteered to participate in a three-part study for extra credit. During the first session, subjects were given the Rest Defining Issues Test (Rest, 1974) which has been shown to assess the extent to which principled reasoning is used in evaluating moral questions. Data from the fifty-eight subjects who appropriately completed the Defining Issues Test (DIT) were used to provide the subject pool for the present study. The attrition rate was generally found to be high, because the test required careful attention to several questions for a period of about one-half hour. It would appear, based on experience here, that many subjects are participating solely to gain extra credit and will invest themselves wholeheartedly in any difficult task.

The range of scores on the DIT was 9 to 37 with a mean of 24.2. The subjects were divided into two groups at the median score, which was 23. to form two groups with twenty-eight subjects having scores of 23 or less and thirty subjects having scores of 24 or higher. The groups were called "low principled" and low-moderate principled", respectively. Such designations were given, because the range of scores found in the sample replicated those of a previous sample taken at VPI&SU (number of subjects--83; range of scores--8-43; mean--25.1) and appeared to represent the lower half of the distributions found by Rest (1974) at eastern and midwestern universities.

Although the principled scores derived from the DIT do not conform exactly to the stages and levels presented by Kohlberg, they do adequately evaluate the level of principled or postconventional reasoning used by

subjects, such that meaningful distinctions may be made among subjects which approximate the Kohlberg stages.

The data on small groups for this study were collected during the third session of the three part experiment. Although every effort was taken to equally distribute the subjects from each principled group into the two treatment groups, further problems of attrition and inappropriately completed data sheets prevented the assignment of equal numbers of subjects to each treatment group. Thus, the data analyses were completed using an analysis of variance for unequal n's. The number of subjects per cell ranged from 6 to 9.

Procedure. Subjects were telephoned approximately four to six weeks after the initial testing session and asked to return to participate in a small group experiment as the third session in which they had agreed to participate. Subjects were assigned to form six-person groups which consisted of equal numbers of low, low-moderate, or unclassified subjects who were used to fill up the groups.

When the subjects arrived at the experimental room, they were seated individually and given a 4" x 6" card to use to make a name plate and two copies of the problem which were separated by carbon paper. The experimenter told the subjects what they were to do and read them the instructions on the problem sheet. When all subjects had completed both the name plate and rankings, the experimenter collected the carbon copies of the rankings and sent the subjects to form a group at the table in the middle of the room. The subjects were then given an unused copy of the rankings form and were read the instructions appropriate to the treatment condition to which they had been assigned. The instructions were either those appropriate to developing a contrient interdependent ("competitive") or a mixture of promotive and contrient instructions called modified

contrient (modified cooperative). The instructions read were as follows.

Contrient Interdependent--Now we would like for you rank order the items for importance as a group. You may have up to 20 minutes to discuss the problem and arrive at a group decision. We have a bonus in real cash, which we will give to the person who has the most influence on the group's decision. The speed with which the group reaches its decision will determine the amount of money which will be awarded to the most influential member. If the group reaches its decision in 5 minutes or less, the most influential member will receive $4.00. If more than 5 minutes but less than 10 minutes are required to arrive at a group decision, the most influential member will receive $3.00. If more than 10 but fewer than 15 minutes are required, the most influential member will receive $2.00. If more than 15 minutes are required, the most influential member will receive $1.00. We have an objective method for determining the most influential member of the group called the "unrevealed difference technique," which I cannot discuss with you at this point. Do you have any questions?

Modified Contrient--Now we would like for you to rank order the items for importance as a group. You may have up to 20 minutes to discuss the problem and arrive at a group decision. We have a bonus in real cash which we will distribute to the group on the following basis. If the group reaches a decision within 5 minutes or less, we will give each member of the group $1.00 and we will give the most influential member of the group 4 times that amount or $4.00. If the group takes more than 5 minutes but less than 10 minutes, we will give each group member $.75 and the most influential member $3.00. If more than 10 minutes but

less than 15 minutes is required, we will give each group member $.25 and the most influential member $1.00. We have an objective method for determining the most influential member of the group called the "unrevealed difference technique," which I cannot discuss with you at this point. Do you have any questions?

At the conclusion of the group session, subjects were given rating scales to determine their satisfaction with their group's performance and their attitudes toward both their own and other possible group strategies. During the time subjects were completing their forms, the experimenter in the contrient interdependent and modified contrient groups calculated the difference scores to determine which member had been the most influential by the "unrevealed difference technique" (Bodin, 1966; Hadley and Jacob, 1973).

When the subjects had completed their group ratings, the experimenter collected their data sheets and spoke to them as a group telling them how much money they had earned and who was the most influential member (where the latter was applicable). Then the experimenter gave the subjects another brief questionnaire and a receipt for the subjects to sign indicating acceptance of the monetary reward. When the subjects had completed these last acts, they were dismissed after all questions about the experiment had been answered.

Results

Two 3 x 2 between groups analyses of variance for unequal n's were completed to assess the influence of group instructions on low and low-moderate subjects' reactions to their group experience. A statistically significant interaction between group instructions and level of principled reasoning ($F = 10.43$, $df = 1, 27$, $p < .005$) was observed on question 4, "Were you satisfied with the way we said we would distribute the rewards?" The analysis of variance summary table and the means and standard deviations of the responses are shown in Tables 5.1

and 5.2 respectively. An analysis of the interaction using Duncan's New Multiple Range Test indicated ($p_s < .05$) that low principled subjects were reliably more satisfied with the competitive strategy than were low moderate principled subjects and that low-moderate principled subjects were reliably more satisfied with the modified cooperative strategy than were low principled subjects. Additionally, the low principled subjects in the competitive strategy were reliably more satisfied than the low principled subjects in the modified cooperative strategy and the low-moderate principled subjects in the modified cooperative strategy were more satisfied than the low-moderate principled subjects in the competitive strategy.

An analysis of the responses to the question of how satisfied the subjects were with the actual distribution rewards yielded no main effects or significant interaction. The analysis of variance summary table and the means and standard deviations of the ratings are shown in Tables 5.3 and 5.4.

Discussion

The general purpose of the study was to determine if there was a relationship between level of principled reasoning and satisfaction with reward distribution strategies which emphasized individual efforts (a competitive strategy) versus group efforts (a modified cooperative strategy). The prediction was made that low principled subjects would be more concerned with their own needs, whereas moderate principled subjects would be more concerned with the group's needs. The two reward distribution strategies selected were designed to emphasize individual effort and represented as either inequitable distribution of the rewards or group efforts with individual effort recognized by a larger share of the reward and represented an equitable distribution of the rewards based on a proportionality strategy. Given these conditions, it would be expected that low principled subjects would express greater satisfaction with the competitive

Table 5.1

Summary table of the analysis of variance for the question of satisfaction with the strategy for distributing rewards

Source	df	Mean Square	F ratio
Group Instruction	1	.0022	.001
Level of Principled Reasoning	1	.0066	.004
Group Instruction X Level of Principled Reasoning	1	18.30	10.43*
Error Term	27	1.75	

*$p < .005$

Table 5.2

Means and standard deviations of ratings of satisfaction with strategies for the distribution of rewards[1]

Group Instructions	Subjects' Principled Level: Low	Low-Moderate
Contrient Interdependent	5.3 ± 1.38[2]	3.5 ± 0.84[3]
Modified Contrient	3.8 ± 1.09[4]	5.1 ± 1.69[5]

---

[1] Ratings were based on a 7-point scale with 1 equalling a rating of very dissatisfied and 7 equalling very satisfied.

[2] n=7

[3] n=6

[4] n=9

[5] n=9

Table 5.3

Summary table of the analysis of variance for the question of satisfaction with the actual distribution of rewards

Source	df	Mean Square	F-ratio
Group Instructions	1	2.26	1.06
Level of Principled Reasoning	1	1.34	.63
Group instructions x level of principled reasoning	1	8.52	3.99
Error term	27	2.13	

Table 5.4

Means and standard deviations of subjects ratings of satisfaction[1] with the experimenter's distribution of the rewards.

Group Instructions	Subjects' Principled Level: Low	Low-Moderate
Contrient Interdependent	2.0 ± 0.82[2]	3.7 ± 2.16[3]
Modified Contrient	2.4 ± 1.67[4]	2.0 ± 1.00[5]

[1] Ratings were based on a 6-point scale with 1 equalling a rating of very satisfied and 6 equalling very dissatisfied

[2] n=7

[3] n=6

[4] n=9

[5] n=9

strategy, whereas low-moderate principled subjects would express greater satisfaction with the modified cooperative strategy.

Two questions were used as dependent variables to assess the satisfaction of the subjects with the reward strategies. The first question asked directly whether subjects were satisfied with the reward distribution plan. The data confirmed the prediction that low principles subjects would express greater satisfaction with a competitive strategy than low-moderate subjects and that low-moderate subjects would express greater satisfaction with a modified cooperative strategy than would low principled subjects. The second question asked about subjects' satisfaction with the actual distribution of rewards but did not support the predictions at a statistically reliable level. Thus, the basic arguments of the present study that a relationship between level of principled reasoning and satisfaction with strategies for distribution of rewards were supported by the direct question about satisfaction with strategies, but were not supported by the question as to satisfaction with the actual distribution of rewards.

An implication of the present study is that although subjects may express satisfaction or dissatisfaction with particular reward strategies, they may or may not be satisfied with the actual outcome of reward distribution. Because there was no quantifiable product which each individual contributed that could be examined, it was not possible to determine the extent to which an individual's real performance was influenced by the strategy for reward distribution. However, it might be assumed that expressed dissatisfaction with reward strategy would lead sooner or later to dissatisfaction with the organization for which one is working and consequently to lowered production. Thus, one possibility for future studies would be to examine the extent to which individual performance is actually influenced by satisfaction or dissatisfaction with a new reward strategy.

SECTION VI

VALUE CONFLICT AND THE LEGITIMACY OF AUTHORITY

In the military, obedience to authority is one of the most valued norms. From the moment the recruit enters the system, he is indoctrinated in the inviolacy of military authority. Differences in dress, privileges, living conditions, symbols, training all tend to accentuate differences in status. Instances of disobedience are most severely punished. Yet, despite all these forces, there are increasing signs of an erosion of the legitimacy of military authority. It is the purpose of this study to explore the conditions that may be related to the breakdown of authoritative influence, namely, conflicts in moral values and managerial conceptions of human nature.

French and Raven describe legitimate power as follows: "Legitimate power of O/P is here defined as that power which stems from internalized values in P which dictate that O has a legitimate right to influence P and that P has an obligation to accept this influence [1959, p. 159]." Three bases of legitimate power are cultural values, acceptance of the social structure, and designation of O as a legitimate power holder by some other legitimizing agent whom P accepts. Goldhamer and Shils (1939) noted that there are three major forms of legitimate power. Legitimate power is regarded as legal when the acceptance of legitimacy rests on a belief in the legality of the laws, decrees, and directives issued by the power-holder. It is traditional when it is derived from the belief in the sanctity of traditions by virtue of which the power-holder exercises his power and in the traditional sanctity of the orders which he issues. Legitimate power is charismatic when the recognition of legitimacy rests on devotion to the personal qualities of the power-holder. Essential to these conceptions of legitimate power is the acceptance of the cultural

values and social structure by the subordinated individuals. Rejection would tend to erode the legitimacy of authority and lead to disobedience. A classic study in obedience was conducted by Milgram (1963). He tried to determine how many persons would continue to obey the commands of an authority figure, even when they were endangering the lives of others. He required the subjects to administer increasingly powerful electric shocks to another subject whenever the latter made mistakes on an association test. The subjects were 40 males heterogeneous with respect to age (20-50) and occupation. Of the 40 subjects, 26 or 65 per cent continued to the end of the shock series. He concluded that obedience to commands is a strong force in our society. In studying the personal characteristics of those who obeyed and those who refused the authoritative commands, he found that those who followed orders had significantly higher scores on the F-scale than did those who refused to continue the experiment. Elms and Milgram reported that "significant attitudinal differences between these two groups were manifested towards one's own father, the experimenter, the sponsoring university, willingness to shoot men in wartime, and other concepts somewhat similar to 'authoritarian personalities' [1966, p. 282]." The decision to obey is also related to the level of moral development. Subjects who refused to continue in the experiment generally have more mature moral judgment scores than subjects who obey. Eight of the subjects were at the highest level of moral development; six, or 75 per cent of these, refused to obey orders. Twenty-four subjects were at conventional levels of moral development, and only three, or 12.5 per cent of these, refused to continue. Principled morality was strongly related to the refusal to collaborate in an act that inflicted pain upon another

human being. These results support the conceptions of moral development proposed by Kohlberg (1963, 1969).

As stated in Section II, the first stage of moral development is the punishment and obedience orientation. The consequences of action determine the goodness and badness of the action, regardless of the meaning of these consequences. Avoidance of punishment and unquestioning deference to power are valued in their own right. The second stage is the instrumental relativist orientation. Right action consists of that which instrumentally satisfied one's own needs and occasionally the needs of others. At the conventional level, which includes the next two stages, maintaining the expectations of one's own family, group, or nation is perceived as valuable in its own right, regardless of immediate and obvious consequences. The attitude is not only one of conformity, but also includes an attitude of loyalty. Emphasis is upon actively maintaining, supporting, and justifying the social order and identifying with the persons or group in it. On the third stage, good behavior is that which pleases, helps, or is approved by others. The fourth stage is made up of law-and-order orientation. Here the orientation is toward authority, established rules, and the maintenance of the social order. Right behavior consists of doing one's duty, showing that one respects authority, and maintaining the social order because it is the given social order. The post-conventional, autonomous, or principled level comprises the fifth and sixth stage of moral development. At the fifth stage (the social-contract-legalistic orientation), right action tends to be defined in relation to general individual rights and with respect to standards that have been critically examined and agreed upon by the whole society. Although the legal point of view is accepted, the possibility of changing the law in light of what seems best

for society is emphasized (this approach contrasts with the fourth stage, which accepts law as right and does not seek to change it). The highest stage of development, the sixth stage, is the orientation of universal ethical principles. What is morally right is defined not by laws and rules of the social order but by one's own conscience, in accordance with self-determined ethical principles. These might include universal principles of justice, principles of the reciprocity and equality of human rights, and respect for the dignity of human beings as individuals.

If Kohlberg's conception of moral development is valid it would be expected that in our present society, very few individuals today, if any, of the highest level of moral development would voluntarily enlist into a "traditional" military organization, or, if they were inducted, they would be most likely to "leave" or refuse to re-enlist or defy military orders if such orders violated their principles. On the other hand, the conventional level person would adapt, obey without question, and be attracted to the military establishment. The second stage person (pre-conventional level) would volunteer if the system is made attractive in terms of the rewards but he would also "leave" if assigned unpleasant tasks or is asked to accept orders which may endanger his life.

The findings of Haan, Smith, and Block (1968) tend to support these predictions. They related student's moral-judgment stages to their political behavior, their participation in student protests, their backgrounds, their perceptions of their parents, and their self- and ideal-concepts. About two-thirds of the men possessed conventional moral judgment and 28 per cent possessed post-conventional or principled morality. At stages 1 and 2, the men were found to be politically radical, active and

protesting but they were more concerned with their personal fulfillment. Respondents at the conventional level were found to have modeled themselves after their parents, having accepted the traditional values of American society. They reported that their parents provided clear rules, punishments, and rewards. These respondents were found to have harmonious, non-skeptical relationships with institutions and authority figures. The students at the principled level were characterized by a firm sense of autonomy in their life patterns and ideological positions. The data on the extent of participation in the 1965 Berkeley Free Speech Movement sit-in showed that among the preconventional level 1 and 2, 60 per cent participated and 40 per cent did not. At the highest stages, 41 per cent participated. On stages 3 and 4, only 18 per cent participated. It is significant to note that the reasons for participation are different for the preconventional and postconventional types. The preconventional stage 2 types see protest in terms of a power conflict in which they are out to improve their own status. The principled protesters (stages 5 and 6) are concerned about basic issues of civil liberties.

Flacks after reviewing a number of studies on obedience suggests that "under conditions where authority is defined by subjects as legitimate, they appear highly ready to do what is expected of them, highly likely to delegate processes of judgment to the authority figure--even when coercion and reward are virtually absent and the consequences of obedience are likely to be negative [1969, p. 130]." In the same article he points out that the "emergence of youthful opponents of militarism and of forms of protest based on civil disobedience and confrontation suggests the possibility of an opposing trend. Indeed, one of the more pressing tasks for social analysis is to attempt to understand which figure--Milgram's sub-

ject or the conscientious resister--best symbolizes the central trends in individual-authority relations in American society [p. 131]." It is significant to note that legitimacy of a particular authority can be measured by the degree to which it can secure conformity without the use of positive or negative sanctions. Flacks enumerates three basic propositions concerning those features of an authority structure which are basic to the maintenance of its legitimacy. Relative to our predictions as to the importance of values, he states that "individuals tend to attribute legitimacy to authority when the exercise of that authority is perceived as beneficial to groups, institutions, or values to which the individual is committed [p. 131]." Later, he elaborates this proposition: "Legitimacy is in danger of erosion if, for example, there is a persistent pattern of inequity experienced by members of a particular class or stratum, if adherents of particular value systems or subcultures feel threatened, unrepresented, or disillusioned by the going system, if the established common values of the national culture are weakened by rapid social change and the national authorities are seen as incompetent to generate or support new values, or if members of particular institutions experience significant discontinuities between their collective goals and those of the authorities [p. 132]."

In addition to value conflicts, two other factors may have a bearing on the legitimacy of the system, that is, the degree to which the organization can adapt itself to meet the changing needs of its constituents and to provide the climate for personal growth. Maslow (1954) suggested that human needs are organized according to a hierarchy in which the lower level needs must be satisfied before higher needs can govern behavior. If the lower level needs are satisfied, the person will behave in accordance with each

next higher level. From the lowest to the highest needs, Maslow identifies the major needs as physiological needs, safety needs, social needs, egoistic needs, and the need for self-fulfillment. McGregor (1960) has reasoned that since the first two needs are usually taken care of for the group members, the individual is influenced by the higher three need areas. If conformity will satisfy our social egoistic, or self-fulfillment needs, we will conform (Maslow, 1954). Recent events, however, demonstrate that it is doubtful that conformity to the current military system will satisfy these higher needs. Under such circumstances, man will seek alternative opportunities outside the military situation.

In somewhat similar fashion, McGregor (1960) has contrasted two managerial assumptions concerning the nature of man, theory X and theory Y. In essence, theory X sees the average human being as one who prefers to be directed, wishes to avoid responsibility, has relatively little ambition, and wants security above all. Theory Y, on the other hand, assumes that external control and the threat of punishment are not the only means for bringing about effort towards organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed. Commitment is a function of the rewards associated with their achievement. The most significant of such rewards, e.g., the satisfaction of ego and self-actualization needs, can be direct products of effort, directed toward group goals.

The present section presents two studies directed mainly at the role of level of moral development as a determinant in the legitimacy of authority. Study I was a laboratory experiment which examined the relationship between level of moral development and ratings toward authority, willingness to

participate in experiments for various incentives and willingness to work for organizations modeled under Theory X or Theory Y. Study II involved a field study performed with military cadets and examined the relationship between level of moral development and the attractiveness of authority.

STUDY I

VALUE CONFLICT AND THE LEGITIMACY OF AUTHORITY: A LABORATORY EXPERIMENT

On the basis of the above formulations on the level of moral development, the hierarchy of needs, and the managerial assumptions about the nature of man, Study I was designed to assess the relationship between level of principled reasoning, ratings of legitimacy of authority, type of needs, and acceptance of Theory X and Y managerial assumptions.

Method

Subjects. Seventy-eight males from Introductory Psychology classes at a large southern university volunteered to participate in a three part study for extra credit. During the first session, subjects were given the Rest Defining Issues Test (Rest, 1974) which has been shown to assess the extent to which principled reasoning is used in evaluating moral questions. Data from the fifty-eight subjects who appropriately completed the Defining Issues Test (DIT) were analyzed to evaluate the predictions of the present study. The attrition rate was generally found to be high, because the test required careful attention to several questions for a period of about one-half hour.

The range of scores on the DIT was 9 to 37 with a mean of 24.2. The subjects were divided into two groups at the median score, which was 23, to form two groups with twenty-eight subjects having scores of 23 or less and thirty subjects having scores of 24 or higher in order to provide a way to categorize subjects in a manner similar to the stages of Kohlberg. The groups were called "low principled" and "low-moderate principled" because the range of scores found in

the sample replicated those of a previous sample taken (range: 8-43; mean: 25.1; number of subjects: 83) and appear to represent the lower half of the distribution found by Rest (1974) at the eastern and midwestern universities. It is important to note that all conclusions generated by the present study must be limited to lower levels of principled reasoning.

Apparatus and procedure. During the first testing session of the experiment, all volunteers were assembled in one location and given a consent form which explicitly stated the conditions for participation in the study, the Rest Defining Issues Test, a Semantic Differential which included the concepts of priest, father, judge, military officer, army policeman, and teacher, and a questionnaire which assessed willingness to participate in experiments for five different possible reasons. At the conclusion of the first session, subjects signed up for one of several possible testing sessions in which "transcripts" of conversations between an organization leader and his district salesman were presented and evaluated.

The Rest Defining Issues Test was used as the index of principled reasoning or the level of moral development achieved by the individual subject. Although the principled scores derived from the test do not conform exactly to the stages and levels presented by Kohlberg, they do adequately evaluate the level of principled or postconventional reasoning used by subjects, such that meaningful distinctions may be made among subjects which approximate the Kohlberg stages.

The total scores earned by subjects on the different concepts of the Semantic Differential were used to evaluate attitudes toward authority figures and were taken as an index of acceptance of the legitimacy of the various authority figures. Low total scores indicated a favorable attitude toward authority, whereas high scores indicated an unfavorable attitude toward authority.

The "Questionnaire on Experimental Participation" was used to evaluate the

level of needs to which the subjects would respond. The questionnaire was given under the instructions that a survey was being run to devise alternative strategies for enlisting the aid of students in psychology experiments. The items on the questionnaire were designed to assess responsiveness to material needs, social needs and self-fulfillment needs.

During the second session, subjects were given transcripts of conversations which had been previously rated by naive, lower level psychology students to be representative of the assumptions of Theory X and Y management. The order of transcripts was counterbalanced randomly across subjects within testing sessions. Subjects were asked to rate each of the transcripts separately on questions as to whether the organization and their leaders would successfully achieve their goals and whether they would be willing to work in the organization. In addition, subjects were asked to rate the organization and its leaders on several adjectival dimensions. Finally, subjects were asked to compare the corporations on a relative basis by stating which of the two they felt would be more effective in raising sales and for which they would prefer to work.

Results

The relationship between level of principled reasoning and favorability of ratings toward authorities (low scores are favorable) is shown in Table 6.1. The means and standard deviations of the ratings of the subjects are shown in Table 6.2. The correlations between the variables show that the total ratings for all the legitimate authorities are related at a statistically reliable level ($p < .01$). However, the relationship of the ratings to level of principled reasoning was not statistically reliable with two exceptions: the higher the level of principled reasoning the more unfavorable the rating for military officer ($p < .05$) and the more unfavorable the rating for Army ($p < .01$). Thus the data provide strong evidence that the semantic differential did tap consistent attitudes

toward authority, but that the level of principled reasoning was not related to acceptance of authority with the two stated exceptions. The means reveal that the Army and military authority are the least favorably rated authority concepts.

The relationship between level of principled reasoning and willingness to participate in experiments for various incentives is shown in Table 6.3. The means and standard deviations of the ratings of the groups are shown in Table 6.4. No statistically reliable relationship between principled score and any of the incentives were found. The means show that subjects are most interested in working for extra credit or money.

The relationship between level of principled reasoning and ratings of effectiveness of organization and willingness to work for organization under Theory X and Y assumptions are shown in Table 6.5. Means and standard deviations of the scores by principled group are shown in Table 6.6. Again, no reliable relationships between level of principled reasoning and approval of the two sets of managerial assumptions is in evidence. The means reveal, however, that Theory Y is strongly preferred over Theory X.

As a post hoc analysis, the relationship between ratings of willingness to work under Theory X and Y assumptions and ratings of Army and military officer were computed. The correlation coefficients were -.15 and .07 between ratings of military officer and willingness to work under Theories X and Y respectively and .30 ($p < .05$) and -.05 between ratings of Army and willingness to work under Theories X and Y respectively. Thus, a statistically reliable preference for persons rating the Army favorably to be accepting of Theory X assumptions was observed.

Discussion

The data and conclusions in the present study are restricted to low and

Table 6.1

Correlation matrix of relationship between principled scores and ratings of favorability of legitimate authority figures or concepts.

	P Score	Priest	Father	Judge	Military Officer	Army	Policeman	Teacher
P Score	--							
Priest	.01	--						
Father	-.22	.55	--					
Judge	-.06	.67	.53	--				
Military Officer	.31	.53	.47	.55	--			
Army	.41	.37	.35	.48	.66	--		
Policeman	-.04	.54	.44	.70	.53	.42	--	
Teacher	-.07	.41	.52	.44	.38	.41	.52	--

n = 50 subjects

Table 6.2

Means and standard deviations of ratings of authority figures on the Semantic Differential

Concept	Personality: Low principled (n=25)	Low-Moderate Principled (n=25)	Overall Means
Priest	15.8 ± 4.77	16.0 ± 6.5	15.9 ± 5.7
Father	23.4 ± 7.6	21.1 ± 7.3	22.3 ± 7.4
Judge	25.8 ± 9.3	26.1 ± 8.4	25.9 ± 9.0
Military Officer	30.5 ± 7.8	35.8 ± 6.9	33.2 ± 7.6
Army	34.1 ±10.6	41.6 ± 8.7	37.9 ± 8.9
Policeman	25.9 ±10.7	28.4 ±11.1	27.2 ±10.8
Teacher	27.1 ± 9.2	26.1 ± 7.6	26.6 ± 8.5
Overall Means	26.1 ± 9.9	27.9 ±11.4	

Table 6.3

Correlation matrix of relationship between principled scores and willingness to participate in experiments for various incentives

	P score	Science	Extra Credit	Money	Other Students	Knowledge
P Score	--					
Science	.20	—				
Extra Credit	-.23	-.03	--			
Money	.12	-.19	.08	--		
Other Students	.10	.61	.02	-.29	—	
Knowledge	.17	.64	-.17	-.15	.48	—

Table 6.4

Means and standard deviations of willingness to participate in experiments for various incentives

Incentive	Low Principled	Low-Moderate Principled	Overall Means
For the sake of science	2.8 ± .66	3.2 ± 1.33	3.0 ± 1.07
For extra credit in a course	4.9 ± .12	4.7 ± 0.41	4.8 ± 0.31
For money	4.4 ±1.28	4.7 ± 0.30	4.6 ± 0.65
For the sake of being able to work with other students and professor/scientists	3.0 ±1.54	3.3 ± 1.11	3.2 ± 1.23
For the sake of learning about effective psychological practices	3.3 ± .68	3.6 ± 1.43	3.4 ± 1.65
Overall Means	3.7 ±1.28	3.9 ± 1.39	

- - - - - - - - -

n=26 per cell

low-moderate principled subjects who approximate the preconventional and conventional levels of moral development. In general, the data failed to show any relationship of any of the variables with level of principled reasoning with the exception of differences between low and low-moderate principled subjects in attitudes toward military officer and Army. It would appear that although the attitudes of low principled subjects toward the Army and military officer are more favorable than those of low-moderate principled subjects, the overall attitudes of both groups are less favorable toward both of these concepts than toward all other concepts of legitimate authority.

One possible explanation of the differences obtained between low and low-moderate subjects toward military officer and Army is that low principles subjects would be more accepting because of the attractions currently offered by the military. An alternative explanation may be offered, however, based on the arguments laid out in a previous report by Cravens and Worchel (1975). The propositions offered at that time were that preconventional individuals would be most likely to conform to the demands of a physically present authority, whereas conventional subjects would generally conform to the demands of an authority figure who was physically present (but would conform less than preconventional subjects), and postconventional subjects would be least inclined to conform under any circumstances. In the present study, the alternative explanation for the results is that the experimenter, in discussing the procedures and conditions of the experiment with possible subjects to obtain full informed consent, told the subjects that the studies were being conducted as part of a contract to the Army. Under these circumstances, it could be argued that with the presence of the experimenter who was openly representing the Army, the low principled subjects would be likely to conform to the demand characteristics of the implied endorsement of the experimenter for the concepts of Army and military officer and would rate

Table 6.5

Correlation matrix of relationship between principled scores and ratings of Theory X and Y managerial assumptions.

			Theory X		Theory Y	
	P Score	P Score	Effectiveness	Willingness	Effectiveness	Willingness
	P Score	---				
	Effectiveness	.06	---			
Theory X						
	Willingness	.11	0.64	---		
	Effectiveness	-.00	.07	-.05	---	
Theory Y						
	Willingness	-.09	-.03	-.05	.41	---

Table 6.6

Means and Standard Deviations of Ratings of Transcripts of Theory X and Y Managerial Assumptions by Low and Low-Moderate Principled Subjects

Do you believe the approach just taken by this leader will be effective in increasing the sales output of his organization

	Theory X	Theory Y	Overall Mean
Low principled	3.4 ± 1.2	1.5 ± 0.5	2.4 ± 1.4
Low-Moderate principled	3.7 ± 1.6	1.8 ± 0.8	2.7 ± 1.7
Overall Mean	3.5 ± 1.5	1.6 ± .80	

Would you be willing to work under this leader in this organization?

	Theory X	Theory Y	Overall Mean
Low principled	3.7 ± 1.4	1.4 ± 0.6	2.5 ± 1.7
Low-Moderate principled	4.2 ± 1.5	1.4 ± 0.7	2.8 ± 1.8
Overall Mean	3.9 ± 1.6	1.4 ± 0.7	

- - - - - - - -

n=26 per cell

it more favorably than conventional or low-moderate subjects. It is presumed that if high principled subjects had been available, they would have rated the Army less favorably, both from the standpoint of not being attracted to the Army and from the standpoint of being unwilling to conform to the demand characteristics of the experiment.

No differences were observed in willingness to participate in experiments for different incentives as a function of level of principled reasoning. Thus, no indications were observed that low principled subjects were more willing to work for material rewards or that low-moderate subjects would prefer to work for social rewards. However, the data did indicate that both groups were most willing to work for extra credit and/or money.

The data for preference of Theory Y management over Theory X management was so overwhelming that it is unlikely that any personality variable would have been shown to have influenced the subjects' choices. Personality tends to operate at a maxmial level when circumstances are ambiguous. In a situation where clearly discrepant alternatives are offered and one of the alternatives represents a social ideal, personality should not be expected to influence choice and in the present study it did not influence choice. However, an evaluation of the ratings of Theory X which was the less preferred alternative did yield an interesting fact: Persons rating Army favorably were more accepting of Theory X transcripts of managerial assumptions by indicating greater willingness to work under these conditions than those rating the Army less favorably. In many respects it is not surprising that those who accept the Army are also more accepting of Theory X assumptions of management which is the Army's traditional style. However, the present empirical confirmation, which took place over two entirely different testing sessions, does suggest that a simple device designed to test

acceptance of an authoritarian structure could produce better selection results than a detailed analysis of personality. Thus, one implication of the present study is that further efforts to directly assess attitudes toward authority and styles of leadership rather than personality should be more fruitful in predicting success in the military.

STUDY II

VALUE CONFLICT AND THE LEGITIMACY OF AUTHORITY: A FIELD STUDY

From the rationale presented in the introduction to Section VI, it was predicted that: 1) The military life-style of the Corps of Cadets would attract predominately those persons who rely upon conventional moral reasoning. Those at the conventional level would have a lower turnover rate in the corps and would gain greater satisfaction from their life-style than those of both the pre- and post-conventional stages; 2) The cadets in the conventional stage, those with the lower P-scores, would have an overall more positive attitude towards the military than those of higher P-scores; 3) The reasoning level of a cadet leader would be related to the cadet subordinate's perception of different aspects of cadet life including the manner in which the cadet describes the leader's behavior.

Method

In order to determine the relationship between a person's moral-judgment stage and his attitude toward authority in a military type of situation, 231 freshmen cadets and their squad leaders completed the Defining Issues Test. The cadets also completed the Leadership Behavior Description Questionnaire referring totheir squad leader, the Job Descriptive Index modified to measure satisfaction derived from their leader, duties, and fellow cadets. In addition, the cadets rated their overall satisfaction with cadet life on a five-point scale, and completed two Cantril attitude-anchoring scales. A cadet's datum was included in the analysis only if he had completed all the measures of concern to the hypothesis test. Hence, sample size varies between analyses.

The Defining Issues Test is an objective instrument for the determination of a person's stage of moral reasoning which follows closely to Kohlberg's stages

of moral development. The result of scoring the DIT is the P-score which reflects the extent to which a person relies upon principled, or post-conventional, reasoning in order to resolve a moral dilemma (Rest, 1974; Rest, Cooper, Coder, Masanz, and Anderson, 1974).

The Leadership Behavior Description Questionnaire (LBDQ) required the cadets to describe the behavior of their squad leader on six-dimensions: Persuasion, Initiating Structure, Freedom, Consideration, Production, and Responsibility (Stogdill and Coons, 1957). Each dimension contains several statements which describe leader behavior. The cadet rated each statement as it applies to his leader's behavior on a five-point scale from Always, through Often, Occasionally, Seldom, to Never.

The Job Descriptive Index (JDI) required the cadet to check off statements that describe several aspects of his or her job (Smith, 1967), in this case, of the cadets' corps. The items are either descriptive of job satisfaction or dissatisfaction. Hence, the result of the JDI is a score for satisfaction with each job aspect: Leader, Duties, and Cadets. Overall satisfaction was measured by asking the cadet to respond on a five-point scale, from very satisfying to very dissatisfying, to the statement: "Overall, I would say that my reaction to the military system at my school is one of :::."

The Cantril type attitude-anchoring scales required the cadet to place his present and future perception of the military on a 10-point "ladder", or scale. Specifically, the questions asked are:

1) Now looking at the ladder, suppose your greatest hopes for the military are at the top; your worst fears at the bottom. Where would you put the military on the ladder at the present time?

2) Just as your best guess, where do you think the military will be on the ladder five years from now?

Placing the military high on the ladder means that the cadet has a positive attitude towards the military. A low ladder-score implies a negative attitude.

An experimental corps policy of squad-leader rotation approximately every 2-weeks created a problem of leader identification. Some cadets rated leaders who did not complete the DIT and some leaders had cadet followers who did not correctly complete the DIT, LBDQ, JDI, or the Cantril . Hence, for the leadership analyses there were 28-cadet leaders with a mean of 4.3-cadets per squad.

Psychometric Properties of the DIT

Before directly testing the hypotheses, several psychometric properties of the DIT were explored in order to determine the validity of the P-score. This check on internal validity is presented first in the following section.

The psychometric properties of the DIT were assessed with a correlation matrix constructed in the fashion of the multitrait-multimethod matrix (Campbell and Fiske, 1959). This correlation matrix employed all the subjects in this study who had completed the DIT; N=381. As shown in Table 6.7 the matrix consists of correlations between stage scores within and between the six-dilemmas. Stage-score reliabilities could not be assessed, hence the diagonal is blank. The bold-face coefficients refer to homostage-heterodilemma correlations, or validity coefficients. These should all be positive and significantly large to demonstrate convergent validity of stages between dilemmas. In addition they should all be greater than the coefficients in the row and column of the same dilemma combination. These heterostage-heterodilemma coefficients should be small and nonsignificant in order to demonstrate divergent validity between stages and between dilemmas. The italisized coefficients below the diagonal are the correlations between stages within a dilemma.

The intra-dilemma correlations were all negative and to a great extent, significantly large. This is expected because of the ranking of issues in a dilemma as the basis for the computation of the stage scores. To the extent that a subject ranks an issue of a particular stage as most important, he must rank other issues lower. The three stage scores were summed between dilemmas.

Table 6.7

Stage by Dilemma Correlation Matrix[a]

		(b)															
	Pre	( )															
HEINZ	Con	-16	( )														
	Post	-40	-56	( )													
	Pre	13	03	-11	( )												
STUDENT	Con	-02	12	-14	-09	( )											
	Post	-01	-10	11	-21	-77	( )										
	Pre	01	07	-12	09	18	-13	( )									
PRISONER	Con	00	-04	11	-13	-15	16	-89	( )								
	Post	01	-04	02	05	03	-05	11	-10	( )							
	Pre	05	08	-05	11	01	-04	09	-07	-08	( )						
DOCTOR	Con	-03	-05	04	-12	-04	06	-10	12	-17	-72	( )					
	Post	01	-04	00	-07	00	04	-05	06	-06	02	03	( )				
	Pre	12	09	-08	16	05	-10	14	-16	-07	19	-16	-44	( )			
WEBSTER	Con	-14	-06	07	-12	-04	07	-12	14	11	-22	17	-15	-78	( )		
	Post	11	-04	-09	13	01	-02	13	-13	07	-01	-01	-01	03	-02	( )	
NEWS-	Pre	01	11	-07	05	08	-10	02	-08	06	14	-14	-05	15	-10	-19	( )
PAPER	Con	-05	-10	11	-12	-06	09	-07	13	-09	-12	15	09	-18	12	-24	-76
		Pre	Con	Post	Pre	Con	Post	Con	Post	Pre	Con	Post	Pre	Con	Post	Pre	Con
		HEINZ			STUDENT			PRISONER			DOCTOR			WEBSTER		NEWS-PAPER	

Overall

	Pre	Con	Post
Pre	( )		
Con	-07	( )	
Post	-27	-82	( )

(a) Pre-Preconventional, Con-Conventional, Post-Postconventional; Heinz, Student, etc. are the dilemmas of the DIT;

(b) Correlation coefficients, decimals omitted; all coefficients greater than or equal to | .09 | are significant $p \leq .05$, N=381 two-tailed test with H_o: r=.00;

The overall correlation matrix in the upper right-corner of Table 6.7 shows that the relationship between the P-score and each of the two lower stages is such that subjects who score high on one will score low on the other. This matrix suggests that the sample consists of two sub-populations, those at the conventional level and those at the principled level and that the P-score can discriminate between these groups: Low and High. The insignificant correlation between the pre-conventional and conventional stages suggests that either very few subjects rank pre-issues high or that the pre and conventional dimensions are independent. Because the ranking imposes a zero-sum-gain for the stages, the first possibility is most probable.

Some combinations of dilemmas show more convergent and divergent validity than others. The dilemmas giving validity to the stage scores are: Heinz and Student, Heinz and Newspaper, Student and Prisoner, and Prisoner and Webster; some of the other combinations are suggestive. Because the P-score is recommended by Rest (1974), it is interesting to note that the post-conventional, or P-score, stages show the greatest validity between the different dilemmas; 11 out of 15 meet the criteria for convergent and divergent validity compared to 7 out of 15 for the conventional stage and 3 out of 10 for the pre-conventional stage. Therefore, the P-score is relatively the best score to reflect the underlying dimension of the DIT. Presumably, it measures the extent to which a person depends upon principled reasoning. As a result, the P-score was used in all subsequent analyses involving the DIT.

Results

To test for the predominance of the conventional level, 231-cadets were staged-typed according to the criteria given by Rest (1975): 1) Stage-P, a P-score greater than or equal to 27; 2) Stage-4, a P-score less than 27 and a stage-4 score greater than or equal to 15; 3) Stage-3, neither of the above conditions but a stage-3 score greater than or equal to 10. Three cadets were

unclassified. Stage-3 contained 12% of the cadets, Stage-4 was 66%, and Stage-P was 22%. Since stages 3 and 4 represent the conventional level, these cadets represent 78% of the sample whereas only 22% represent a post-conventional level. No method yet exists for reliably classifying pre-conventional persons with the P-score. The data demonstrated that the majority of cadets exhibit a conventional mode of reasoning.

Rest et al. (1974) presents the appropriate statistics to compare the present sample with a high school and a college sample. Under the null hypothesis that there is no difference between P-score means, two t-tests were calculated between the present sample and each of the other samples according to Hay's (1973) formula for pooling estimates of the population variance parameter (p. 408). Table 6.8 presents the results. The P-scores in Table 6.8 are transformations of the raw P-score into a percentage of responses to principled-level reasoning: raw P-score divided by 60, multiplied by 100 for the percentage. This P-score can range from 0 to 95 percent. The significant difference between the cadets and the college students is expected as the P-score correlates in the .60s with age (Rest, 1974). The cadet sample are freshmen and the college sample consist of juniors and seniors. No difference exists between the cadet sample and that of the High school Sample with the two-tailed test, although this difference approaches significance ($p < .10$).

The three additional samples are included in Table 6.8 for comparison; the absence of the standard deviation presents a test of statistical significance. It is interesting to note that the samples which consist of freshmen and sophomores have mean P-scores in the low 40s. These samples are most comparable in age and academic level to the cadets. The final sample of students are comparable on a regional basis, their reported P-score is low (24.5) although it is possible that it is a raw P-score. As a percentage, it would be 40.8 which is comparable to the other college samples. There is a lack of standari-

Table 6.8

Differences between sample means on the P-score

Sample	N	Mean	SD[(a)]	t
Cadets-freshmen, male, 18-19	264	34.13	11.4	
Senior High School-male & female, civilian Rest et al. 1974	40	37.4	15.4	-1.6
College Juniors & Seniors male & female, civilian Rest et al. 1974	40	54.9	13.6	-10.4*
College Freshmen-New Zealand Univ. McGeorge, 1973	146	43.0		
College Freshmen and Sophmores - a midwest community college Krause, 1974	113	41.0		
College students-southern U.S. college White, 1973	161	24.5		

(a) uncorrected standard deviation (see Hays, 1973, p. 408).

* $p < .05$ two-tailed test for difference between means with the cadet sample.

zation in reporting the psychometric properties of DIT samples. Hence, the data is suggestive and no conclusion may be drawn that the cadet sample differs from comparable civilian samples on the P-score.

The difference in mean P-score for those cadets who remained and who resigned within 2 years is presented in Table 6.9. This difference is not in the predicted direction and is not statistically significant. Table 6.9 also presents the mean satisfaction for the dimensions on the JDI and the overall-satisfaction scale. None of the differences approach significance. In addition, the cadets were classified into either Low or High P-score by splitting the distribution at the mean. No differences approached significance for the JDI and overall-satisfaction scales. Obviously, a cadet's level of moral development did not effect his satisfaction among these dimensions. Neither moral level nor satisfaction would seem to determine whether a cadet would resign.

To test whether cadets of the conventionsl stage have a higher overall positive attitude toward the military, the sample of cadets were split at the mean of the P-score distribution. An analysis of variance was performed on each of the Cantril questions across the two levels of P-score. The present-military question yielded a $F(1, 230)$ of 4.6, ($p < .05$) and the future-military question yielded a $F(1, 230)$ of 4.0, ($p < .05$). The means and standard deviations are presented in Table 6.10.

In addition a correlational analysis was performed. The two Cantril military-attitude questions correlated at .65 ($p < .01$), N=232. The present-attitude question has a correlation of -.17 ($p < .01$) with P-score and the future-military attitude question has a correlation of -.15 ($p < .025$) with P-score.

To test the influence of a squad leader's level of moral reasoning upon cadet follower's perception of the military life-style, the cadets were divided into four categories in a two-way ANOVA design involving leader P-score (Low vs.

Table 6.9

Differences in P-score and satisfaction on the JDI for Remained vs. Resigned and High and Low P-score.

Measure	Stayed N=177	Resigned[a] N=55	Low P-score N=114	High P-score N=118
P-score				
$\bar{X}$	34.9	31.6	-	-
SD	11.6	10.6	-	-
Sat. Leader				
$\bar{X}$	41.4	43.0	42.3	41.2
SD	8.1	8.4	7.7	8.6
Sat. Duties				
$\bar{X}$	35.2	33.3	35.5	34.1
SD	8.4	8.4	8.6	8.2
Sat. Cadets				
$\bar{X}$	41.4	41.4	41.8	40.9
SD	7.5	7.9	7.5	7.7
Overall Sat.				
$\bar{X}$	2.5	2.5	2.6	2.5
SD	1.4	1.6	1.4	1.4

(a) Resigned within 2-years after data was collected.

Table 6.10

Differences in P-score on the

Present and Future Military Attitude

Attitude		Low P-score N=114	High P-score N=116
Present	$\bar{X}$	5.4	4.8
Military	SD	2.3	2.3
Future	$\bar{X}$	6.6	5.9
Military	SD	2.5	2.9

High) and cadet subordinate P-score (Low vs. High). There are two levels of each factor: high and low P-scores determined by a split at the mean of the corresponding factor.

An ANOVA was calculated for each of the JDI scales as the dependent variables. This revealed that the leader's P-score had an effect on the cadet's satisfaction with the leader. This finding in part replicates that of Rest, Turiel, and Kohlberg (1969) who found that persons prefer others who have a higher P-score, or are more morally mature. The cadet leaders who had higher P-scores had cadet followers who were more satisfied with their leaders than leaders with lower P-scores; $F(1,91)=4.1$, ($p < .05$). No other effects were found for the JDI scales.

All the ANOVAs for the LBDQ yielded no effects. Obviously, the P-score of the leader is reflected in cadet satisfaction with the leader, but the P-score of the leader does not effect the manner in which the cadet describes the leader's behavior.

Discussion

The first hypothesis was only partially confirmed. The majority of cadets are of the conventional level of moral reasoning. This is not a surprising finding for several reasons. First, from Kohlberg's theoretical base, a conventional reasoning person must accept traditional social rules and conventions and also feel comfortable in a structured life-style in order to be attracted to the military. Secondly, from a methodological standpoint, the cadet-freshmen are at the age level where conventional moral reasoning is most predominant. Whether the cadets differ from civilian males of the same age and academic level has yet to be substantially demonstrated. Thirdly, from a scrutiny of the DIT, there are predominately more issues in the dilemmas which if chosen by the cadet as important would categorize him at a conventional level.

The null finding of turnover and P-score and satisfaction suggests that neither moral reasoning nor satisfaction are relevant factors that a cadet considers when making a decision to resign. Indeed, most cadets feel that the educational benefits of the Corps are the most salient for such decisions.

The second hypothesis was fully confirmed. Overall, the present-attitude toward the military is inversely related to a cadet's level of moral reasoning. The earlier findings do not demonstrate a manifestation of this attitude in satisfaction or turnover. This would seem to imply that some of the cadets, those with high P-scores, must be in a state of cognitive-dissonance. They describe the military in the same manner as those with low P-scores but they express a more negative attitude toward the military. A post-hoc analysis does not show this dissonance manifesting itself in turnover. Those that resigned showed a slightly less positive attitude toward the military, but this difference does not approach significance.

In order to locate the source of the negative attitudes, the responses to the present and future military-attitude questions were correlated with the satisfaction scales; see Table 6.11. A positive correlation is interpreted as higher satisfaction and a more positive attitude, or lower satisfaction and a more negative attitude. In Table 6.11 present and future attitude is related to satisfaction with fellow cadets. Recall that satisfaction with cadets was unrelated to P-score in the ANOVA of P-score with high and low levels. Conversely, the more sensitive statistic, the Pearson product-moment correlation, demonstrates a significant relationship. Hence, four variables are significantly correlated to each other: satisfaction with fellow cadets, P-score, present and future attitude toward the military. From the theoretical position stated earlier and in the hypotheses, a theoretical network of these variables can be constructed. This network may be tested for appropriateness in an exploratory fashion with

Table 6.11

Correlations of Present and Future Military Attitude with Satisfaction Scales.

Scale	Present Attitude	Future Attitude	P-score
Satisfaction with LEADER	-.01	.12	-.09
Satisfaction with Fellow CADETS	.18**	.26**	-.13*
Satisfaction with DUTIES	.08	.08	-.09
Overall Satisfaction	-.07	-.03	-.01

N = 232

* $p < .05$

** $p < .01$

Path Analysis (Kerlinger and Pedhazur, 1973).

The diagram in the upper portion of Figure-1 presents the theoretical network of recursive causal linkages. Because level of moral reasoning is considered theoretically to be a stable personality type of trait, it is represented as an exogenous variable which effects satisfaction with fellow cadets and the present and future attitudes toward the military. The logic for this directionality is that a variable which concerns reasoning will affect the reasoning employed by a cadet to derive "ideals" with which "perceived reality" is compared and contrasted in order to develop likes and dislikes such as satisfactions and attitude formations. In addition, the satisfaction measure preceeds the attitude measures assumming that attitudes are formulated upon experiences which are satisfying or disatisfying. Finally, present attitudes are hypothesized to determine attitudes towards the future even if such attitudes are speculation. Figure-1 shows the correlations (r) among the variables and the derived path-coefficients (P) of the linkages. Path-coefficients are standarized regression coefficients, or Beta-weights (Kerlinger and Pedhazur, 1973).

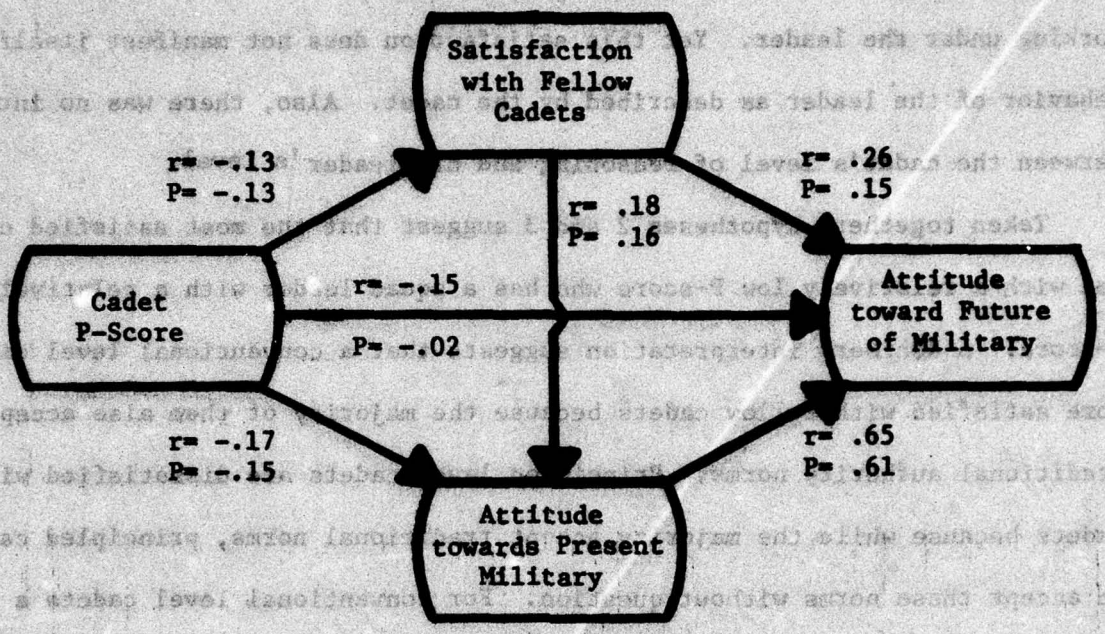
Note that the P-score direct-influence on future attitude is reduced to an insignificant amount. P-score does exert a total indirect influence on future attitude of -.13 via satisfaction with cadets and present attitude. In turn, satisfaction with cadets exerts a total indirect influence of .11 on future attitude via present attitude.

The purpose of the model in the lower portion of Figure-1 is to illustrate the result of the Path-Analysis and where moral reasoning fits into the scheme of attitude formation towards the military. Essentially, it suggests that cadets in the conventional levels will gain greater satisfaction with their fellow cadets and have a better, or positive, attitude towards the military. The

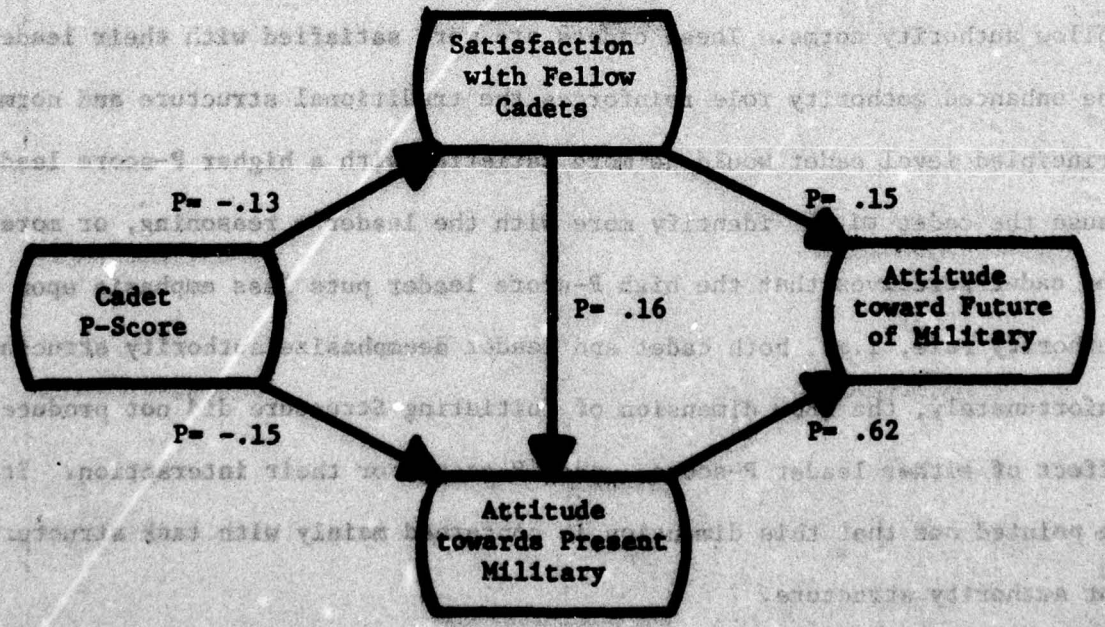
Figure 6.1

Path Model for P-score, Satisfaction with Fellow Cadets and Present and Future Military Attitudes (a)

Hypothesized Model



Derived Model



(a) r = zero-order correlation

P = Path Coefficient

extent to which these latter two variables are important for successful cadet performance will determine the utility of the model.

Hypothesis 3 was only partially confirmed. The reasoning level of the cadet's squad leader does seem to influence the satisfaction the cadet derives from working under the leader. Yet this satisfaction does not manifest itself in the behavior of the leader as described by the cadet. Also, there was no interaction between the cadet's level of reasoning and his leader's level.

Taken together, Hypotheses 2 and 3 suggest that the most satisfied cadet is one with a relatively low P-score who has a squad leader with a relatively high P-score. A Kohlberg interpretation suggests that a conventional level cadet is more satisfied with fellow cadets because the majority of them also accept the traditional authority norms. Principled level cadets are dissatisfied with fellow cadets because while the majority accept traditional norms, principled cadets fail to accept these norms without question. For conventional level cadets a high P-score leader enhances his authority role with his reasoning level. That is, the different reasoning further differentiates those in authority and those who follow authority norms. These cadets are more satisfied with their leader because the enhanced authority role reinforces the traditional structure and norms. A principled level cadet would be more satisfied with a higher P-score leader because the cadet might identify more with the leader's reasoning, or more likely, the cadet perceives that the high P-score leader puts less emphasis upon the authority role, i.e., both cadet and leader deemphasize authority structure. Unfortunately, the LEDQ dimension of Initiating Structure did not produce a main effect of either leader P-score, cadet P-score, or their interaction. It should be pointed out that this dimension is concerned mainly with task structure and not authority structure.

This field study demonstrated some construct validity for moral reasoning as

measured by the Defining Issues Test. Most importantly, the concept of moral reasoning was found to exert influence upon a cadet's satisfaction with his fellow cadets and indirectly influence the cadet's attitude toward the military.

SECTION VII

SUMMARY

The present section serves to summarize the findings of the previous six sections.

SECTION I - Coercive and Persuasive Power: Determinants and Reactions

Laboratory Study. The reactions of internal and external locus of control subjects to leaders using reward and coercive power were investigated in a group setting. It was predicted that internals would react more negatively to the use of coercive power than externals and that externals would react more positively to leaders' feedback of success and failure than externals. Male undergraduate volunteers met with a confederate who was selected by lot as leader of the group involved in a simple manual task. The results indicated that internals less frequently complied with leaders demands than externals regardless of power used, and complied least frequently under coercive power when feedback was given. No relationship between vote to retain the old leader and locus of control or power was observed. However, the data indicated that externals may have utilized success and failure feedback better than internals by more realistically calculating the amount of bonus for their leaders.

Field Study. The present study sought to investigate: (1) the nature of the relationship between cadet satisfaction and perceived leadership style; (2) the nature of the relationship between cadet satisfaction, cadet locus-of-control and perceived coercive leadership style, and (3) the nature of the relationship between leader locus-of-control and perceived leadership style.

The Leader Behavior Description Questionnaire (LBDQ), Rotter's Locus of Control scale and a measure of cadet satisfaction toward leaders were completed by 206 freshmen cadets in Sample A and 80 freshmen cadets in Sample B.

The results indicated that: (1) cadet satisfaction with leaders was determined

primarily by the degree of persuasion and consideration exhibited by the leader; (2) in Sample A, low internal control cadets were more satisfied with low perceived coercive leadership style than either high or medium coercive leadership and no differences existed for high control cadets; (3) in Sample B both low and high internal control cadets were more satisfied with low than high perceived coercive leadership style; and (4) no significant relationships were found between the locus-of-control of the leader and perceived leadership style.

The results were discussed with regard to situational variables which might account for the findings.

SECTION II - Self- Versus Group-Oriented Leadership

The purpose of the present study was to evaluate the relationships between group-oriented and personalized uses of power and one personality factor, level of moral development, which might influence the use of power by a leader and the reactions of group members to the use of power. Male introductory psychology students were identified as low or low-to-moderately principled moral reasoners. Subjects in groups of 5 or 7 participated in a group decision making experience. After the group decision was reached, group members were given bonus feedback that their leader had either given them (including himself) an equal share of the bonus or had taken half of the bonus for himself and left the remaining half to be shared among the group members. The dependent variables were the amount of the bonus subjects would give to their leaders and whether they would vote to keep the same leader for another group problem. An analysis of the data indicated that subjects were willing to give more of the bonus to a leader who had kept half of the bonus than to a leader who had shared equally. An interaction further revealed that low principled subjects were willing to give more money to a leader who kept half than the low-moderate principled subjects. No statistically reliable difference in vote to retain the same leader were observed.

The fact that both low and low-moderate subjects gave more money to leaders who kept half of the bonus than to leaders who shared equally and that low principled subjects did so more than moderately principled subjects supported the hypothesis that both low and low-moderate subjects would be conforming with low-principled subjects being more conforming than low-moderate subjects. Interestingly, neither group of subjects attempted to replace him as leader for a new group.

SECTION III - Interpersonal Trust and the Delegation of Authority and Responsibility

Laboratory Study. The delegation of items to staff members for investigation by subjects varying in interpersonal trust (Rotter, 1967) was studied in a role-played law firm. It was predicted that high trusters would delegate more items than low trusters when no information about staff members' capabilities was known and that both high and low trusters would delegate more items to a staff member who was identified as competent and trustworthy than one identified as having made errors of judgment. Twenty male and female college students received no information and twenty received complete information before delegating responsibility. The results failed to support the prediction that high trusters would delegate more items under no information conditions but did show that high trusters delegated more items to an untrustworthy staff member when information was known. The data supported Garske's (1975) conclusion that low trusting might lead to more adaptive behavior than high trusting.

Field Study - Part I. The present paper attempted to determine the extent to which a subordinate's perceptions of leader behavior would be related to interpersonal trust. The trust level of the member as well as the trust level of the leader were manipulated. Since interpersonal trust was considered to be a generalized expectancy of the degree to which persons may be relied on (Rotter, 1967, 1971), leaders who are trusting should be perceived as allowing greater freedom of action and initiative in their subordinates.

The Rotter interpersonal trust scale was given to 153 military cadets and their leaders at two southern universities. The cadets were classified into three levels of trust (Low, Medium, High) and their leaders were also classified into three levels of trust (Low, Medium, High). The cadet members were then required to evaluate their leaders on the Ohio State Leader Behavior Description Questionnaire (LBDQ) and the Job Descriptive Index (JDI) for satisfaction with supervision (in this case leadership).

A 3 x 3 MANOVA was performed on the six scales of the LBDQ and the JDI. The results revealed that the scales of Consideration, Freedom, and JDI-Satisfaction were found to be positively related to Leader Trust. The subordinate trust variable was not significant as well as the Subordinate trust x Leader trust interaction.

Field Study - Part II.

The present study sought to investigate whether cadet satisfaction with leaders would vary as a function of cadet locus-of-control and perceived delegation and freedom of authority and responsibility.

Freshmen squad members completed the Rotter Locus-of-Control scale (LOC), the Leader Behavior Description Questionnaire (LBDQ) and a satisfaction with leader scale.

The results indicated that cadet locus-of-control was not a significant variable and that cadets were most satisfied with leaders who allowed freedom, authority, and responsibility. The data are explained on the basis of the situational variables existing at a military/college setting.

SECTION IV - The Attractiveness of the Military Organization

Field Study - Part I. The present study was aimed directly at assessing the attractiveness of the military organization and gaining insight into those variables which are responsible for the adjustment of freshmen cadets to the

military setting in the academic community.

Freshmen cadets in Sample A (N=311) and Sample B (N=102) were administered the Self-Anchoring Scale of Cantrill and Semantic Differential ratings related to authority concepts. Included in the Cantrill Scale were essay questions regarding the hopes and fears for the military and personal life of the cadet. After two years (end of sophomore year) data was collected regarding those cadets that had withdrawn from each institution.

The data were factor analyzed for each sample and the following results were obtained: (1) For Sample A, the attitudes toward the present and future of the military were loaded on the same dimension as self-rating of the cadet's present and future. (2) For Sample B, the present and future ratings of the military were loaded on a different factor than the self-rating of the cadet's present and future.

Sample A showed significantly lower ratings for self-ratings of present and future and more positive attitude toward the authority concepts than the Sample B. Regarding withdrawal data, cadets in Sample A who resigned showed significantly lower present and future self-ratings than those cadets who remained. No difference existed within the Sample B.

The essay questions were related to the statistical findings and the data were discussed in the framework of situational variables which existed within each setting.

Field Study - Part II. The second study was a Field investigation conducted with 252 freshmen cadets and 104 freshmen civilians from three universities. The subjects were required to complete a questionnaire dealing with the variables of Commitment, Concern, and Attraction of the Military. Statistical analyses indicated that relative to civilians, cadets were significantly more concerned with Factors of World Orientation, Self-Orientation, and Future Military, and had less

concern with future personal issues such as choice of a spouse and having a family.

SECTION V - Intra Group Conflict: Individual Versus Unit Objectives

The reactions of subjects who were low or low-to-moderate in their usage of morally principled reasoning to small group experience in which reward was based either on a strictly competitively or a modified cooperative strategy were assessed. As predicted, subjects who were low in their use of principled reasoning less favorably rated a competitve reward strategy in which the most influential group member was given all the reward than did low-to-moderate principled subjects. Conversely, low-to-moderate principled subjects more favorably rated a reward strategy in which all group members shared in the rewards, but the most influential group member was given more of the reward than other group members. Similar predictions for the actual earned distributions of the rewards were not confirmed. Thus, it was established that level of principled reasoning influenced group members' approval of reward strategies, but not their satisfaction with actual reward distribution. Because of the nature of the experimental task, it was not possible to adequately assess individual group members' levels of performance as a function of approval of reward strategy; however, it is assumed that a relationship should exist and should be studied.

SECTION VI - Value Conflict and the Legitimacy of Authority

Laboratory Study. The relationships between usage of level of morally principled reasoning and respect for legitimate authority figures, willingness to participate in experiments for various incentives, and endorsement of Theory X and Theory Y assumptions of management were assessed. In general, no relationship between any of the variables and principled reasoning was observed with the exception that the higher the level of principled reasoning used the more unfavorable was the rating of Army and military officers. Possible explanations for

these findings were (1) that low principled subjects are more attracted to today's Army because of the incentives offered for enlistment and (2) low principled subjects may more readily conform to the demand characteristics of an experiment. A post hoc analysis of the relationship between acceptance of Theory X assumptions of management and favorability of attitudes toward the Army revealed a statistically reliable correlation which accounted for almost as much of the variance as did the relationship between principled reasoning and ratings of the Army. This finding suggested that the more economical and less difficult evaluation of attitudes would be nearly as efficient in predicting acceptance of the Army as would the more detailed process of evaluating level of principled reasoning.

Field Study. This study examined the relationships between a cadet's level of moral reasoning as measured by the Defining Issues Test, and level of satisfaction with various dimensions of the cadet life-style. The P-score of the Defining Issues Test was found to be relatively the best measure of the test. The majority of cadets (78%) were staged-type at the conventional level but no conclusion could be reached that the cadets differed in moral reasoning from civilian freshmen students. Level of moral reasoning was not found to be related to turnover. But, moral reasoning was found to be inversely related to the cadets present and future attitude toward the Military. A path-model was presented to evaluate where moral reasoning fit into the scheme of satisfaction and attitude variables. In addition, the squad-leader's level of moral reasoning was positively related toward cadet satisfaction with the leader. A Kohlberg interpretation, although not totally inclusive, accounts for these results.

SECTION VIII

CONCLUSIONS, IMPLICATIONS AND LIMITATIONS

This final section is concerned with the conclusions, implications, and limitations of the research reported in the present paper. For clarity, each section will again be reported separately.

SECTION I: Coercive and Persuasive Power: Determinants and Reactions

The basic question in Section I was whether the locus-of-control personality variable would moderate the reactions of a subordinate toward his leader's use of coercive and persuasive power. In general, it was found that cadet subordinates prefer persuasive and considerate leaders. The locus-of-control variable was a more complex variable than originally hypothesized. In the laboratory study, the locus-of-control variable did not moderate satisfaction with different leader use of power, but did moderate the performance of the cadet subordinates. In the latter finding, internals were less responsive to the demands of the leaders than externals.

The major finding that should be recognized for possible generalization to an operational setting is that cadet subordinates are most satisfied with a leader who is perceived to be considerate and persuasive and that the perceived behaviors of structure, production, and responsibility are not predominate variables. A limitation that warrants consideration is that such a generalization may be confined to a situation in which the leader has limited power and the task is very structured. This limitation is dictated by the situational confines of a military college setting.

SECTION II: Self- versus Group-Oriented Leadership

This section was basically oriented toward the examination of the effect of

differential patterns of reward allocation on subordinates who differ in level of moral development. It may be concluded that if subordinates are at the conventional level of moral reasoning, a reward allocation by a leader that distinguishes between the amount given to the leader himself and to the subordinate will be more effective for a valued leader than an allocation which does not make such a distinction.

The major implication is that if highly principled subordinates were included, they should act independently of authority and not conform as easily to the personalized use of power as did moderate and low principled (conventional) subordinates.

SECTION III: Interpersonal Trust and the Delegation of Authority

This section involved one laboratory study and two field studies divided toward an investigation of the role of interpersonal trust as a variable in the delegation of authority and responsibility. In the laboratory study, it was found that when the low and high trusting allocators did not know the trustworthiness of the recipients, delegation of responsibility was equal. However, when a specific expectancy was established, low trusters delegated more responsibility to a trustworthy recipient and high trusters delegated more responsibility to a untrustworthy recipient. The implication is that low trusting delegators are more conservative in their assessment of the worthiness of the recipient regardless of prior knowledge of the recipient. On the other hand, high trusting delegators would be so liberal in their assessment of recipients that quite possibly an untrustworthy recipient might receive responsibility that might be abused.

The field studies carry the direct implication that the trust level of a leader does affect his interaction with his subordinates. In this case,

the leader's behavior will reflect characteristics of his lack of trust. Cadet subordinates perceived cadet leaders who were low in interpersonal trust as being less persuasive, less considerate, and tolerating less freedom than cadet leaders who were high in interpersonal trust. In addition, cadet subordinates were less satisfied with cadet leaders who were low in interpersonal trust.

A second major finding of the field studies was that the locus-of-control of the cadet was not an important determinant of the manner in which the cadet responded to the leader's use of delegators of authority and responsibility. Regardless of the cadet subordinates' level of locus-of-control, they are satisfied with leaders who are perceived to allow more authority, responsibility and freedom.

SECTION IV: The Attractiveness of the Military Organization

Taken together, the field studies indicate two major findings that have direct bearing on those variables that underlie a cadet's perception of the attractiveness of the military. First, at a university which is all military, a cadet is apt to withdraw if he has a low self-concept for both the present and future status. A major limitation of this conclusion is that it is possible that two alternative implications are possible. First, it may be that the self-concept a cadet enters with is responsible for withdrawal or that once he enters the program, he is apt to develop a low self-concept as a function of the stress imposed upon him during the first year. The second major finding and one that should be heeded by those responsible for the recruiting of cadets is that those individuals who are most attracted to the military have a strong commitment to an occupational choice and a political and religious ideology. In addition, they are not concerned with future domestic issues such as choosing a spouse or having a family.

SECTION V: Intra-group Conflict: Individual versus Unit Objectives

This section involved a laboratory study which focused upon level of moral development and satisfaction with reward distribution strategies which emphasized individual efforts (competitive) versus group efforts (cooperative). Low principled subjects expressed greater satisfaction with a competitive strategy than low-moderate subjects, and low-moderate subjects expressed greater satisfaction with a cooperative strategy than did low principled subjects. No difference existed, however, when satisfaction with the actual distribution of rewards was considered. Although no performance measure was included, a definite implication of the present study is that expressed dissatisfaction with a reward strategy would eventually interfere with progress toward a group goal. To this end, a leader should select group members who have a level of moral development which would be compatible with the reward distribution strategy used in the particular group.

SECTION VI: Value Conflict and The Legitimacy of Authority

The laboratory study implies that student level of moral reasoning is inversely related to favorableness of military authority figures, and of those students who rate the Army favorably, there is a preference for Theory X managerial-assumptions. Hence, a major implication is that the recruitment of military personnel should focus upon persons of conventional reasoning and those who prefer Theory X. In general, these persons would require a structured life-style which provides security.

The field study demonstrated that the best method for scoring the Defining issues test is the P-score. The study also carries the implication that the military setting in a university attracts persons at the conventional level of reasoning. Thus, recruitment should focus upon potential cadets of the conven-

tional level. It is suggested that these cadets will adapt to the military life style with ease and should be most satisfied, get along better with fellow cadets, and have a more positive attitude toward the future of the military. A further implication is that cadet-leaders should be selected on the basis of a relatively higher level of moral reasoning than the majority of cadets. With the majority of cadets at the conventional level of reasoning, the enhancement of authority structure with differential levels of reasoning will increase the attractiveness of the organization by increasing satisfaction with the leader.

GENERAL LIMITATIONS

In any experiment, whether it be laboratory or field study, there are limitations that cannot be avoided. Within laboratory studies such as reported in the present paper, the limitation of generalization to real life settings is relevant. At the same time, the very nature of the scientific method allows a most precise statement of the systematic variation between variables. The major limitations to field studies is that while the empirical findings have generality, their applicability is restricted to populations that are similar in both personal and situational similarity. Such is the case in the present data. The samples were drawn from military college settings in the South and Southwest. Whether similar findings may be obtained from schools in other regions of the country are problematic and can only be substantiated by further research. Furthermore, the underlying reasons for the relationships discovered in the field studies carry a number of possible alternatives. The present investigators have suggested particular reasons throughout the paper. It should be remembered, however, that their notions are suggestive and are by no means the only alternatives for explantion of the data.

REFERENCES

Alegre, C. & Murray, E. J. Locus of control, behavioral intention, and verbal conditioning. Journal of Personality, 1974, 42, 668-681.

Alker, H. A. A quasi-paranoid feature of students extreme attitudes against colonalism. Behavioral Science, 1971, 16, 218-227.

Argyris, C. Organization of a bank. New Haven: Yale University, Labor and Management Center, 1954.

Barnard, C. I. The functions of the executive. Cambridge: Harvard University Press, 1938.

Baron, R. M., Cowan, C., Ganz, R. L., & McDonald, M. Interaction of locus of control and type of performance feedback: Considerations of external validity. Journal of Personality and Social Psychology, 1974, 30, 285-292.

Bass, B. M. Leadership, psychology, and organizational behaviors. New York: Harper, 1960.

Becker, S., & Carroll, J. Ordinal position and conformity. Journal of Abnormal and Social Psychology, 1962, 65, 129-131.

Biondo, J. & McDonald, Jr., A. P. Internal-external locus of control and response to influence attempts. Journal of Personality, 1971, 39, 407-419.

Bodin, A. Family interaction, coalition, disagreement, and compromise in problem, normal and synthetic triads. Unpublished doctoral dissertation, State University of New York at Buffalo, 1966.

Campbell, D. T. & Fiske, D. W. Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix. Psychological Bulletin, 1959, 56, 81-105.

Coch, L. & French, J. R. P., Jr. Overcoming resistance to change. Human Relations, 1948, 1, 512-532.

Cravens, R. W. & Worchel, P. Self-versus group-oriented leadership. Prepared for the Army Research Institute for Behavioral and Social Sciences. Arlington, Virginia, 1975.

Deutsch, M. An experimental study of the effects of cooperation and competition upon group process. Human Relations, 1949, 2, 129-152 and 199-231.

DuCette, J., & Wolk, S. Cognitive and motivational correlates of generalized expectancies for control. Journal of Personality and Social Psychology, 1973, 26, 420-426.

Elms, A. C., & Milgram, S. Personality characteristics associated with obedience and defiance toward authoritative command. Journal of Experimental Research in Personality, 1966, 1, 282-289.

Erikson, E. H. The problem of ego identity. Journal of the American Psychoanalytic Association, 1956, 4, 56-121.

Erikson, E. H. Childhood and society. (2nd ed.) New York: Norton, 1963.

Fairweather, G. W. Social change: The challenge to survival. Morristown, New Jersey: General Learning Press, 1972.

Feather, N. T. Valence of outcome and expectation of success in relation to task difficulty and perceived locus of control. Journal of Personality and Social Psychology, 1967, 7, 372-386.

Fiedler, F. E. Leadership. Morristown, New Jersey: General Learning Press, 1971.

Fischer, E. H. Birth planning of youth: Concern about overpopulation and intention to limit family size. American Psychologist, 1972, 27, 951-958.

Fischer, E. H., & Turner, J. LeB. Orientation to seeking professional help: Development and research utility of an attitude scale. Journal of Consulting and Clinical Psychology, 1970, 35, 79-90.

Fitzgerald, B. J., Pasewark, R. A., & Noah, S. J. Validity of Rotter's Interpersonal Trust Scale: A study of delinquent adolescents. Psychological Reports, 1970a, 26, 163-166.

Fitzgerald, B. J., Pasewark, R. A., & Noah, S. Interpersonal trust and delinquency: A reply to Rotter. Psychological Reports, 1970b, 26, 665-666.

Flacks, R. Protest or conform: Some social psychological perspectives on legitimacy. Journal of Applied Behavioral Science, 1969, 5, 127-150.

Flippo, E. B. Management: A behavioral approach. Boston: Allyn and Bacon, 1966.

Flippo, E. B. Principles of personnel management. New York: McGraw-Hill Book Company, 1971.

Foa, U. G. Relation of worker's expectation to satisfaction with supervisor. Personnel Psychology, 1957, 10, 161-168.

French, J. R. P., Jr. A formal theory of social power. Psychological Review, 1956, 63, 181-194.

French, J. R. P., Jr., Morrison, H. W., and Levinger, G. Coercive power and forces affecting conformity. Journal of Abnormal and Social Psychology, 1960, 61, 93-101.

French, J. R. P., Jr. & Raven, B. H. The bases of social power. In D. Cartwright (ed.) Studies in social power. Ann Arbor: University of Michigan, 1959.

Friedlander, F. The primacy of trust as a facilitator of further group accomplishment. Journal of Applied Behavioral Science, 1970, 6, 387-400.

Garske, J. P. Interpersonal trust and construct complexity for positively and negatively evaluated persons. Personality and Social Psychology Bulletin, 1975, 1, 616-619.

Getter, J. A personality determinant of verbal conditioning. Journal of Personality, 1966, 34, 397-405.

Goldhamer, H., & Shils, E. A. Types of power and status. American Journal of Sociology, 1939, 45, 171-182.

Goodstadt, B. E. & Hjelle, L. A. Power to the powerless: Locus of control and the use of power. Journal of Personality and Social Psychology, 1973, 27, 190-196.

Goodstadt, B. & Kipnis, D. Situational influences on the use of power. Journal of Applied Psychology, 1970, 54, 201-207.

Gore, P., & Rotter, J. B. A personality correlate of social action. Journal of Personality, 1963, 31, 58-64.

Haan, N., Smith, M. B., & Block, J. H. Moral reasoning of young adults: Political-social behavior, family backgrounds, and personality correlates. Journal of Personality and Social Psychology , 1968, 10, 183-201.

Hadley, T. R., & Jocob, T. Relationship among measures of family power. Journal of Personality and Social Psychology, 1973, 27, 6-12.

Hamsher, J. H., Geller, J. D., & Rotter, J. B. Interpersonal trust, internal-external control, and the Warren Commission report. Journal of Personality and Social Psychology, 1968, 9, 210-215.

Harsanyi, J. C. A bargaining model for social status in informal groups and formal organizations. Behavioral Science, 1966, 11, 357-369.

Hays, W. L. Statistics for the Social Sciences, Holt, Rinehart and Winston, Inc., 1973.

Hochreich, D. J. Defensive externality and attribution of responsibility. Journal of Personality, 1974, 42, 543-557.

Hochreich, D. J., & Rotter, J. B. Have college students become less trusting? Journal of Personality and Social Psychology, 1970. 15, 211-214.

Jacobson, W. D. Power and interpersonal relations. Belmont, California: Wadsworth, 1972.

James, W. H., Woodruff, A. B., & Werner, W. Effect of internal and external control upon changes in smoking behavior. Journal of Consulting Psychology, 1965, 29, 184-186.

Jolley, M. T., & Spielberger, C. D. The effects of locus of control and anxiety on verbal conditioning. Journal of Personality, 1973, 41, 443-456.

Kaplan, R. M. Components of trust: Note on use of Rotter's scale. Psychological Reports, 1973, 33, 13-14.

Katz, H. A., & Rotter, J. B. Interpersonal trust scores of college Students and their parents. Child Development, 1969, 40, 657-661.

Kelley, H. H., & Thibaut, J. W. Experimental studies of group problem solving and process. In G. Lindzey (Ed.), Handbook of social psychology. Reading Mass.: Addison-Wesley, 1954. Pp. 735-785.

Kerlinger, F. N., & Pedhazur, E. J. Multiple Regression in Behavioral Research; Holt, Rinehart and Winston: 1973.

Kipnis, D. M. The effects of leadership style and leadership power upon the inducement of attitude change. Journal of Abnormal and Social Psychology, 1958, 57, 173-180.

Kipnis, D., & Lane, W. Self-confidence and leadership. Journal of Applied Psychology, 1962, 46, 291-295.

Klugh, H. E. Statistics: The essentials for research. New York: Wiley, 1970.

Kohlberg, L. Stage and sequence: The cognitive-developmental approach to socialization. In D. A. Goslin (ed.) Handbook of socialization on theory and research. Chicago: Rand McNally, 1969.

Kohlberg, L. The development of children's orientations towards a moral order. I. Sequence in the development of moral thought. Vita Humana, 1963, 6, 11-33.

Kohlberg, L. The development of modes or moral thinking and choice in the years ten to sixteen. Unpublished doctoral dissertation, University of Chicago, 1958.

Kohlberg, L. Moral and religious education and the public schools: A developmental view. In T. Sizer (Ed.), Religion and public education. Boston: Houghton-Mufflin, 1967.

Kohlberg, L. Stages in the development of moral thought and action. New York: Holt, Rinehart, & Winston, 1969. (b)

Kohlberg, L. From is to ought. In T. Mischel (Ed.), Cognitive development and epistemology. New York: Academic Press, 1971. Pp. 151-235.

Kohlberg, L., & Turiel, E. Moral development and moral education. In G. S. Lesser (Ed.), Psychology and educational practice. Glenview, Ill.: Scott, Foresman, 1971. Pp. 410-465.

Kolb, D. A., Rubin, I. M., & McIntyre, J. M. Organizational psychology: An experimental approach. Englewood Cliffs, N.J.: Prentice-Hall, 1971.

Kurtine, W., & Greif, E. B. The development of moral thought: Review and evaluation of Kohlberg's approach. Psychological Bulletin, 1974, 81, 453-470.

Lewin, K., Lippitt, R., & White, R. K. Patterns of aggressive behavior in experimentally created social climates. Journal of Social Psychology, 1939, 10, 271-299.

Loomis, J. L. Communication, the development of trust, and cooperative behavior. Human Relations, 1959, 12, 305-315.

Lotsof, E. J., & Grot, J. S. Interpersonal trust, internal-external control and the Walker Report on the democratic convention disorders. Psychological Reports, 1973, 32, 747-752.

MacDonald, A. P. Internal-external locus of control and the practice of birth control. Psychological Reports, 1970, 27, 206.

MacDonald, A. P., Kessel, V. S., & Fuller, J. Self-disclosure and two kinds of trust. Psychological Reports, 1972, 30, 143-148.

Marcia, J. E. Determination and construct validity of ego identity status. Unpublished doctoral dissertation, Ohio State University, 1964.

Marcia, J. E. Development and validation of ego identity status. Journal of Personality and Social Psychology, 1966, 3, 551-558.

Maslow, A. Motivation and personality. New York: Harper & Row, 1954.

Massari, D. J., & Rosenblum, D. C. Locus of control, interpersonal trust and academic achievement. Psychological Reports, 1972, 31, 355-360.

McClelland, D. C. The two faces of power. Journal of International Affairs, 1970, 24, 29-47.

McDavid, J., Jr. Personality and situational determinants of conformity. Journal of Abnormal and Social Psychology, 1959, 58, 241-246.

McGinnies, E., & Ward, C. D. Persuasibility as a function of source credibility and locus of control: Five cross-cultural experiments. Journal of Personality, 1974, 42, 360-371.

McGregor, D. M. The human side of enterprise. New York: McGraw-Hill, 1960.

Mellinger, G. D. Interpersonal Trust as a Factor in Communication. Journal of Abnormal and Social Psychology, 1956, 52, 304-309.

Milgram, S. Behavioral study of obedience. Journal of Abnormal and Social Psychology, 1963, 67, 371-378.

Moeller, G., & Applezweig, M. H. A motivational factor in conformity. Journal of Abnormal and Social Psychology, 1957, 55, 114-120.

O'Reilly, C. A., & Roberts, K. H. Information filtration in organizations: Three experiments. Organizational Behavior and Human Performance, 1974, 11, 253-265.

O'Reilly, C. A., & Roberts, K. H. Trust and communication in work units. Unpublished manuscript, University of California, Berkeley, 1975.

Orlofsky, J. L. The development of a methodology for the study of ego identity. Unpublished manuscript, State University of New York at at Buffalo, 1970.

Orlofsky, J. L., Marcia, J. E., & Lesser, I. M. Ego identity status and the intimacy versus isolation crisis of young adults. Journal of Personality and Social Psychology, 1973, 27, 211-219.

Pasewark, R. A., Fitzgerald, B. J., Sawyer, R., & Fossey, J. Validity of Rotter's Interpersonal Trust Scale: A study of paranoid schizophrenics. Psychological Reports, 1973, 32, 982.

Phillips, D. N., & DeVault, M. Y. Evaluation of research on cooperation and competition. Psychological Reports, 1957, 3, 289-292.

Podd, M., Marcia, J. E., & Rubin, B. The effects of ego identity status and partner perception on a prisoner's dilemma game. Journal of Social Psychology, 1968, 82, 117-126.

Pines, H. A., & Julian, J. W. Effects of task and social demands on locus of control differences in information processing. Journal of Personality, 1972, 40, 407-416.

Rest, J. Manual for the Defining Issues Test: An objective test of moral judgment development. Unpublished manuscript, University of Minnesota, 1974.

Rest, J. R., Turiel, E., & Kohlberg, L. Level of moral development as a determinant of preference and comprehension of moral judgment made by others. Journal of Personality, 1969, 37, 225-252.

Rest, J. R., Cooper, D., Coder, R., Masanz, J., & Anderson, D. Judging the important issues in moral dilemmas - An objective measure of development. Developmental Psychology, 1974, 10, 491-501.

Ritchie, E., & Phares, E. J. Attitude change as a function of internal-external control and communicator status. Journal of Personality, 1969, 37, 429-443.

Rotter, J. B. Social learning and clinical psychology. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1954.

Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80, (Whole No. 609).

Rotter, J. B. A new scale for the measurement of interpersonal trust. Journal of Personality, 1967, 35, 651-665.

Rotter, J. B. Generalized expectancies for interpersonal trust. American Psychologist, 1971, 26, 443-452.

Rotter, J. B., Chance, J. E., & Phares, E. J. Applications of social learning theory of personality. New York: Holt, Rinehart, and Winston, Inc., 1972.

Saltzstein, H. D., Diamond, R. M., & Belenky, M. Moral judgment level and conformity behavior. Developmental Psychology, 1972, 7, 327-336.

Samelson, F. Conforming behavior under two conditions of conflict in the cognitive field. Journal of Abnormal and Social Psychology, 1957, 55, 181-187.

Sanford, F. H. Authoritorianism and leadership. Philadelphia: Institute for Research in Human Relations, 1950.

Sawyer, R., Pasewark, R., Davis, F., & Fitzgerald, B. Relationship of Rotter's Interpersonal Trust Scale to social class. Psychological Reports, 1973, 32, 989-990.

Shlenker, B. R., Helm, B., & Tedeschi, J. T. The effects of personality and situational variables on behavioral trust. Journal of Personality and Social Psychology, 1973, 25, 419-427.

Schroder, H. M., & Hunt, D. E. Dispositional effects upon conformity at different levels of discrepancy. Journal of Personality, 1958, 26, 243-258.

Schwarz, J. C. Influences upon expectancy during delay. In J. B. Rotter, J. E. Chance, & E. J. Phares (eds.), Applications of social learning theory of personality. New York: Holt, Rinehart, and Winston, Inc., 1972.

Sherman, S. J. Internal-external control and its relationship to attitude change under different social influence techniques. Journal of Personality and Social Psychology, 1973, 26, 23-29.

Smith, P. C. The development of a method of measuring job satisfaction: The Cornell studies, In Studies in Personnel and Industrial Psychology, Flieshman, E. A. (Ed.) Homewood: Dorsey Press, 1967.

Stogdill, R. M. Personal factors associated with leadership: A survey of the literature. Journal of Psychology, 1948, 25, 35-71.

Stogdill, R. M., & Coons, A. E. Leader behavior: Its description and measurement. Research Monograph No. 88., Ohio State University, 1957.

Straits, B. C., & Sechrest, L. Further support of some findings about characteristics of smokers and non-smokers. Journal of Consulting Psychology, 1963, 27, 282.

Strickland, B. R. The prediction of social action from a dimension of internal-external control. Journal of Social Psychology, 1965, 66, 353-358.

Strickland, B. R. Individual differences in verbal conditioning, extinction, and awareness. Journal of Personality, 1970, 38, 364-378.

Switkin, L. R., & Gynther, M. D. Trust, activism, and interpersonal perception in black and white college students. Journal of Social Psychology, 1974, 94, 153-154.

Tannenbaum, R., & Schmidt, W. H. How to choose a leadership pattern. Harvard Business Review, 1958, 36, (No. 2), 95-101.

Tawney, R. H. Equality. New York: Harcourt Brace Jovanovich, 1931.

Thibaut, J., & Kelley, H. H. The social psychology of groups. New York: John Wiley, 1959.

Vondracek, F. W., & Marshall, M. J. Self-disclosure and interpersonal trust: An exploratory study. Psychological Reports, 1971, 28, 235-240.

Vroom, V. H. Some Personality determinants of the effects of participation. Journal of Abnormal and Social Psychology, 1959, 59, 322-327.

Vroom, V. H. Employee attitudes. In G. Fisk (ed.) Frontiers of management psychology. New York: Harper & Row, 1960, 127-143.

Walker, D. N., & Mosher, D. L. Altruism in college women. Psychological Reports, 1970, 27, 887-894.