

AD-785 413

METHODS FOR ENHANCING THE MILITARY
POTENTIAL OF SELECTED MANPOWER
SEGMENTS

Barbara L. Seboda, et al

Westinghouse Electric Corporation

Prepared for:

Air Force Office of Scientific Research

August 1974

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

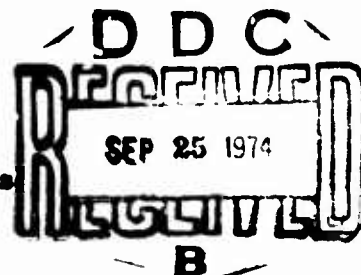
**Best
Available
Copy**

Westinghouse Health Systems
5575 Sterrett Place
1st Floor, The Ridgely Building
Columbia, Maryland 21044
Westinghouse Project WM43507

Barbara L. Seboda
Vernon B. Morris, Jr.
Charles D. Ward

August 1974

Submitted to: Dr. Charles E. Hutchinson
U. S. Air Force Office of
Scientific Research
Directorate of Life Sciences
1400 Wilson Boulevard
Arlington, Virginia 22209



Vernon B. Morris, Jr., Principal Investigator

AFOSR - TR - 74 - 1369-1

FINAL REPORT

METHODS FOR ENHANCING THE
MILITARY POTENTIAL OF
SELECTED MANPOWER SEGMENTS

USAFOSR

F44620-72-C-0093

AIR FORCE OFFICE OF SCIENTIFIC RESEARCH (AFSC)

NOTICE OF TRANSMISSION TO DDC

This report has been reviewed and is
approved for release under AFR 190-12 (7b).

Classification unlimited.

D. V. TAYLOR

Technical Information Officer

Approved for public release;
distribution unlimited.

ACKNOWLEDGEMENTS

The authors wish to express their appreciation to all who have supported and contributed to the research program herein reported. We regret that it is not possible to list everyone.

Dr. Charles E. Hutchinson, Program Manager, Life Sciences, AFOSR and the hundreds of students and their parents who completed the survey instrument deserve special acknowledgement. Those surveyed remain anonymous, but the absence of their names does not reflect a lack of appreciation.

The Baltimore City Public Schools through Dr. John L. Crew, Anne Emery, Richard Doak, Thomas S. English, Harold Clark, Virginia W. Leland and Douglas Norris were most cooperative; as was the Baltimore City Bureau of Recreation, through L. Clements Nixon.

In performing all phases of the program Robert L. Crawford, E. Frank Hamrelson, and Louis Robinson, Jr. made major contributions. The voluminous data processing effort was conducted by John Michela, James S. Grimes, and Eliezer N. Solomon. Our sincere thanks to Ruth L. Banks and Barbara S. Foster for their efforts in preparing the interim and this final report.

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. SUMMARY	3
Communications Patterns	3
Occupational Decision-Making	6
Occupational Role of Women	7
Recruitment Information and Influence	8
III. SAMPLE DESIGN AND DESCRIPTION	10
Sample Acquisition	10
Statistical Analyses	13
Description of the Sample	16
VI. COMMUNICATION PATTERNS	21
Hours of Exposure/Month	23
Total Sample	26
Group Profiles	26
Significant Differences	27
Information/Entertainment Ratings	30
Job Information	32
Total Sample	32
Group Profiles	37
Significant Differences	37
Job Influence	42
Total Sample	43
Group Profiles	43
Significant Differences	43
Interaction Style and Agreement Extent	49
Interaction Style	49
Agreement Extent	50
V. OCCUPATIONAL DECISION-MAKING	53
Theoretical Relationships	56

TABLE OF CONTENTS (Continued)		Page
	Values and Armed Services Ratings	59
	Job Characteristics	59
	Armed Services Ratings	63
	Evaluating the Job Desirability of the Armed Services	66
	Products and Sums	68
	Attraction and Probability	73
	Armed Services	73
	Major Activity	75
VI.	OCCUPATIONAL ROLE OF WOMEN	77
	Scale Construction and Scoring	78
	Student Responses	82
	Recruitment Implications	85
	Student-Parent Comparisons	86
VII.	RECRUITMENT INFORMATION AND INFLUENCE	92
	Recent Exposure	92
	Information Sources	98
	Attitudes of Potential Influencers	104
VIII.	REFERENCES	107

APPENDICES

APPENDIX A.	High School Seniors Questionnaire
APPENDIX B.	Ordered Means For Hours of Exposure, Job Information Ratings, and Job Influence Ratings by Population Group
APPENDIX C.	Ordered Means For Job Characteristics Ratings by Major Groups
APPENDIX D.	Ordered Means For Products of Job Characteristics and Armed Services Ratings by Population Groups
APPENDIX E.	An Annotated Bibliography of Technical Reports Concerning Armed Services Recruitment and Retention: 1972-1973
APPENDIX F.	Technical Paper: "Influence Through Personal and Nonpersonal Channels of Communication"

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM																
1. REPORT NUMBER AFOSR TR-74-1369		2. GOVT ACCESSION NO.																
3. TITLE (and Subtitle) METHODS FOR ENHANCING THE MILITARY POTENTIAL OF SELECTED MANPOWER SEGMENTS		4. RECIPIENT'S CATALOG NUMBER AD785 413																
5. AUTHOR(s) Barbara L. Seboda, Vernon B. Morris, Jr., Charles D. Ward		6. TYPE OF REPORT & PERIOD COVERED Final																
7. PERFORMING ORGANIZATION NAME AND ADDRESS Westinghouse Electric Corporation Health Services Division 5575 Sterrett Place, The Ridgely Building Columbia, Maryland 21044		8. CONTRACT OR GRANT NUMBER(s) F44620-72-C-0093																
9. CONTROLLING OFFICE NAME AND ADDRESS Air Force Office of Scientific Research 1400 Wilson Boulevard Arlington, Virginia 22209		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Project No. 9778 61102F 681313																
11. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE August 1974																
		13. NUMBER OF PAGES 208																
		14. SECURITY CLASS. (of this report) Unclassified																
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE																
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited																		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)																		
18. SUPPLEMENTARY NOTES TECH, OTHER																		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) <table border="0"> <tr> <td>Race</td> <td>Job Information</td> <td>Males</td> </tr> <tr> <td>College</td> <td>Job Influence</td> <td></td> </tr> <tr> <td>Jobs</td> <td>Recruitment</td> <td></td> </tr> <tr> <td>Occupational Decision-Making</td> <td>Volunteer army</td> <td></td> </tr> <tr> <td>Communications</td> <td>Females</td> <td></td> </tr> </table>				Race	Job Information	Males	College	Job Influence		Jobs	Recruitment		Occupational Decision-Making	Volunteer army		Communications	Females	
Race	Job Information	Males																
College	Job Influence																	
Jobs	Recruitment																	
Occupational Decision-Making	Volunteer army																	
Communications	Females																	
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report addresses communication patterns, occupational decision-making, the occupational role of women, and armed services recruitments information and influence as perceived by high school seniors. Responses are analyzed for the various populations derived through a factorially crossed design: sex-by-race-by-post high school orientation (college vs. non-college bound). Parents of the seniors also answered questions about the occupational roles of women. An occupational decision-making model is presented, and a bibliography titled: "An Annotated Bibliography of Technical Reports Concerning Armed Services Recruitment and Retention: 1972-1973."																		

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

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
U S Department of Commerce
Springfield VA 22151

LIST OF TABLES AND FIGURES

FIGURES

		<u>Page</u>
1.	Model of Occupational Decision-Making with Armed Services as Desired Outcome	57
2.	Profile of Armed Services Job Characteristics	67

TABLES

1.	Distribution of Initial and Usable Sample by Race, Sex, and Career Orientation	12
2.	Descriptive Variables	17
3.	Control Variables	18
4.	Number Hours of Exposure/Month	24
5.	Communication Summary Means and Significance - Hours of Exposure/Month	28
6.	Information/Entertainment Rank	31
7.	Information/Entertainment Ratings	33
8.	Job Information Rating	35
9.	Communication Summary Means and Significance - Job Information Ratings	38
10.	Job Influence Ratings	44
11.	Communication Summary Means and Significance - Job Influence Ratings	46
12.	Interaction Style and Agreement Extent	51
13.	Extent of Agreement Rank	50
14.	Theoretical Predictions	58
15.	Job Characteristics - Summary of Group Values, Armed Services Quantity Ratings and Significant Effects	60
16.	Armed Services Ratings Effects	64
17.	Job Characteristics - Values and Armed Services Quantity Ratings by Group	69

	<u>Page</u>
LIST OF TABLES AND FIGURES (Continued)	
18. Summed Products for Armed Services	72
19. Armed Services and Major Activity Attraction and Satisfaction, Group Means and Significant Effects	74
20. Attitudes Toward Women Scale, Group Means and Significant Effects	80
21. Attitudes Toward Women, Student and Parent Comparisons - Sum of 20 Questions	87
22. Women Mechanics - Parent and Student Means	90
23. Recruiting Ads Seen In Last Month	93
24. Type of Ad	95
25. Source of Ad	96
26. Follow-up On Ads by Those Interested	97
27. Peer Interaction Follow-up	99
28. Discussion About Recruiting Ads Initiated by Friends	100
29. Conversation With Recruiter and Occasion	102
30. Literature Request and Source of Content Information	103
31. Rankings of Information Sources	104
32. Attitudes of Relatives and Friends Toward Enlisting	105

I. INTRODUCTION

The Air Force, though presently experiencing much less severe problems than other branches of the military, faces both quantitative and qualitative requirements in maintaining adequate force strength. In the all-volunteer environment, there is a greater burden upon the services to attract qualified persons. This has resulted in accelerated efforts to reach potential enlistees and to accent new and existing incentives, as the services compete with civilian employers for personnel.

Different appeals or enlistment incentives may operate differentially both in the numbers and types of persons that will be attracted. The "Youth in Transition" study [1], for example, suggests that a higher pay incentive attracts those who average lower in general intelligence than those who are attracted by an educational support incentive. Although the armed services need a spectrum of personnel skills and capabilities, at any given time, quotas will be short in specific slots. Therefore it would be useful to know how best to reach and attract certain kinds of people who could fill particular roles.

Accordingly, this report describes an exploratory study of communication patterns and occupational values for a number of important population groups. The population dimensions selected for investigation were sex, post high school career orientation (college vs. non-college bound) and race. These dimensions were selected because each has a component that, at least prior to the all-volunteer environment, could be considered to be underrepresented in the services. Thus, females, the college bound, and blacks were not or could not be recruited as readily as males, the non-college bound, and whites. An understanding of the communication patterns and the occupational values of these population groups, then, ultimately might help in extending the "eligible" pool of enlistees.

-
1. Jerome Johnston and Jerald G. Bachman, Youth in Transition, Volume V, "Young Men and Military Service," Institute for Social Research, University of Michigan, Ann Arbor, Michigan, 1972.

The questionnaire used to assess these patterns and values is included as Appendix A of this report. The questionnaire was administered to a sample of 310 Baltimore city high school seniors during March 1974. There are a number of separate question sets within the questionnaire dealing with various matters. They are discussed within the body of this report in the following sections:

	<u>Report Section</u>	<u>Questionnaire Page(s)</u>
III.	Sample Design and Description	11
IV.	Communication Patterns	1, 2, 3, 4, 6
V.	Occupational Decision Making	7, 8, 9, 10, 14
VI.	Occupational Roles of Women	5
VII.	Recruitment Information and Influence	12, 13

Previous publications from this project include the following "Methods for Estimating and Enhancing the Military Potential of Selected Manpower Segments," August 1973 (the first year final report); "A Demographic Methodology to Select Survey Sites for Conducting Population Subgroup Analyses" (an attachment to the first year final report); and "An Annotated Bibliography of Reports Pertinent to Armed Services Recruitment and Retention" (also included with the first year final report).

An annotated bibliography included as Appendix E of the present report updates the bibliography produced last year. It is titled: "An Annotated Bibliography of Technical Reports Concerning Armed Services Recruitment and Retention: 1972-1973." A forthcoming paper, which will be published in the Journal of Psychology in September 1974, is included here as Appendix F. The title of the paper is "Influence Through Personal and Nonpersonal Channels of Communication."

II. SUMMARY

The findings of the project focus upon a select group of youth. The sample was composed of high school seniors, typically 18 years of age, from Baltimore city. The average respondent was close to a "B" student and, socially, was from the lower middle class. The final sample was balanced for race, sex, and post high school orientation (college vs. non-college bound).

The independent variables of sex, race and orientation, which were crossed factorially in a 2 x 2 x 2 arrangement contained equal numbers of subjects. The major statistical technique used to analyze the data was analysis of variance.

Overall, the data suggest that differential communication/influence patterns do occur for different population groups. This is not to say that an approach for reaching and/or attracting one group will "burn off" another group. Rather, the differences are ones of degree. For some communication sources or occupational values, the difference is not simply between the two levels of sex, or of orientation, or of race, but rather reflects an interaction between these variables.

Major findings are summarized below. In addition to the fuller presentation to be found in the subsequent text, "profiles" (rankings by means) of communication sources and occupational values for individual population groups are included as Appendices to this report:

Communication Patterns

Each respondent was asked questions about 26 personal and mass media sources with respect to amount of exposure experienced, amount of job information received, and amount of job influence felt. Also assessed was interaction style, including extent of agreement, with a selected set of sources.

The three top rated sources for the total sample were as follows: for hours of exposure, mother, radio, TV; for job information, newspapers, mother, teacher; and for job influence, mother, teacher, and school counselor. The total

sample reported, by approximately a 2 to 1 ratio, more personal than mass media exposure, job information and job influence. Extent of agreement with mothers was reported to be "often," the same rating given to peer group members. The "moderate" extent of agreement reported for fathers was noticeably lower. Interaction style was generally an exchange of opinions with all sources. However, a tendency toward one-way opinion communication appeared as a function of age; younger persons were more often seen to be the recipient of the respondent's opinion, and respondents were more often seen to be the recipient of an older source's opinion.

Orientation played a minor role with respect to group differences for hours of exposure. The non-college bound reported more exposure to adult friends than did the college bound. The college bound gave a significantly higher rating of job influence to printed media than did the non-college bound. Also, there was a sex-by-orientation interaction for job information and job influence with respect to parents. In each of the two interactions, male college bound respondents gave the highest ratings, followed by the female non-college bound, while female college bound and male non-college bound respondents reported relatively less job information and influence from parents.

Other than the interactions noted above, there were no significant sex differences for ratings of job influence. For hours of exposure, there was more female exposure to adult friends, and also a sex-by-orientation interaction for this category: female non-college bound reported the highest exposure, with males non-college bound much lower, but somewhat higher than males and females who were college bound. Females also indicated more exposure to "other relatives" (i.e., outside the nuclear family) than did males. Job information ratings provided the greatest number of sex differences. The "personal" category of adult friends was rated higher as a job information source by females than by males. Females reported that a relatively larger percent of their job information came from the mass media than did males, and females rated all

mass media categories (electronic, printed, special, all) significantly higher than males. There was a sex-by-orientation interaction for the electronic media; females non-college bound made the highest rating.

There were significant race differences in hours of exposure to siblings and "other relatives"; blacks indicated more exposure to these sources than did whites. Questions addressed to family composition also indicated that blacks in the sample came from larger families than did whites, which is the probable explanation for the former differences. Blacks also indicated more exposure to "formal (personal)" sources. This category is composed of teachers, school counselor, business representatives, college representatives and armed services recruiter. Higher black exposure to sources in the formal category apparently is primarily a function of greater exposure to teachers and school counselor. For job information, blacks gave higher ratings to a number of personal sources than did whites. Whites had a higher "% mass media" score and a higher rating for special media (brochures, posters and billboards). The significantly higher black ratings were for the following sources: all personal sources combined, all relatives, and "other relatives." Blacks also gave a higher job information rating to the category of "all friends" than did whites. Blacks were significantly higher than whites for the job information rating on one mass media category: electronic media. Job influence ratings by blacks tended to be higher overall than those given by whites, with blacks reporting more influence in general. Blacks gave significantly higher job influence ratings to "personal sources" (including the categories of "other relatives," all friends, and adult friends, in particular), and formal (personal) sources. Whites gave a significantly higher rating to percent job influence from mass media, but blacks gave a significantly higher rating to job influence from the electronic media. For the three questions, there is an overall pattern of greater black emphasis on personal sources (with the exception of electronic media), and relatively higher white values for the mass media.

Occupational Decision-Making

Respondents were asked to rate 15 job characteristics along a continuum of desirability/undesirability, and to assess the extent to which each characteristic was present in the average job, their present career choice, and the armed services. Also, they rated their attraction to, and probability of carrying out, their present career choice as well as armed services enlistment.

The total sample rated the following characteristics to be of average to high desirability: prestige, worthwhile activity, freedom to carry out assigned tasks on their own, security, friendly people, fringe benefits, high pay, advancement, and the opportunity for self-improvement. Considered to be less than average in desirability (or even undesirable) were: responsibility, easy work, personal restrictions, travel, uninteresting tasks and physical danger. Combining the above evaluations with ratings of the extent to which the characteristics are present in an armed services job, the armed services were considered to have the following positive attractions: hard work, interesting tasks, freedom, worthwhile activity, security, high pay, friendly people, prestige, fringe benefits, advancement, and opportunity for self-improvement. The armed services' negative attributes were responsibility, travel, personal restrictions and physical danger. The generally "good image" presented by the armed services, combined with the finding that few respondents intended to enlist, supports the hypothesis that non-enlistment is a function of some "better" alternative. Ratings for attraction to, probability of carrying out chosen career vs. armed services enlistment also suggest this to be so. Future analyses of characteristics of average job and of career choice will provide more evidence concerning this possibility.

The college bound found one characteristic significantly more desirable than did the non-college bound: the opportunity for self-improvement. There was a race-by-orientation interaction for uninteresting tasks: whites who were college bound were much more negative toward this characteristic than were the other groups. With respect to travel, a characteristic rated below average by all

groups, a sex-by-orientation interaction indicated that males non-college bound gave the highest ratings followed by college bound females, while college bound males were somewhat higher than non-college bound females. The only other sex difference for the job characteristic evaluations was found for physical danger. Females were even more negative than males toward this characteristic.

The amount of each job characteristic perceived to be associated with an armed services job also was examined. The single orientation difference related to travel: the college bound thought that there was more travel involved in the armed services than did the non-college bound. Whites, compared to blacks, also perceived travel as being higher. Females credited the armed services with more prestige, friendlier people, and greater freedom in carrying out assigned activities than did males. Males perceived more physical danger in the armed service than did females. There was a race-by-orientation interaction for physical danger: college bound blacks perceived more physical danger in an armed services job than did non-college bound blacks, while college bound whites saw less danger than did non-college bound whites. Blacks associated an armed services job with higher pay and more responsibility than did whites.

Occupational Role of Women

A series of 21 questions were asked concerning attitudes toward the rights and roles of women. These questions were asked of parents as well as students. Responses were scored along a scale of traditional versus liberal.

Female students were more liberal (profeminist) than male students. College bound students were more liberal than non-college bound students. There was no overall pattern by race; whites were relatively more liberal on two items and blacks on only one. The overall trend suggests that increases in female enlistments will not be particularly upsetting: selective recruitment (of those with traditional outlooks) probably will limit the strain.

The difference in attitudes between the sexes is more marked among students than among parents. Mothers tended to be more liberal than fathers,

but not significantly so. Attitudes for the older group, contrary to what might have been expected, were not consistently more conservative than those of students. Mothers, in fact, were significantly more liberal than their own sons. Fathers tended to be more liberal than their own sons, but not significantly so. Daughters were not markedly more liberal than their own mothers.

Recruitment Information and Influence

Approximately 70% of the total sample indicated that they had noticed at least one recruiting ad in the last month. Three-quarters of those who had seen ads indicated that the ads were about both men and women. The ads were most frequently seen on posters and billboards or on TV. Twenty percent of the respondents seeing ads subsequently attempted to get more information. After seeing ads, approximately a third of these respondents discussed them with male friends and about a fifth discussed them with female friends.

Forty-two percent of the respondents had male friends who had come to them at some time to discuss recruiting ads, and 18% had female friends who had done so. Approximately 35% of the respondents indicated that they had had contact with a recruiter at some time. Most respondents had contact with a recruiter during school visits. However, non-college bound males were as likely to have had contact at a recruiting station as during a school visit. Eighteen percent of the sample had mailed in a coupon or telephoned to ask for armed services literature. Black males and non-college bound males were most likely to have done so. Sources important for information about the armed services were ranked as follows: armed services recruiter first, followed by school counselor, knowledgeable older friend or relative, male peers, and female peers.

Some of the respondents had discussed enlistment in the armed services with their relatives and friends. Forty-two percent had talked to older friends, who were primarily neutral toward enlistment. Thirty-five percent had talked

to their mothers, and the same proportion of the sample had talked to male peers. Mothers were most often neutral in their opinions on enlistment, but male peers were more opinionated. However, male peers tended to encourage the respondents to enlist almost as often as they discouraged them. Approximately 25% or fewer of the respondents spoke to fathers, sisters, female peers and brothers about enlistment. Fathers and brothers tended to be primarily neutral; sisters tended to encourage this possibility, but female peers tended to discourage it. In expressing their own attitudes to their peers, the 44% of the sample that had given advice to their male peers about enlistment were primarily neutral, as were those in the sample (22%) who had advised their female peers.

III. SAMPLE DESIGN AND DESCRIPTION

Sample acquisition, analytical techniques, and descriptive characteristics of the sample are presented in this section.

SAMPLE ACQUISITION

Advertisements were placed in Baltimore city newspapers and on Recreation Center bulletin boards in March 1974. They offered \$5.00 for filling out a questionnaire on occupational decision-making. Respondents also were obtained through the public school system. The accepted applicants had to be seniors in Baltimore city public high schools.

The questionnaire was administered to 310 Baltimore city high school seniors, male and female, during the latter part of March 1974. All respondents were paid \$5 for participation. The questionnaire took approximately one hour to complete. A review for questionnaire completeness was conducted at the conclusion of the administration session, prior to paying each respondent. Questionnaire administration took place at city recreation centers and at city high schools. Research staff was always on hand to answer questions. A complete description of the data-collection procedures was included in the Third Quarter Report (January, February, March 1974) for the project.

The objective was to determine the possible effects of the independent variables of sex, post high school career orientation, and race, on the dependent variables of job-related communication activities, occupational values, attitudes toward women as workers, etc. It was important to have equal numbers of subjects in each of the following eight* categories:

Black males college bound

Black males non-college bound

* It was originally intended that sex and orientation only be examined. The addition of race as an independent variable was decided upon at a later stage in the project.

Black females college bound
Black females non-college bound
White males college bound
White males non-college bound
White females college bound
White females non-college bound

Prior to the actual data collection, of course, it was not practically possible to screen for perfectly equal representation in each of the eight cells. Such screening was done later, prior to the data analysis (see below).

The full sample of 310 students is probably a reasonable representation of the sex, orientation, and race of high school seniors in Baltimore city. The race breakdown in the city schools, for example, is approximately 70% black and 30% white. As shown in Table 1, this is the same race breakdown as the present sample. The sample's apparent overrepresentation of black females (over black males) actually is probably fairly close to the overall city trend for black high school seniors, as well. However, no percentages were available for direct comparison on this point. The apparent overrepresentation of college bound blacks was checked against the exact figures for one high school, using counseling records for college applications. It coincided reasonably well with our sample.* Again, however, city-wide figures were not available for a definitive check. Two factors of course should be taken into consideration with respect to the present distribution between college bound and non-college bound: (1) the distinction is based on the perception of the respondent; in fact, economics, admission procedures,** etc. could preclude realization of this goal; and (2) high school seniors

* The orientation measure used in the present study was the response on page 10 of the questionnaire to: "What do you think your major activity will be for the first few years after high school?" Responses then were classified as either college bound (the response of "go to college") or non-college bound (all other responses).

** On the other hand, admission requirements to some community colleges are minimal -- a high school diploma regardless of grade average.

TABLE 1
DISTRIBUTION OF INITIAL AND USABLE SAMPLE
BY RACE, SEX, AND CAREER ORIENTATION

SEX/ORIENTATION DESIGNATION	BLACK				WHITE				COMBINED	
	Initial % of Sub- sample N	Errors % of Group N	Usable % of Sub- sample N	% of Sample	Initial % of Sub- sample N	Errors % of Group N	Usable % of Sub- sample N	% of Sample	Usable % of Sample N	
Male College	36 16.6	6 17%	30 17.0	11.3	19 20.4	0 0%	19 21.4	7.1	49 18.5	
Male Non-College	19 8.8	2 11%	17 9.6	6.4	24 25.8	1 4.2%	23 25.8	8.7	40 15.0	
Subtotal	55 25.4	8 14.5%	47 26.6	17.7	43 46.2	1 2.3%	42 47.2	15.8	89 33.5	
Female College	113 52.1	24 21%	89 50.3	33.5	27 29.0	2 13.5%	25 28.1	9.4	114 42.8	
Female Non-College	49 22.6	8 6%	41 23.2	15.4	23 24.7	1 4.3%	22 24.7	8.3	63 23.7	
Subtotal	162 74.7	32 20%	130 73.5	48.9	50 53.7	3 6%	47 52.8	17.7	177 66.5	
TOTAL	217 100%	40 -	177 100%	66.5%	93 100%	4 -	89 100%	33.5%	266 100%	

NOTE: Total % equals 100% ± .1% due to rounding

are a select group since many of the non-college bound already have dropped out.

The final sample, for analysis purposes, had equal numbers of blacks and whites, males and females, and college bound and non college bound. All strata thus were equally represented. In addition, only subjects with complete questionnaires (or nearly so) were included in the final sample. A two stage selection process was followed to arrive at the final sample:

1. Some of the subjects (approximately 15%) were excluded in the first stage. They included those who had failed to answer important questions and also a few who apparently gave non-valid answers (e.g., all items on a lengthy scale marked with the same response). Both categories are designated as "errors" in Table 1. A total of 44 questionnaires (a little less than 15% of the initial sample) were eliminated on this basis, leaving a pool of 266 usable questionnaires.
2. The cell with the smallest number of usable (i.e., error free) questionnaires contained black males who were non-college bound. There were 17 respondents in that cell. All other cells subsequently were reduced in size so that each of the other cells also contained 17 subjects. This reduction was carried out for each cell by a random selection process. The final sample thus contained 136 subjects, systematically balanced in factorial fashion by sex, race, and college/non-college orientation ($2^3 \times 17 = 136$).

The term "various population groups" refers to either the race-by-sex-by-orientation cells, each containing 17 respondents, or to the 4 sex-by-orientation cells and the 4 sex-by-race cells. Each of the latter two categories contain cells of 34 respondents each. The "major population groups" referred to in the following text are blacks and whites; males and females; the college bound and the non-college bound. These larger groups (each group contains 68 respondents) are comprised of the same respondents as in the eight strata; each major population group pair contains the total sample classified in a different manner.

STATISTICAL ANALYSES

The primary statistical technique which was employed was analysis of variance (ANOVA). In a few cases, however, t tests were used to compare individual means; the χ^2 test was used where parametric tests were not appropriate.

Two different series of two-way analyses of variance were conducted on most of the questionnaire data. The independent variables were respondent's sex and orientation in the first series of such ANOVA's. Sex (male-female) and orientation (college bound vs. non-college bound) are the two independent variables specified in the original plans. They are the two variables on which most of the project's original formulations and concerns were based.

The above ANOVA's, although appropriate for the project's original concerns, do have one possible disadvantage -- they are not concerned with other potentially interesting variables. One such variable is the respondent's race. The first set of ANOVA's treated race as a controlled factor rather than as a factor on which separate comparisons were to be made. Additional comparisons involving the race variable, although not required by the original proposal or contract, potentially might be of considerable use to the Air Force. On this basis, the decision was made to do an additional series of ANOVA's which involved the race variable. Specifically, a second complete set of two-way ANOVA's was computed in parallel with the first set. In this second set of ANOVA's, the two independent variables were the respondent's sex (male-female) and race (black-white). These two demographic variables are of particular importance to the contemporary job scene in general, and therefore also to the special area of military recruitment.

One immediate outcome of the above procedure was that the amount of computation eventually carried out was approximately double the amount originally required. Most of these additional analyses have been included in the present report with the hope that they will indeed be of interest and use. Data from both sets of ANOVA's thus appear together section by section. As a result, the primary focus of the present report is on presentation of a very large amount of data, rather than on the interpretation and discussion of a much more limited body of findings.

The ANOVA technique tests for significant differences among groups in the form of "main effects" and "interactions." Main effects, in the present case,

refer to comparisons between males and females, blacks and whites, and college bound vs. non-college bound. Interaction effects refer to outcomes produced by combinations of independent variables, outcomes which are not predictable on the basis of only the separate effects of each independent variable when considered in isolation. An example would be testing whether the effect of one variable (e.g., orientation) is the same at both levels of a second variable (e.g., sex). The sample used in the ANOVA's are the 136 respondents of the final sample described above.

In the interests of economy, individual F values have not been reported, only the p values for significant effects. Significance, in keeping with tradition, has been designated as a p value of .05 or less. Major descending steps from this value also are reported, rather than exact values (i.e., $p < .05$, $p < .025$, $p < .01$, $p < .001$). A p value of $< .05$, then, refers to a p less than .05, but more than .025, etc. In some instances, where questions were considered of particular interest, p values of $< .10$ have been noted.

One exception occurred to the general procedure of conducting two parallel sets of two-way ANOVA's. The exception occurred for the questionnaire data dealing with occupational decision-making (questionnaire pages 7-10, 14), as reported in Section V following. A single three-way analysis of variance was carried out on those data. The three-way ANOVA provides for the same comparisons that are possible in the two-way ANOVA's (main effects due to sex, orientation, and race, plus a sex-by-race interaction and a sex-by-orientation interaction), as well as two additional effects (race-by-orientation interaction and a sex-by-race-by-orientation interaction). All ANOVA's were carried out on the MANOVA program of Clyde, Cramer, and Sherin [1].

-
1. D. J. Clyde, E. M. Cramer, and R. J. Sherin, Multivariate Statistical Programs, Coral Gables, Florida: University of Miami, Biometrics Laboratory, 1966.

DESCRIPTION OF THE SAMPLE

Table 2 describes the sample with respect to a number of characteristics. The characteristics include the number of older and younger sisters; the number of older and younger brothers; the percent of the sample working at part-time jobs; and perception of post high school plans of the respondent's friends.

Blacks come from larger families than whites. For every sibling category (older sisters, younger sisters, older brothers, and younger brothers), whites had larger percentages concentrated at the zero and one values than did blacks. The distributions for blacks and whites were significantly different (via a χ^2 test) for all the categories except younger brothers.

Almost 40% of the respondents reported that they held a part-time job. This trend was somewhat higher for whites and for males. There was little difference with respect to orientation (38% of the college bound reported that they were working at a part-time job versus 40% for the non-college bound). As for the post high school career plans of most of their friends, somewhat better than half of the sample, 53%, reported that their friends were college bound. Females and blacks perceived their friends to be college bound more often than males and whites. The trend for orientation was in the expected direction: the college bound reported their friends as college bound 77% of the time while the non-college bound reported their friends as job bound 66% of the time.

Social class was generally equal among the groups. The average respondent indicated that he or she was "lower middle class," as reported in Table 3, section A. However, there is a difference, significant at the .01 level, in perceived social class for the college versus non-college groups. The means for these groups, classified also by sex, are as follows:

	<u>Social Class</u>	
	Male	Female
College	2.824	2.676
Non-College	3.235	3.118

TABLE 2
DESCRIPTIVE VARIABLES

A. Siblings

1. No. of Older Sisters				2. No. of Younger Sisters		
<u>N</u>	<u>Total</u>	<u>Black</u>	<u>White</u>	<u>Total</u>	<u>Black</u>	<u>White</u>
0	38%	32%	43%	38%	28%	49%
1	35%	28%	43%	30%	29%	31%
2	12%	16%	7%	19%	25%	13%
3	10%	15%	4%	10%	13%	6%
4	6%	9%	3%	3%	4%	1%

3. No. of Older Brothers				4. No. of Younger Brothers		
<u>N</u>	<u>Total</u>	<u>Black</u>	<u>White</u>	<u>Total</u>	<u>Black</u>	<u>White</u>
0	47%	47%	47%	50%	40%	60%
1	29%	22%	35%	32%	32%	31%
2	13%	18%	7%	12%	19%	4%
3	6%	6%	6%	4%	4%	4%
4	6%	7%	4%	2%	4%	0%

B. Present Employment (Part-time Job)

Total - 39%; Black - 35%, White - 43%; Male - 44%, Female - 34%;
College - 38%, Non-College - 40%

C. Friends Post High School Plans

	<u>Total</u>	<u>Male</u>	<u>Female</u>	<u>Black</u>	<u>White</u>	<u>College</u>	<u>NC</u>
College	53%	50%	56%	62%	44%	77%	29%
Job	45%	48%	41%	35%	54%	22%	66%
Other	2%	2%	3%	3%	2%	0%	4%

TABLE 3
CONTROL VARIABLES

A. Social Class and Grades (Means and Significant Effects)

<u>Social Class</u> ⁽¹⁾		<u>Average Letter Grade</u> ⁽²⁾
Male College	2.824	2.471
Male Non College	3.235	2.618
Female College	2.676	1.971
Female Non College	3.118	2.353
Black Male	3.147	2.735
White Male	2.912	2.353
Black Female	3.000	2.353
White Female	2.794	1.971
Significant Effect: Orientation, $p < .01$		Sex, $p < .01$ Race, $p < .01$

B. Leadership, Competition and How to Get Ahead (Means and Significant Effects)

<u>Leadership</u> ⁽³⁾	<u>Competition</u> ⁽⁴⁾	<u>Get Ahead</u> ⁽⁵⁾
Male College	5.588	1.441
Male Non College	5.588	1.500
Female College	5.176	1.529
Female Non College	5.029	1.559
Black Male	5.618	1.559
White Male	5.559	1.382
Black Female	4.971	1.500
White Female	5.235	1.588
Significant Effect: Sex, $p < .05$	Sex, $p < .05$	None

C. Organizational Membership (Means and Significant Effects)

<u>No. of Extracurricular Activities</u>	<u>No. of Clubs Outside of School</u>
Male College	1.735
Male Non College	.882
Female College	1.735
Female Non College	.412
Black Male	1.618
White Male	1.000
Black Female	1.029
White Female	1.119
Significant Effect: Orientation, $p < .001$	Orientation, $p < .01$

(1) 1 - Upper class, 2 - Upper middle class, 3 - Lower middle class, 4 - Working class, 5 - Lower class.

(2) 1 - A, 2 - B, 3 - C, 4 - D, 5 - F.

(3) 1 - very, very low; 2 - very low; 3 - low; 4 - slightly below average; 5 - average; 6 - slightly above average; 7 - high; 8 - very high; 9 - very, very high.

(4) 1 - very, very seldom; 2 - very seldom; 3 - seldom; 4 - slightly less than average; 5 - average; 6 - slightly above average; 7 - often; 8 - very often; 9 - very, very often.

(5) 1 - hard work more important; 2 - hard work, luck equally important; 3 - luck most important.

The college bound report that they are closer to "upper middle class" than do the non-college bound.

In a sense, educational level has been perfectly controlled in the sample: all were high school seniors. As far as academic achievement is concerned, the various population groups range from a mean close to an overall grade of B to a mean close to a C average. There are significant sex and race main effects, both significant at the .01 level, for letter grades as reported below:

<u>Letter Grade</u>	
	Male Female
Black	2.735 2.353
White	2.353 1.971

The average letter grade is significantly higher* for whites than for blacks, and the female mean is significantly higher than the mean for males.

Three questions were asked about degree of leadership, extent of competitiveness, and how one can best get ahead.** The results are shown in Table 3, section B. There were significant sex differences for leadership and competition, but no significant differences at all for "get ahead." The means for the questions showing significant effects (p 's $< .05$) are:

<u>Leadership</u>	
	Male Female
Black	5.618 4.971
White	5.559 5.235

<u>Competition</u>	
	Male Female
Black	5.618 3.941
White	5.235 4.941

* For the coding used in this question, a lower number represents a higher grade; i.e., A = 1, B = 2, C = 3, etc.

** The three choices for how one can best get ahead were: hard work more important; hard work, luck, equally important; luck most important.

All groups report themselves as being close to "average" or "slightly above average" in leadership and competition. The one exception is black females with respect to competition: their mean is closer to "slightly below average." However there is an overall sex effect on both variables, indicating that males are relatively more competitive, and more often leaders, than are females. The response to "how one can best get ahead" centered about 1.5 for all of the population groups, a mean midway between "hard work more important" and "hard work, luck equally important."

Questions were also asked about organizational membership, both school affiliated and outside of school. Significant effects here, as shown in Table 3 section C, were related to orientation. The means are:

<u>Extracurricular Activities</u>			<u>Clubs Outside School</u>		
	Male	Female		Male	Female
College	1.735	1.735	College	1.412	1.441
Non-College	.882	.412	Non-College	.912	.706

The college bound are more likely to belong to organizations, both inside and outside of school, than are the non-college bound. The differences are significant at the .001 and .01 levels, respectively. On the average, extracurricular activities ranged from close to zero to two for the various population groups. Memberships in clubs outside of school centered about one for all of the groups.

Overall, then, the average respondent in the final sample had close to a B grade average, was of the lower middle class, was average in leadership and competitiveness, was a believer in hard work, and was active in two organizations, one of which was school affiliated. A large percentage (40%) held part-time jobs. Somewhat fewer than one-half believed that their friends would get jobs, rather than go to college, after high school.

IV. COMMUNICATION PATTERNS

Are there differential communication/influence patterns identifiable for particular population groups? Pages 1-4 of the questionnaire attempted to investigate this question with respect to sex, career orientation and race. A series of questions were asked about a set of 26 communication sources:

1. How many hours did you spend talking or attending to each source in the past week or month?
 - To what extent was contact with each source important for entertainment and important for information?
2. Overall, how much job information have you gotten from each of these sources?
3. Overall, how influential would you say that each of these sources has been in your present career or job plans?

A series of parallel questions was also asked relative to the armed services, discussed in Section VI.

The 26 communication sources were subsequently classified as follows:

A. Personal Sources

1. Relatives
 - a. Father
 - b. Mother
 - c. Brother
 - d. Sister
 - e. Other Relatives Home
 - f. Other Relatives Not Home
2. Friends
 - a. Boys your age who are going on to college
 - b. Girls your age who are going on to college
 - c. Boys your age who are not going on to college
 - d. Girls your age who are not going on to college
 - e. Neighbors

- f. Adult Male Friends
 - g. Adult Female Friends
- 3. Formal
 - a. Teachers
 - b. School Counselor
 - c. Armed Services Recruiter
 - d. College Representatives
 - e. Business Representatives
 - f. Religious Leader
- B. Mass Media
 - 1. Electronic
 - a. TV
 - b. Radio
 - 2. Printed
 - a. Newspapers
 - b. Magazines
 - c. Books
 - 3. Special
 - a. Brochures
 - b. Posters & billboards

For the examination of statistically significant differences, the following groupings of these sources were used:

- 1. All Personal Sources (the sum of all sources classified under A. above)
- 2. All Mass Media Sources (the sum of all sources classified under B. above)
- 3. % Mass Media (i.e., $\frac{\text{Mass Media Sources}}{\text{Personal Sources} + \text{Mass Media Sources}}$)
- 4. All Relatives (A.1. above)
- 5. Parents (A.1.a. and b.)
- 6. Siblings (A.1.c. and d.)

7. Other Relatives (A.1.e. and f.)
8. All Friends (A.2. above)
9. Adult Friends (A.2.f. and g.)
10. Formal (A.3. above)
11. Electronic Media (B.1. above)
12. Printed Media (B.2. above)
13. Special Media (B.3. above)

HOURS OF EXPOSURE/MONTH

Table 4 presents the mean hours of exposure per month, and the associated standard deviation for various population groups. Respondents answered the question relative to the week or month just past at the time of administration. To facilitate student response, likely sources of frequent contact were grouped under the question "during the last week" and likely sources of less frequent contact were grouped under the question "during the last month." All answers were then combined on a monthly basis by multiplying any weekly figures by 4.35. Two blanks were provided for answering the hours of exposure question for each source, and any entries of three digits were cut back to 99. Fractional answers were converted to the next higher whole number.

No explicit constraint was placed upon the respondent to have all exposure responses fit reasonably within the natural limitations of hours per week or month. In fact, it is questionable that the sum of the total hours indicated could truly be expended in communication activities; however, the information in this form was considered to be more useful than a scaling response for showing relative exposure to the extensive list of communication sources chosen for inclusion. The extreme variability in responses to this question set is indicated by the large standard deviations shown in the table.

The answer of zero was to be used if there was no contact with a particular source. Shown in the table in parentheses is the number of respondents that indicated zero exposure to a given communication source. This is explicitly

TABLE 4

NUMBER HOURS OF EXPOSURE /MONTH*

Source	Total	Female	Male	A. Personal Sources						Black Male	Black Female	White Male	White Female		
				College	Non-College	Black	White	Female							
								College	NC						
1. Relatives															
Father	42.6 (34) 52.0	49.1 (15) 52.8	36.1 (19) 50.7	44.7 (19) 52.2	40.6 (15) 52.0	39.6 (20) 51.6	45.7 (14) 52.5	51.2 (9) 52.0	47.1 (6) 54.4	38.3 (10) 52.4	34.0 (9) 49.5	28.4 (11) 43.0	50.8 (9) 57.4	43.9 (8) 56.9	47.5 (6) 48.6
Mother	83.9 (3) 81.6	94.3 (2) 80.2	73.4 (1) 82.3	92.8 (1) 89.0	74.9 (2) 73.1	92.4 (1) 98.6	75.3 (2) 59.7	101.2 (0) 41.2	87.4 (2) 79.8	84.4 (1) 96.6	62.4 (0) 64.5	83.5 (0) 100.7	101.3 (1) 97.0	63.1 (1) 53.2	87.3 (1) 59.6
Br. ther	38.7 (44) 58.0	37.0 (2) 51.9	40.4 (24) 63.8	44.1 (22) 65.1	33.3 (22) 46.7	47.3 (19) 64.4	30.2 (25) 49.7	44.8 (9) 55.3	29.3 (11) 47.8	43.5 (13) 74.5	37.4 (11) 52.0	45.2 (11) 67.6	49.4 (8) 62.1	35.7 (13) 60.5	24.7 (12) 36.0
Sister	49.1 (33) 62.7	53.6 (15) 55.2	44.7 (18) 69.5	54.8 (20) 70.8	13.4 (13) 13.3	60.6 (12) 73.4	37.6 (21) 47.5	53.1 (10) 51.5	54.1 (5) 59.4	56.5 (10) 86.7	32.8 (8) 44.8	59.9 (5) 84.6	61.4 (4) 61.6	29.4 (10) 46.7	45.8 (11) 47.6
Other Rel. Home	8.7 (100) 24.1	14.5 (45) 32.4	2.9 (55) 7.3	11.3 (46) 25.2	6.1 (54) 22.9	13.7 (47) 32.1	3.7 (53) 9.6	18.6 (20) 33.3	10.5 (25) 31.6	4.0 (26) 8.9	1.8 (29) 5.3	2.6 (28) 6.9	24.8 (9) 42.3	3.2 (27) 7.6	4.2 (26) 11.2
Other Rel. Not Home	11.1 (33) 17.0	11.4 (10) 16.5	10.8 (23) 17.7	8.8 (20) 14.2	13.4 (13) 19.3	12.0 (16) 16.1	10.2 (17) 17.9	10.2 (7) 17.2	12.5 (3) 15.9	7.3 (13) 10.4	14.3 (10) 22.4	9.4 (11) 13.1	14.6 (5) 18.5	12.2 (12) 21.4	8.1 (5) 13.7
2. Friends															
Boys College	38.3 (37) 61.9	35.1 (18) 49.1	41.5 (19) 72.7	55.0 (9) 74.8	21.7 (28) 39.5	40.7 (21) 73.4	35.9 (16) 48.1	47.1 (4) 51.1	23.2 (14) 44.7	62.8 (5) 92.9	20.2 (14) 34.2	47.3 (11) 91.9	34.2 (10) 49.2	35.7 (8) 47.2	36.1 (8) 49.8
Girls College	41.6 (34) 57.4	44.4 (10) 45.4	38.9 (24) 67.6	58.3 (8) 69.3	24.9 (26) 35.8	47.1 (15) 68.6	36.1 (19) 43.3	63.2 (1) 51.0	25.6 (9) 29.2	53.5 (7) 84.2	24.3 (17) 41.8	53.5 (10) 86.1	40.8 (5) 45.4	24.3 (14) 37.6	48.0 (5) 45.8
Boys NC	55.1 (17) 58.6	52.6 (8) 60.6	57.7 (9) 56.9	50.0 (5) 52.5	60.3 (12) 64.2	53.2 (8) 52.6	57.1 (9) 64.5	42.7 (2) 53.1	62.4 (6) 66.6	57.3 (3) 51.6	58.1 (6) 62.6	52.8 (5) 50.9	53.6 (3) 54.9	62.6 (4) 62.8	51.6 (5) 56.6
Girls NC	64.2 (21) 70.5	67.9 (10) 70.0	60.5 (11) 71.3	54.4 (9) 70.6	74.0 (12) 69.5	62.2 (12) 73.0	66.2 (9) 68.4	49.8 (5) 61.7	86.1 (5) 73.9	59.0 (4) 79.2	61.9 (7) 63.6	62.1 (6) 79.6	62.3 (6) 66.9	58.9 (5) 63.1	73.8 (4) 73.5
Neighbors	22.2 (39) 44.5	26.4 (15) 55.6	18.0 (24) 29.4	20.9 (14) 28.2	23.5 (25) 56.5	27.1 (22) 58.7	17.3 (17) 22.3	20.1 (6) 24.5	32.6 (9) 74.8	21.6 (8) 31.9	14.5 (16) 26.7	18.7 (14) 35.0	35.4 (8) 75.0	17.4 (10) 23.1	17.3 (7) 21.9
Ad. Male Friends	18.2 (5) 24.0	22.0 (7) 28.3	14.4 (8) 18.3	12.6 (7) 17.8	23.8 (8) 28.0	20.1 (8) 26.8	16.4 (7) 20.9	13.1 (3) 18.9	31.0 (4) 33.2	12.2 (4) 16.9	16.6 (4) 19.6	13.4 (4) 15.1	26.7 (4) 33.8	15.5 (4) 21.2	17.4 (3) 21.0
Ad. Female Friends	15.1 (15) 19.8	18.2 (5) 21.9	12.1 (10) 17.1	10.7 (8) 14.3	19.6 (7) 23.4	15.5 (12) 21.7	14.4 (3) 17.9	9.9 (4) 11.8	26.5 (1) 26.3	11.5 (4) 16.5	12.6 (6) 18.0	10.3 (7) 1.0	20.6 (5) 27.5	13.8 (3) 21.1	15.8 (0) 14.4

* Numbers reported on the first line for each source are X hours of exposure in the first month, and in parentheses, the number answering zero (included in the calculation of X). Second line entry is the standard deviation.

TABLE 4 (Continued) NUMBER HOURS OF EXPOSURE/MONTH*

Source	Total	Female	Male	College	Non-College	Black	White	Female College	Female NC	Male College	Male NC	Black Male	Black Female	White Male	White Female
3. Formal															
Teachers	57.4 (14) 62.5	54.1 (7) 57.0	60.4 (7) 67.9	65.1 (6) 73.1	42.7 (8) 49.1	75.3 (5) 73.5	39.5 (9) 42.7	60.1 (3) 62.8	48.0 (4) 50.7	70.1 (3) 82.8	51.4 (4) 48.1	77.0 (4) 84.6	73.6 (1) 61.8	44.5 (3) 40.7	34.5 (6) 44.7
School Counselor	4.5 (40) 4.5	4.4 (19) 9.7	4.1 (21) 7.3	4.8 (17) 9.4	4.1 (23) 7.6	6.8 (14) 10.4	2.2 (26) 5.2	5.4 (7) 12.2	3.9 (12) 6.3	3.9 (10) 5.5	4.4 (11) 8.8	6.2 (8) 9.5	7.4 (6) 11.4	2.1 (13) 2.9	2.3 (13) 6.8
Armed Serv. Rep.	6 (119) 3.3	7 (62) 3.8	6 (57) 2.6	1 (61) 4	1.1 (58) 4.6	4 (60) 1.6	9 (59) 4.3	1 (31) 3	1.2 (31) 5.4	1 (30) 4	1.0 (27) 3.6	4 (28) 1.4	3 (32) 1.7	7 (29) 3.4	1.0 (30) 5.1
College Rep.	2.4 (77) 9.0	3.4 (38) 12.4	1.5 (39) 2.5	3.5 (27) 12.1	1.4 (50) 3.6	3.5 (35) 12.2	1.4 (42) 3.5	4.5 (13) 16.9	2.3 (25) 4.9	2.5 (14) 3.7	5 (25) 9	1.9 (19) 3.4	5.0 (16) 16.9	1.1 (20) 2.1	1.8 (22) 4.4
Business Rep.	3.1 (92) 12.0	3.7 (44) 13.0	2.4 (48) 11.1	1.0 (51) 2.5	5.2 (41) 16.6	3.6 (45) 13.0	2.5 (47) 11.0	7 (28) 2.0	6.8 (16) 17.9	1.3 (23) 3.0	3.5 (25) 15.4	1.1 (24) 2.9	6.1 (21) 18.0	3.6 (24) 15.4	1.4 (23) 2.7
Religious Leader	3.4 (74) 7.4	4.8 (30) 4.9	2.0 (44) 6.4	3.4 (36) 4.3	3.4 (38) 7.5	4.4 (34) 4.7	2.3 (40) 6.7	5.4 (15) 11.1	4.2 (15) 6.0	1.4 (21) 2.7	2.6 (23) 8.7	1.8 (21) 3.1	7.1 (13) 11.5	2.1 (23) 8.5	2.6 (17) 4.4
B. Mass Media															
1. Electronic															
TV	74.4 (4) 59.0	80.4 (2) 59.3	68.4 (2) 58.5	66.5 (2) 50.5	42.4 (2) 65.4	79.4 (2) 57.3	69.1 (2) 60.6	79.7 (1) 59.2	41.1 (1) 60.2	53.2 (1) 36.2	83.7 (1) 71.9	68.7 (1) 52.6	90.8 (1) 60.4	68.2 (1) 64.7	70.0 (1) 57.1
Radio	80.3 (5) 83.6	76.2 (2) 76.1	84.3 (1) 89.1	74.8 (3) 84.4	45.7 (2) 42.9	47.1 (2) 44.4	73.4 (3) 78.5	70.4 (2) 69.0	81.6 (2) 46.9	74.9 (1) 94.4	89.7 (0) 79.9	96.6 (0) 100.5	77.5 (2) 74.5	72.0 (1) 75.5	74.8 (3) 82.6
2. Printed															
Newspaper	21.1 (12) 32.1	19.8 (4) 19.2	22.5 (6) 41.2	26.9 (1) 42.6	15.4 (11) 13.6	24.1 (9) 43.3	14.2 (3) 13.3	23.7 (0) 23.4	15.9 (6) 12.2	30.2 (1) 55.7	14.8 (0) 15.1	26.6 (4) 56.6	21.5 (5) 24.4	18.4 (2) 14.6	18.0 (1) 12.1
Magazines	15.8 (37) 32.9	15.5 (15) 31.3	16.1 (22) 34.7	15.2 (14) 35.4	16.4 (23) 30.4	14.9 (23) 33.0	7 (14) 44.1	16.0 (5) 37.0	15.0 (10) 25.0	14.5 (9) 34.3	17.8 (13) 35.4	19.4 (13) 44.6	10.4 (10) 13.2	12.8 (9) 20.7	20.6 (5) 42.0
Books	20.4 (8) 22.1	24.7 (5) 25.3	16.0 (3) 17.5	22.8 (3) 25.3	14.0 (5) 14.3	19.7 (4) 22.2	21.0 (4) 22.1	29.2 (1) 29.2	20.2 (4) 20.3	16.3 (2) 19.0	15.7 (1) 16.1	16.4 (2) 19.4	23.0 (2) 24.2	15.6 (1) 15.0	26.5 (3) 26.6
3. Special															
Brochures	4.3 (48) 11.9	5.3 (22) 13.4	3.3 (26) 7.0	5.5 (17) 13.3	3.1 (31) 7.3	4.4 (34) 12.6	4.2 (14) 4.5	7.3 (9) 14.1	3.4 (13) 5.7	4.7 (4) 4.9	2.9 (14) 4.7	2.9 (17) 4.7	5.9 (17) 17.2	3.6 (9) 4.4	4.7 (5) 4.3
Posters & Billboards	6.1 (34) 11.9	7.7 (13) 13.0	4.6 (21) 10.5	5.5 (20) 11.4	6.7 (14) 12.3	4.5 (22) 14.8	3.4 (12) 7.4	4.6 (14) 15.1	6.7 (5) 10.5	2.5 (12) 4.2	6.7 (9) 14.0	5.6 (13) 13.1	11.4 (9) 15.9	3.6 (4) 7.0	4.0 (4) 7.4

* Number reported on the first line for each source are X hours of exposure in the past month, and in parentheses, the number answering zero (included in the calculation of X). Second line entry is the standard deviation.

included because it may be used as a proxy measure of how often a particular contact is non-existent within a particular population group. (Theoretically, it may simply indicate a lack of interaction with a present source, or a source that was away for the time period just past; however, it is more likely, in the case of personal sources, that the relationship does not exist - the respondent has no brothers or sisters, a parent is deceased, etc.) This rationale indicates, for example, that the father or male guardian is not present for 20 of the black students and 14 of the white students. Any zero responses were included in the denominator for calculating the group means, and the resultant is, in effect, a product of availability times utilization.

Total Sample

The various sources can be ranked from those perceived as having the most exposure, to those having the least exposure. This process indicates that high school seniors spend more time communicating with their mothers than with any other single personal source. The mass media source allocated the largest number of hours is radio. Based on individual ratios, the mean percent of personal source exposure vs. mass media exposure was approximately 69% to 31%, or a ratio of better than 2 to 1. Looking at the combined categories, exposure to all friends was the highest category, followed closely by all relatives; electronic media has a middle position; and formal personal sources (including teachers) and printed media (including "special" printed media) are close together at the low end of the list. Aside from teachers, formal sources show very low levels of exposure (as would be expected), with armed services representative showing the least amount of exposure, within the last month.

Group Profiles

Group profiles, ranking the means for hours of exposure to various sources, are presented in Appendix B. Rankings do shift as a function of group membership. For example, orientation (college bound vs. non-college bound) results in a different "rank" for peers of the same orientation: non-college bound seniors

report much higher exposure rates to other males and females who are also non-college bound, as opposed to males and females who are college bound. College bound seniors show practically equal exposure rate to other males and females of both orientations, with college bound peers only nominally higher. Likewise, college and non-college bound respondents show comparatively higher ranks for college representatives and business representatives, respectively. The profiles in Appendix B present ranks, based on means, for job information and job influence along with the hours of exposure for each group. The profiles can be used to look at all three communication dimensions (exposure, job information, job influence) simultaneously for a particular group. They may be utilized in this manner to assess the tradeoff between sheer exposure vs. pertinent sources of job information, exposure vs. influence, etc.

Significant Differences

Four kinds of sources show statistically significant group differences, as summarized in Table 5. These are "Siblings," "Other Relatives" (relatives other than parents or siblings), "Adult Friends," and "Formal" (personal).

The pertinent group means for communication hours with "siblings" are:

	<u>Siblings</u>	
	Male	Female
Black	105.039	110.797
White	65.122	70.495

The higher black exposure is significant at the .05 level. Blacks in this sample do report having more sisters and brothers than whites, as stated earlier.

There are sex and race main effects, as well as a significant interaction, for the means presented for "other relatives:"

	<u>Other Relatives</u>	
	Male	Female
Black	11.358	39.467
White	15.433	12.339

TABLE 5

COMMUNICATION SUMMARY MEANS AND SIGNIFICANCE - HOURS OF EXPOSURE/MONTH

	Mean of Summed Responses						Significant Effects			
	Male Coll.	Male NC	Female Coll.	Female NC	Male		Sex	Orient	Race	EXO Int
					Black	White				
All Personal Sources	591.160	454.381	601.487	594.704	575.485	470.055				
All Mass Media Sources	199.256	231.221	235.268	223.028	236.285	194.189				
% Mass Media*	28.559	36.646	29.719	28.833	31.794	33.410				
All Relatives	233.976	182.694	279.040	240.904	228.900	187.770				
Parents	122.696	96.468	152.378	134.466	111.948	107.214				
Siblings	100.050	70.112	97.875	83.418	105.039	65.122				
Other Relatives	11.231	16.115	28.787	23.021	11.358	15.433	<.025		<.05	<.01
All Friends	277.925	408.284	245.874	287.410	258.064	228.144				
Adm. Friends	23.706	29.294	23.000	57.500	23.676	29.323	<.05	<.01		<.05
Formal (Personal)	79.259	63.403	76.574	66.390	88.520	54.141				
Electronic Media	132.163	173.360	150.459	162.741	165.300	140.223				
Printed Media	60.946	48.331	68.897	51.069	62.500	46.776				
Special Media	6.147	9.529	15.912	10.118	8.500	7.176				

* Mean of individual ratios within each group.

Females indicate significantly greater contact with "other relatives" than do males, and blacks significantly greater contact than whites, both at the .025 level. The interaction between sex and race is significant at the .01 level with a race reversal in the sex pairs: white males show a greater amount of contact with "other relatives" than do black males, while black females show a much greater amount of contact than white females. Looking at the means for the two sources that make up the "other relatives" category, that is, other relatives home and other relatives not home, it appears that the "other relatives home" source dominates the difference in amount of contact.

The "adult friends" means show significant main effects for sex and orientation, and a sex-by-orientation interaction:

<u>Adult Friends</u>		
	Male	Female
College	23.706	23.000
Non-College	29.294	57.500

Females indicate significantly higher contact with adult friends compared to males, while non-college bound respondents report significantly higher contact than bound, at the .05 and .01 levels, respectively. There is a significant interaction at the .01 level: college bound males and females show essentially the same amount of contact, but non-college bound females show a much higher amount of contact than non-college bound males.

Finally, there is a race main effect for "formal" (personal) sources significant at the .001 level. These means are:

<u>Formal</u>		
	Male	Female
Black	88.520	99.448
White	54.141	43.514

Blacks show a much higher exposure rate to these sources than whites. The "formal" category is composed of teachers, school counselor, armed services representatives, college representatives, business representatives, and religious leader. Blacks report a high exposure to all of these sources, compared to whites, with the exception of armed services representatives. The dominant factor in the difference appears to be teachers; blacks report 75.3 hours/month in communication activity with teachers compared to 39.5 hours for whites. Blacks also indicate more contact with school counselors.

Trends which are not at the established significance level of .05, but which are at less than the .10 level of significance, include the following. First, females show more communication time with parents, compared to males. Second, blacks show more communication with all relatives, and in fact all personal sources, compared to whites. Although not statistically significant even at the .10 level, the pattern for mass media exposure for college vs. non-college bound students is in the expected direction; college bound students are relatively more exposed to printed sources and spend comparatively less time with electronic media.

Information/Entertainment Ratings

The degree to which each source, whether personal or mass media, was perceived as supplying information vs. entertainment was also assessed. The rank order by means for each of the sources is presented in Table 6 for the total sample. As indicated, radio is closest to the entertainment end of the continuum, with a mean rating of 1.9 (2 equals mostly entertainment). Business representatives and college representatives are rated at the other end of the continuum, with a mean rating of 6.3 (6 equals mostly information), followed by school counselor (6.2), and armed services representatives (5.8).

Books are rated in the middle of a scale, half entertainment and half information, with magazines rated as having somewhat less information value (mean rating of 3.8) and newspapers considerably more information value (mean

TABLE 6

INFORMATION/ENTERTAINMENT RANK ⁽¹⁾

6.3	Business Representatives
6.3	College Representatives
6.2	School Counselor
5.8	Armed Services Representative
5.7	Teachers
5.5	Brochures
5.5	Religious Leader
5.3	Newspapers
4.7	Posters & Billboards
4.5	Father
4.3	Mother
4.0	Books
3.8	Magazines
3.5	Girls - College
3.5	Boys - College
3.4	Adult Male Friends
3.4	Other Relatives Home
3.2	Brother
3.1	Neighbors
3.1	Other Relatives Not Home
3.1	Sister
3.0	TV
3.0	Adult Female Friends
2.8	Boys - Non-College
2.7	Girls - Non-College
1.9	Radio

- (1) 1 - Entertainment only; 2 - Mostly entertainment; 3 - More entertainment but some information; 4 - Half entertainment, half information; 5 - More information but some entertainment; 6 - Mostly information; 7 - Information only.

rating of 5.3). TV is given a higher information value compared to radio; it is rated as "more entertainment but some information."

With the exception of father and mother, and formal personal sources, other personal sources are rated below the middle of the scale. Peers are differentiated by orientation; college bound peers, both girls and boys, are given a relatively higher information rating compared to non-college bound peers; a mean of 3.5 versus 2.75. Fathers are given a slightly higher information rating (a mean of 4.5) compared to mothers (a mean of 4.3).

Table 7 presents the information/entertainment rating means and standard deviation given to each communication source by each group in the sample. The ratings are only for those sources still present (e.g., father still alive). (No statistical tests were made on differences in ratings among the group.)

JOB INFORMATION

All respondents rated the amount of job information they had obtained from various communication sources. They used a 1-7 scale, with a rating of 1 defined as none and 7 defined as "very, very much." The question was asked generically rather than over any particular time period. As would be expected, job information rankings, based on the mean rating for each source, are different than the rankings that result from ordering mean hours of exposure during the past month for the various sources.

Total Sample

The most important source of job information is reported to be, on the average for the total sample, newspapers (see Table 8). Newspapers are accorded a mean of 4.8, close to a 5 or "much" rating. Three personal sources have the next highest means: mother (4.2), teacher (3.6), school counselor (3.5). Adult male friends and fathers both with a mean of 3.4, are rated next. All other sources are accorded close to 3 or less, and a 3 is equal to "little." It is surprising to find a low rating for most of the low-exposure-rate "formal" sources; business representatives, college representatives, and armed services representatives are accorded ratings of only 2.5, 2.2 and 1.4, respectively. Brochures

TABLE 7

(1) INFORMATION/ENTERTAINMENT RATING

A. Personal Sources															
Source	Total	Female	Male	College	NC	Black	White	Female College	Male College	Female NC	Male NC	Black Male	Black Female	White Male	White Female
Father	4.5	4.4	4.6	4.3	4.7	4.7	4.3	4.2	4.4	4.6	4.4	4.4	4.6	4.4	4.2
	1.4	1.4	1.4	1.4	1.4	1.6	1.2	1.5	1.4	1.7	1.4	1.6	1.7	1.2	1.2
Mother	4.3	4.3	4.3	4.2	4.4	4.6	4.0	4.2	4.1	4.7	4.5	4.6	4.5	4.1	4.0
	1.3	1.3	1.3	1.2	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.2	1.2
Brother	3.2	3.2	3.2	3.3	3.1	3.3	3.1	3.4	3.2	3.0	3.2	3.5	3.2	3.0	3.2
	1.5	1.3	1.7	1.6	1.3	1.7	1.2	1.3	2.0	1.3	1.4	2.0	1.5	1.3	1.2
Sister	3.1	3.0	3.1	3.2	3.0	3.0	3.1	3.3	3.1	2.8	3.2	3.1	2.9	3.1	3.2
	1.5	1.5	1.4	1.3	1.5	1.5	1.4	1.4	1.4	1.5	1.5	1.5	1.6	1.4	1.4
Other Rel. Home	3.4	3.4	3.5	3.4	3.6	3.6	3.3	3.5	3.1	3.2	4.2	3.7	3.5	3.4	3.1
	2.0	1.8	2.3	1.9	2.2	1.9	2.1	1.9	2.7	1.9	2.7	2.4	1.6	2.4	2.0
Other Rel. Not Home	3.1	3.1	3.1	3.1	3.1	3.0	3.2	3.3	2.9	3.0	3.7	2.7	3.3	3.5	3.0
	1.5	1.5	1.5	1.5	1.5	1.6	1.4	1.3	1.6	1.7	1.3	1.5	1.6	1.3	1.3
2. Friends															
Boys college	3.5	3.2	3.4	3.5	3.5	3.5	3.5	2.9	4.1	3.6	3.3	3.4	3.2	3.7	3.2
	1.6	1.5	1.7	1.6	1.7	1.8	1.5	1.3	1.7	1.6	1.8	1.8	1.7	1.7	1.2
Girls college	3.5	3.6	3.1	3.7	3.3	3.6	3.3	3.6	3.7	3.4	3.0	3.7	3.6	3.0	3.2
	1.6	1.4	1.8	1.6	1.5	1.7	1.5	1.3	2.0	1.5	1.5	1.8	1.6	1.6	1.1
Boys NC	2.8	2.7	2.9	3.0	2.5	2.9	2.6	3.1	2.9	2.8	2.8	2.7	3.1	3.0	2.2
	1.5	1.3	1.7	1.6	1.3	1.6	1.4	1.3	2.0	1.3	1.4	1.7	1.5	1.7	1.0
Girls NC	2.7	2.9	2.6	2.9	2.6	2.8	2.6	3.2	2.6	2.6	2.6	2.6	3.1	2.5	2.7
	1.4	1.3	1.4	1.5	1.3	1.5	1.3	1.3	1.6	1.3	1.3	1.6	1.3	1.3	1.3
Neighbors	3.1	3.0	3.2	3.0	3.1	3.0	3.1	2.9	3.2	3.0	3.2	3.2	2.9	3.1	3.0
	1.6	1.4	1.7	1.6	1.5	1.7	1.4	1.5	1.8	1.7	1.7	2.1	1.4	1.4	1.4
Adult Male Friends	3.4	3.3	3.4	3.4	3.3	3.5	3.2	3.6	3.3	3.1	3.5	3.3	3.7	3.4	3.0
	1.4	1.4	1.3	1.4	1.3	1.5	1.2	1.4	1.4	1.4	1.5	1.5	1.4	1.1	1.4
Adult Female Friends	3.0	3.0	3.1	3.3	2.8	3.2	2.9	3.4	3.2	2.7	2.9	3.0	3.4	3.1	2.8
	1.5	1.4	1.6	1.6	1.4	1.6	1.4	1.3	1.8	1.4	1.4	1.7	1.5	1.6	1.2

TABLE 7 (Continued) INFORMATION/ENTERTAINMENT RATING⁽¹⁾

Source	Total	Female	Male	College	NC	Black	3. Formal		Female College	Male College	Male NC	Black Male	Black Female	White Male	White Female
							White	Black							
Teachers	5.7	5.6	5.9	5.5	6.0	6.0	5.5	6.0	5.4	5.7	6.1	6.0	5.9	5.8	5.2
	1.3	1.3	1.2	1.3	1.1	1.2	1.3	1.2	1.3	1.4	.8	1.3	1.2	1.0	1.5
School Counselor	6.2	6.4	6.0	6.4	5.9	6.1	6.4	6.1	6.6	6.3	5.8	5.9	6.2	6.2	6.3
	1.4	1.1	1.6	1.0	1.7	1.6	1.0	1.6	.6	1.3	1.9	1.9	1.4	1.2	.7
Armed	5.8	6.0	5.6	6.3	5.0	6.1	5.4	6.1	7.0	6.7	5.0	6.3	5.5	4.8	6.3
Serv. Rep.	1.9	1.3	2.2	.4	2.2	1.4	2.4	1.4	.0	.5	2.6	1.2	2.1	3.0	1.0
College Rep.	6.3	6.2	6.5	6.4	6.3	6.3	6.4	6.3	6.3	6.4	6.7	6.4	6.2	6.6	6.2
	1.3	1.4	1.2	1.3	1.2	1.3	1.2	1.3	1.3	1.4	.7	1.5	1.2	.6	1.7
Business Rep.	6.3	6.5	5.9	6.4	6.2	6.4	6.0	6.4	6.5	6.3	5.6	6.2	6.6	5.7	6.4
	1.4	.7	1.9	1.5	1.4	1.3	1.5	1.3	.5	1.8	2.1	1.9	.5	2.0	.8
Religious Leader	5.5	5.5	5.6	5.6	5.5	5.6	5.4	5.6	5.4	5.8	5.3	5.4	5.8	5.8	5.2
	1.5	1.3	1.7	1.4	1.5	1.5	1.5	1.5	1.5	1.3	2.1	1.9	1.3	1.5	1.4

B. Mass Media Sources

		1. Electronic		2. Printed		3. Special	
		Female	Male	Female	Male	Female	Male
TV	3.0	3.0	3.0	3.0	3.0	3.0	3.1
	1.3	1.2	1.4	1.3	1.2	1.3	1.4
Radio	1.9	2.1	1.8	2.1	1.8	1.8	1.8
	1.2	1.2	1.1	1.2	1.1	.9	1.2
Newspapers	5.3	5.0	5.5	5.4	5.3	5.0	5.6
	1.6	1.6	1.6	1.6	1.7	1.7	1.6
Magazines	3.5	3.3	4.3	4.0	3.6	3.3	4.4
	1.2	1.7	2.0	2.0	1.8	1.7	2.1
Books	4.0	4.0	4.0	4.2	3.9	3.8	4.2
	1.9	1.8	2.1	1.8	2.1	2.1	2.0
Exhibits	5.5	5.5	5.5	5.6	5.4	5.4	5.7
	1.7	1.6	1.8	1.7	1.7	1.9	2.0
Posters & Billboards	4.7	4.8	4.6	4.7	4.6	4.6	4.5
	1.9	1.9	2.0	1.8	2.1	2.2	2.0

NOTE: The mean is given on the first line and the standard deviation on the second line.

(1) 1 - Entertainment only; 2 - Mostly entertainment; 3 - More entertainment but some information; 4 - Half entertainment, half information; 5 - More information but some entertainment; 6 - Mostly information; 7 - Information only

TABLE 8

JOB INFORMATION RATING (1)

A. Personal Sources

Source	Total	Female	Male	College	NC	Black	White	Female College	Female NC	Male College	Male NC	Black Male	Black Female	White Male	White Female
							1. Relatives								
Father	3.4 1.9	3.3 1.7	3.5 1.1	3.4 1.9	3.4 1.9	3.3 2.0	3.5 1.9	3.0 1.7	3.6 1.7	3.8 2.0	3.1 2.1	3.3 2.1	3.3 1.8	3.6 2.1	3.4 1.7
Mother	4.2 1.8	4.2 1.8	4.3 1.9	4.2 1.8	4.2 1.8	4.4 1.9	4.0 1.8	3.7 1.6	4.6 1.8	4.7 1.9	3.8 1.8	4.5 1.9	4.3 1.8	4.0 1.9	4.0 1.7
Brother	2.3 1.7	2.3 1.7	2.2 1.7	2.3 1.8	2.2 1.6	2.4 1.8	2.1 1.7	2.2 1.8	2.4 1.8	2.4 1.9	2.0 1.5	2.1 1.7	2.7 1.8	2.4 1.7	1.9 1.6
Sister	2.6 1.8	2.7 1.8	2.4 1.8	2.7 1.8	2.5 1.8	2.9 2.0	2.3 1.6	2.6 1.7	2.9 2.0	2.7 1.9	2.1 1.7	2.6 2.0	3.1 2.0	2.2 1.6	2.4 1.6
Other rel. Home	1.8 1.5	1.9 1.6	1.6 1.3	1.6 1.3	1.9 1.6	2.0 1.8	1.5 1.1	1.7 1.4	2.1 1.8	1.5 1.2	1.7 1.5	1.6 1.5	2.4 2.0	1.6 1.2	1.4 .8
Other Rel. Not Home	2.5 1.6	2.5 1.6	2.4 1.7	2.4 1.6	2.6 1.7	2.9 1.7	2.1 1.5	2.4 1.5	2.7 1.7	2.4 1.7	2.5 1.6	2.8 1.7	3.0 1.7	2.1 1.6	2.1 1.4
							2. Friends								
Boys College	2.6 1.8	2.5 1.8	2.8 1.8	3.1 1.8	2.1 1.6	2.9 1.9	2.4 1.6	3.0 1.8	1.9 1.6	3.3 1.9	2.4 1.5	2.9 1.8	2.8 2.0	2.8 1.7	2.1 1.4
Girls College	2.7 1.6	2.9 1.7	2.6 1.6	3.1 1.7	2.4 1.4	2.9 1.6	2.6 1.3	3.3 1.7	2.4 1.5	2.9 1.7	2.4 1.4	2.8 1.8	3.0 1.9	2.4 1.3	2.7 1.3
Boys NC	3.1 1.8	2.9 1.9	3.3 1.8	3.0 1.9	3.1 1.7	3.2 1.9	2.9 1.8	2.8 1.9	2.9 1.9	3.2 1.9	3.3 1.6	3.3 1.9	3.2 1.9	3.3 1.7	2.6 1.6
Girls NC	2.9 1.7	3.2 1.7	2.7 1.7	2.9 1.8	3.0 1.6	3.3 1.9	2.6 1.4	3.0 1.7	3.4 1.7	2.9 1.9	2.6 1.4	3.0 2.0	3.5 1.7	2.4 1.3	2.8 1.6
Neighbors	2.0 1.3	2.2 1.4	1.8 1.2	2.0 1.3	2.0 1.3	2.2 1.4	1.8 1.2	2.0 1.3	2.4 1.5	2.0 1.3	1.7 1.1	2.1 1.3	2.4 1.5	1.6 1.1	2.0 1.2
Adult Male Friends	3.4 1.7	3.5 1.9	3.4 1.6	3.2 1.7	3.6 1.7	3.5 1.9	3.3 1.6	3.4 1.8	3.6 2.0	3.1 1.7	3.6 1.5	3.3 1.7	3.7 2.0	3.4 1.5	3.2 1.7
Adult Female Friends	3.1 1.8	3.7 1.8	2.6 1.6	3.1 1.7	3.2 1.9	3.4 1.9	2.9 1.6	3.4 1.8	4.0 1.9	2.7 1.6	2.5 1.5	2.9 1.8	2.9 1.9	2.4 1.2	3.5 1.7

NOTE: The mean is given on the first line and the standard deviation on the second line.

(1) 1 - None, 2 - Very little, 3 - Little, 4 - Moderate, 5 - Much, 6 - Very much, 7 - Very, very much

TABLE 8 (Continued) JOB INFORMATION RATING
(1)

<u>Source</u>	<u>Total</u>	<u>Female</u>	<u>Male</u>	<u>College</u>	<u>NC</u>	<u>Black</u>	<u>White</u>	<u>Female College</u>	<u>Female NC</u>	<u>Male College</u>	<u>Male NC</u>	<u>Black Male</u>	<u>Black Female</u>	<u>White Male</u>	<u>White Female</u>
				<u>3. Formal</u>											
Teachers	3.6 2.0	3.9 1.9	3.3 2.0	3.7 2.1	3.6 1.9	3.8 2.0	3.5 2.0	3.8 1.9	4.1 1.9	3.5 2.2	3.1 1.8	3.2 1.8	4.4 2.0	3.4 2.2	3.8 1.7
School Counselor	3.5 2.1	3.8 2.1	3.1 1.9	3.5 1.9	3.5 2.2	3.9 1.9	3.1 2.1	3.8 1.9	3.9 2.4	3.1 1.8	3.1 2.0	3.4 1.9	4.3 1.9	2.7 1.9	3.4 2.3
Armed Serv. Rep.	1.4 1.2	1.4 1.2	1.5 1.3	1.3 1.0	1.6 1.4	1.4 1.0	1.5 1.4	1.4 1.2	1.4 1.3	1.2 .7	1.8 1.6	1.5 1.1	1.3 1.0	1.5 1.4	1.8 1.4
College Rep.	2.2 1.8	2.1 1.8	2.3 1.9	2.9 2.0	1.5 1.3	2.3 1.8	2.1 1.8	2.8 2.1	1.4 .9	2.9 2.0	1.6 1.6	2.5 2.0	2.1 1.6	2.1 1.7	2.0 1.9
Business Rep.	2.3 1.9	2.5 2.1	2.1 1.7	2.0 1.8	2.6 2.0	2.5 2.1	2.2 1.7	1.9 1.7	3.2 2.3	2.2 2.0	1.9 1.4	2.1 1.9	2.8 2.3	2.0 1.6	2.3 1.9
Religious Leader	1.8 1.4	1.9 1.5	1.6 1.3	1.8 1.6	1.7 1.2	2.0 1.6	1.5 1.2	1.9 1.6	2.0 1.4	1.7 1.6	1.4 1.0	1.7 1.5	2.3 1.7	1.4 1.1	1.6 1.2

B. Mass Media

	1. Electronic										2. Printed						3. Special					
TV	3.3	3.8	2.9	3.3	3.4	3.6	3.1	3.6	4.0	3.0	2.8	3.1	4.1	2.7	3.5							
	1.6	1.7	1.4	1.5	4.8	1.8	1.5	1.7	1.7	1.3	1.6	1.4	1.9	1.4	1.4							
Radio	3.2	3.5	3.0	3.1	3.3	3.7	2.7	3.0	3.9	3.3	2.7	3.5	3.9	2.4	3.1							
	1.7	1.7	1.7	1.6	1.8	1.8	1.4	1.4	1.8	1.7	1.6	1.8	1.8	1.4	1.5							
Newspapers	4.8	5.0	4.7	4.9	4.7	5.0	4.7	5.0	5.1	4.9	4.4	4.8	5.1	4.6	4.9							
	1.7	1.7	1.8	1.6	1.8	1.9	1.6	1.5	1.8	1.8	1.8	2.0	1.8	1.6	1.5							
Magazines	2.6	2.9	2.4	2.9	2.4	2.6	2.7	3.1	2.6	2.7	2.1	2.6	2.5	2.2	3.2							
	1.5	1.6	1.5	1.6	1.4	1.5	1.6	1.6	1.5	1.7	1.0	1.6	1.4	1.3	1.7							
Books	3.0	3.4	2.5	3.2	2.7	3.0	2.9	3.3	3.5	3.1	1.9	2.4	3.6	2.6	3.2							
	2.0	2.1	1.8	2.0	2.0	2.3	1.8	2.0	2.3	2.1	1.4	2.0	2.4	1.7	1.9							
Brochures	2.8	3.1	2.5	3.1	2.6	2.4	3.2	3.6	2.7	2.6	2.5	2.3	2.5	2.8	3.7							
	1.8	1.9	1.6	1.8	1.8	1.8	1.7	1.9	1.9	1.7	1.6	1.7	1.8	1.5	1.8							
Posters & Billboards	2.7	3.0	2.4	2.7	2.7	2.6	2.7	3.1	2.9	2.4	2.5	2.5	2.7	2.3	3.2							
	1.6	1.7	1.4	1.6	1.5	1.7	1.5	1.8	1.6	1.4	1.5	1.6	1.8	1.3	1.6							

NOTE: The mean is given on the first line and the standard deviation on the second line.

(1) 1 - None, 2 - Very little, 3 - Little, 4 - Moderate, 5 - Much, 6 - Very much, 7 - Very, very much

and posters-and-billboards received somewhat higher ratings (2.8 and 2.7) than these personal sources, probably as a function of exposure. Peer group members get a "little" or even lower rank, with college-bound friends being even less informative than non-college bound friends.

Group Profiles

The group profiles in Appendix B rank the means for each source by population group. Again, certain regularities can be noted, by sex and orientation, for example. Females, compared to males, accord a much higher job information rating to adult female friends and books. The college bound give a relatively higher rating to college representatives, and the non-college bound to business representatives; the non-college bound rate adult male friends relatively higher, and the college bound rate books higher. Although there is little difference in the ranking of college and non-college bound friends by the college bound, the non-college bound respondents rate non-college friends relatively higher than college bound friends.

Significant Differences

Means and statistically significant differences for combined communication categories are shown in Table 9. To arrive at the group means presented here, scale ratings for the particular sources involved were summed for each respondent. Almost every communication category shows some significant effects.

For the "all personal sources" category, there is a race main effect significant at the .05 level:

<u>All Personal Sources</u>		
	Male	Female
White	47.294	48.323
Black	51.529	58.588

Blacks give a higher cumulative rating for job information from "all personal sources" than do whites.

TABLE 9

COMMUNICATION SUMMARY MEANS AND SIGNIFICANCE - JOB INFORMATION RATINGS

	Mean of Summed Responses						Significant Effects			
	Male Coll.	Male NC	Female Coll.	Female NC	Male Black	Male White	Female Black	Female White	Sex	Race
All Personal Sources	52.294	46.529	52.029	54.882	51.529	47.294	58.588	48.323		
All Mass Media Sources	21.941	18.882	24.529	24.676	21.235	19.588	24.411	24.794	<.001	
% Mass Media *	30.049	29.176	52.583	31.037	29.613	29.610	29.390	34.229	<.05	<.05
All Relatives	17.500	15.294	15.647	14.324	16.852	15.941	18.852	15.117		<.05
Parents	8.500	6.941	6.735	8.294	7.764	7.676	7.588	7.441		<.05
Siblings	5.176	4.088	4.824	5.265	4.676	4.588	5.852	4.235		<.01
Other Relatives	3.824	4.265	4.088	4.765	4.411	3.676	5.411	3.441		<.01
All Friends	20.088	18.553	20.824	20.588	20.205	18.235	22.558	18.852		<.05
Adult Friends	5.882	6.029	6.735	7.559	6.147	5.764	7.647	6.647	<.05	
Formal (Personal)	14.706	12.882	15.559	15.971	14.470	13.117	17.176	14.352		
Electronic Media	6.265	5.441	6.559	7.971	6.558	5.147	8.000	6.529	<.01	<.025
Printed Media	10.706	8.500	11.353	11.176	9.852	9.352	11.176	11.352	<.01	
Special Media	4.971	4.941	6.618	5.529	4.823	5.088	5.277	6.911	<.025	<.05

* Mean of individual ratios within each group

The category of "all mass media sources," on the other hand, shows a sex main effect:

<u>All Mass Media Sources</u>		
	Male	Female
Black	21.235	24.411
White	19.588	24.794

Females give a higher cumulative rating for job information to "all mass media sources" than do males, a difference significant at the .001 level.

For the "% mass media" category* there are significant main effects due to sex and race, and there is a sex-by-race interaction effect. All are significant at the .05 level.

<u>% Mass Media</u>		
	Male	Female
Black	29.613	29.390
White	29.610	34.229

Whites report a significantly higher percent of their job information coming from mass media than do blacks, and females a significantly higher percent of their job information coming from mass media than do males. The more basic underlying interaction reflects the fact that by far the highest mean for all the cells occurs for white females, who attribute 34% of their job information to mass media sources.

The "all relatives" category shows a race main effect significant at the .05 level, and a sex-by-orientation interaction also significant at that level:

* This percent is derived by first deriving the percent for each respondent, summing these values and dividing by n.

All Relatives

	Male	Female		Male	Female
Black	16.852	18.852	College	17.500	15.647
White	15.941	15.117	Non-College	15.294	18.324

Blacks report significantly more job information coming from relatives than do whites. There is a sex reversal in the sex-by-orientation interaction: college bound males report a higher amount of job information from relatives than do college bound females, but non-college bound males report less job information from relatives than do non-college bound females. This interaction is related to, and probably caused by, the same sex-by-orientation interaction found for the "parents" category:

Parents

	Male	Female
College	8.500	6.735
Non-College	6.941	8.294

The sex-by-orientation interaction for the "parents" category was significant at the .01 level. Similarly, an underlying race main effect found for the "other relatives" category appears to explain the race main effect found for "all relatives:"

Other Relatives

	Male	Female
Black	4.411	5.411
White	3.676	3.441

Blacks show a greater amount of job information derived from "other relatives" than do whites, a difference significant at the .01 level.

The remaining personal categories showing significant effects are "all friends," and "adult friend." There is a race main effect for "all friends:"

All Friends

	Male	Female
Black	20.205	22.558
White	18.235	18.852

Blacks show a higher rating, significant at the .05 level, than whites. Females attribute a greater amount of job information to the "adult friends" subcategory than do males, a difference significant at the .05 level:

Adult Friends

	Male	Female
Black	6.147	7.647
White	5.764	6.647

All of the mass media communication subcategories show significant effects. For the "electronic media" category the means are as follows:

Electronic Media

	Male	Female		Male	Female
Black	6.558	8.000	College	6.265	6.559
White	5.147	6.529	Non-College	5.441	7.971

There are sex and race main effects, significant at the .01 level, reflecting higher ratings made by females (compared to males) and blacks (compared to whites). In addition there is a sex-by-orientation interaction significant at the .025 level. Within the male cells, the college bound rate "electronic media" higher; within the female cells, the non-college bound rate "electronic media" higher.

The "printed media" category shows a sex main effect significant at the .01 level:

Printed Media

	Male	Female
College	10.706	11.353
Non-College	8.500	11.176

Females give a higher rating for job information obtained from the "printed media" than do males. The "special media" category demonstrates the same kind of sex main effect, as well as a race main effect. The two are significant at the .025 and .05 levels, respectively.

Special Media

	Male	Female
Black	4.823	5.235
White	5.088	6.911

Females give a higher rating for job information from the "special media" than do males. Whites give a higher rating for job information than do blacks.

JOB INFLUENCE

All respondents rated the amount of job influence they had experienced from various communication sources on a 1-7 scale, with a rating of 1 defined as "none" and 7 defined as "very, very much." This question was also asked generically rather than over any particular time period. The mean job influence ratings of course differ from those for job information. Overall, parents, teachers, and school counselors have influence ratings somewhat greater than their information ratings. Peers tend to have the same (or lower) influence rating as information rating. Other formal sources present a mixed pattern; college representatives show an increase, business representatives show a decrease, and armed services representatives stay at the same level, for influence compared to information. "Electronic media" have influence ratings below their information ratings. For the other mass media sources, books and brochures show an increase in influence

from their information rating, perhaps as a function of information seeking on the part of the respondents. For a further discussion of this information/influence distinction, see the paper "Influence through Personal and Nonpersonal Channels of Communication" in Appendix F.

Total Sample

The most important source of job influence, on the average for the total sample, is mothers, as shown in Table 10. Mothers are rated as 4.4, compared to a lower 3.6 for fathers. After mother and father come teachers (3.9) and school counselors (3.7). Other sources having a rating above 3, or "little," are adult male friends (3.5), newspapers (3.4), books (3.3), and adult female friends (3.1). All peers are rated between "little" and "very little." In general, the formal sources of college representatives (2.6), business representatives (2.1) and armed services representatives (1.5) are shown to be relatively low in influence.

Group Profiles

The group profiles presented in Appendix B order the sources by mean ratings. They show the different values expressed by the different groups. For example, fathers are attributed more job influence by males than by females. The college bound attribute comparatively more influence to college representatives and college bound friends, while the non-college bound attribute comparatively more influence to business representatives and non-college bound friends. Blacks attribute more influence to adult male friends than do whites.

Significant Differences

Table 11 presents the mean summed ratings of job influence. It is broken down by communication categories and population groups, and shows all significant effects. Most of the significant differences are race main effects; usually in the direction of higher black ratings.

Blacks have a significantly higher mean for "all personal" sources while whites have a significantly higher mean for "% mass media" (p's of .001 and .025, respectively):

TABLE 10

JOB INFLUENCE RATING (1)

A. Personal Sources

Source	Total	Female	Male	College	NC	Black	1. Relatives		Male College	Female NC	Male College	Male NC	Black Male	Black Female	White Male	White Female
							White	Black								
Father	3.6 2.1	3.4 1.9	3.8 2.2	3.6 2.1	3.5 2.1	3.5 2.2	3.6 1.9	3.2 1.9	3.6 2.0	3.2 2.0	4.1 2.2	3.4 2.2	3.8 2.5	3.3 1.9	3.7 1.9	3.4 1.9
Mother	4.4 2.0	4.4 2.0	4.5 2.0	4.7 1.8	4.1 2.1	4.6 2.0	4.2 1.9	4.3 1.8	4.4 2.2	4.4 2.2	5.1 1.8	3.9 2.0	4.9 2.1	4.4 2.0	4.2 1.6	4.3 2.0
Brothers	2.4 1.9	2.4 2.0	2.4 1.9	2.5 2.1	2.3 1.8	2.4 1.9	2.4 2.0	2.5 2.1	2.4 1.9	2.4 1.9	2.6 2.0	2.2 1.7	2.1 1.8	2.8 2.1	2.8 2.0	2.1 1.9
Sisters	2.5 1.9	2.6 1.9	2.4 1.9	2.7 2.0	2.3 1.8	2.7 2.0	2.3 1.8	2.5 1.8	2.7 2.0	2.7 2.0	2.9 2.2	1.9 1.5	2.4 1.9	3.0 2.1	2.4 2.0	2.2 1.7
Other Rel. Home	1.6 1.4	1.7 1.5	1.5 1.3	1.7 1.6	1.5 1.2	1.7 1.7	1.4 1.1	1.9 1.7	1.5 1.2	1.5 1.2	1.6 1.4	1.4 1.3	1.6 1.5	1.9 1.8	1.4 1.2	1.4 .9
Other Rel. Not Home	2.3 1.7	2.4 1.7	2.2 1.8	2.1 1.6	2.5 1.8	2.9 2.0	1.7 1.1	2.3 1.5	2.4 1.8	2.4 1.8	1.9 1.7	2.5 1.8	2.8 2.0	3.0 1.9	1.7 1.2	1.7 1.1
2. Friends																
Boys College	2.5 1.8	2.3 1.8	2.8 1.9	3.1 2.0	2.0 1.6	2.8 2.0	2.3 1.7	2.8 1.8	1.8 1.6	2.8 1.6	3.4 2.1	2.1 1.5	2.7 1.9	2.9 2.1	2.9 1.9	1.7 1.1
Girls College	2.6 1.8	2.8 1.9	2.4 1.7	3.0 2.0	2.1 1.5	2.9 2.0	2.2 1.5	3.2 2.0	2.3 1.6	2.3 1.6	2.8 2.0	1.9 1.3	2.7 1.9	3.2 2.1	2.0 1.5	2.4 1.6
Boys NC	2.7 1.8	2.6 2.0	2.7 1.6	2.6 1.8	2.7 1.8	2.8 1.9	2.6 1.7	2.5 2.0	2.7 2.0	2.7 2.0	2.8 1.6	2.7 1.6	2.7 1.7	2.8 2.1	2.8 1.5	2.4 1.9
Girls NC	2.6 1.8	2.7 1.8	2.5 1.7	2.6 1.9	2.6 1.7	3.0 1.9	2.2 1.6	2.4 1.8	3.1 1.9	3.1 1.9	2.8 2.0	2.2 1.5	2.9 1.9	3.1 1.9	2.1 1.5	2.3 1.7
Neighbors	1.9 1.4	2.0 1.5	1.8 1.3	1.9 1.5	1.9 1.3	2.3 1.6	1.5 1.1	1.9 1.5	2.1 1.5	2.1 1.5	1.9 1.6	1.6 1.0	2.1 1.4	2.5 1.7	1.4 1.2	1.6 1.0
Adult Male Friends	3.5 1.9	3.3 2.1	3.7 1.8	3.5 1.9	3.4 1.9	3.8 1.9	3.1 1.9	3.2 2.0	3.3 2.1	3.3 2.1	3.8 1.8	3.6 1.7	3.9 1.7	3.8 2.1	3.5 1.8	2.7 1.9
Adult Female Friends	3.1 1.8	3.3 1.9	2.9 1.8	3.2 1.9	3.0 1.8	3.4 1.9	2.8 1.8	3.1 1.9	3.5 1.9	3.5 1.9	3.1 1.9	2.5 1.5	3.2 1.8	3.5 1.9	2.6 1.6	3.1 1.9

NOTE: The mean is given on the first line and the standard deviation on the second line.

(1) 1 - None, 2 - Very little, 3 - Little, 4 - Moderate, 5 - Much, 6 - Very much, 7 - Very, very much

TABLE 10 (continued) JOB INFLUENCE RATING (1)

Source	Total	Female	Male	College	NC	Black	White	Female College	Female NC	Male College	Male NC	Black Male	Black Female	White Male	White Female
3. Formal															
Teachers	3.1	4.0	3.7	4.2	3.6	4.3	4.4	4.2	3.9	4.1	3.3	4.0	4.7	3.4	3.4
	2.0	1.9	2.1	2.0	2.0	1.9	2.0	1.9	2.0	2.1	2.0	2.0	1.7	2.1	2.0
School Counselor	3.7	3.9	3.4	3.9	3.5	4.4	3.0	3.9	3.9	3.9	3.0	4.0	4.7	2.9	3.0
	2.2	2.2	2.2	2.1	2.3	2.2	2.0	2.0	2.5	2.3	2.0	2.2	2.2	2.0	2.0
Armed	1.5	1.4	1.6	1.4	1.6	1.5	1.5	1.4	1.5	1.4	1.7	1.7	1.3	1.5	1.6
Serv. Rep.	1.3	1.3	1.4	1.3	1.4	1.1	1.5	1.2	1.4	1.4	1.4	1.3	.9	1.5	1.6
College Rep.	2.6	2.5	2.8	3.6	1.6	3.1	2.1	3.5	1.5	3.8	1.8	3.3	3.0	2.3	2.0
	2.1	2.0	2.1	2.2	1.3	2.1	1.8	2.2	1.0	2.1	1.6	2.2	2.1	2.0	1.7
Business Rep.	2.1	2.4	1.9	1.8	2.4	2.5	1.8	1.7	3.1	1.9	1.8	2.1	2.8	1.6	2.0
	1.9	2.2	1.6	1.7	2.1	2.2	1.6	1.6	2.5	1.7	1.3	1.9	2.4	1.1	1.9
Religious Leader	1.7	2.0	1.5	1.7	1.8	2.2	1.3	2.1	1.9	1.4	1.7	1.8	2.6	1.2	1.3
	1.6	1.7	1.4	1.6	1.5	1.9	1.0	2.0	1.4	1.0	1.6	1.7	2.0	.9	1.0

B. Mass Media Sources

1. Electronic															
TV	2.9	3.2	2.5	3.0	2.7	3.1	2.7	3.4	3.0	2.6	2.4	3.7	3.5	2.4	3.0
	1.9	1.9	1.8	1.8	2.0	2.0	1.8	1.8	2.0	1.8	1.7	1.9	2.0	1.8	1.8
Radio	2.8	3.0	2.7	2.7	3.0	3.3	2.4	2.9	3.1	2.6	2.9	3.1	3.5	2.3	2.5
	1.9	1.9	1.9	1.8	2.0	2.0	1.7	1.8	1.9	1.8	2.0	2.1	1.9	1.7	1.6
2. Printed															
Newspapers	3.4	3.7	3.1	3.4	3.3	3.6	3.1	3.6	3.4	3.3	2.9	3.0	4.2	3.2	3.1
	1.9	1.9	1.9	1.9	2.0	2.1	1.7	1.7	2.2	2.0	1.8	2.0	2.0	1.8	1.7
Magazines	2.6	2.7	2.5	2.9	2.3	2.5	2.7	3.1	2.3	2.6	2.4	2.4	2.5	2.6	2.9
	1.7	1.7	1.7	1.8	1.5	1.7	1.7	1.7	1.6	2.0	1.5	1.8	1.5	1.7	1.8
Books	3.3	3.6	3.0	3.7	2.9	3.5	3.0	3.7	3.4	3.7	2.3	3.1	3.9	2.8	3.2
	2.2	2.2	2.2	2.2	2.1	2.4	1.9	2.2	2.1	2.3	1.8	2.4	2.4	1.9	1.9
3. Special															
Brochures	3.0	3.1	3.0	3.5	2.6	2.7	3.3	3.4	2.7	3.5	2.4	2.8	2.7	3.2	3.4
	1.9	1.9	2.0	2.0	1.8	2.0	1.8	1.9	1.9	2.2	1.6	2.1	2.0	1.9	1.8
Posters & Billboards	2.2	2.4	2.0	2.1	2.3	2.3	2.1	2.4	2.3	1.9	2.2	2.1	2.5	1.9	2.3
	1.5	1.6	1.3	1.3	1.6	1.6	1.3	1.5	1.7	1.2	1.4	1.5	1.7	1.1	1.5

NOTE: The mean is given on the first line and the standard deviation on the second line.

(1) 1 - None, 2 - Very little, 3 - Little, 4 - Moderate, 5 - Much, 6 - Very much, 7 - Very, very much

TABLE 11

COMMUNICATION SUMMARY MEANS AND SIGNIFICANCE - JOB INFLUENCE RATINGS

	Mean of Summed Responses				Significant Effects			
	Male Coll.	Male NC	Female Coll.	Female NC	Male Black	Male White	Female Black	Female White
All Personal Sources	55.441	45.494	52.235	51.559	54.470	46.264	59.323	44.470
All Mass Media Sources	20.176	17.441	22.441	20.676	19.265	14.353	22.765	20.353
9 Mass Media*	26.110	27.622	30.164	24.452	25.947	24.405	27.663	11.150
All Relatives	14.147	15.441	16.611	16.971	17.441	16.147	14.470	15.117
Parents	9.206	7.324	7.500	7.971	4.611	7.912	7.735	7.735
Siblings	5.471	4.147	4.971	5.059	4.500	5.117	5.794	4.235
Other Relatives	3.471	3.971	4.147	3.941	4.324	3.118	4.941	3.147
All Friends	20.794	16.611	19.090	14.424	20.176	17.235	21.765	16.059
Adult Friends	7.111	6.029	6.265	6.735	7.044	6.059	7.265	5.735
Formal (Personal)	16.500	13.235	16.611	15.465	16.453	12.442	19.044	13.294
Electronic Media	5.176	5.235	6.294	6.176	5.735	4.676	7.000	5.471
Printed Media	9.611	7.559	10.324	9.471	4.611	4.559	10.544	9.206
Special Media	5.342	4.647	5.424	5.029	4.212	5.111	5.176	5.676

< .05

< .001

< .01

< .05

< .001

< .01

< .05

< .05

* Mean of individual ratios within each group

All Personal Sources

	Male	Female
Black	54.470	59.323
White	46.264	44.470

% Mass Media

	Male	Female
Black	25.987	27.663
White	28.405	31.150

Thus, although personal sources account for the greatest influence for all groups, whites attribute greater influence to mass media than do blacks (29.8% vs. 26.8%).

Within the personal subcategories, blacks are higher in the amount of influence experienced, at the significance levels indicated, for the following categories: "other relatives" (.001), "all friends" (.01), "adult friends" (.05), and "formal (personal)" (.001). The means are shown below.

Other Relatives

	Male	Female
Black	4.324	4.941
White	3.118	3.147

All Friends

	Male	Female
Black	20.176	21.765
White	17.235	16.059

Adult Friends

	Male	Female
Black	7.088	7.265
White	6.059	5.735

Formal (Personal)

	Male	Female
Black	16.853	19.088
White	12.882	13.294

Blacks, then, appear to be relatively more responsive to these particular personal sources than do whites.

One other personal subcategory that shows a different pattern of significance is that of "parents." This source shows a sex-by-orientation interaction significant at the .05 level:

Parents

	Male	Female
College	9.206	7.500
Non-College	7.324	7.971

College bound males give a much higher influence rating to parents than do non-college bound males, while non-college bound females rate parents slightly higher than do college bound females.

With respect to the mass media, blacks rate the "electronic media" significantly higher than whites at the .05 level:

<u>Electronic Media</u>		
	Male	Female
Black	5.735	7.000
White	4.676	5.471

This effect, combined with the preceding report of higher black ratings for various personal sources, highlights the general tendency of blacks to give higher ratings than whites to influence received. The apparent surface contradiction of blacks showing nominally higher ratings for all categories of mass media (see Table 11) than whites, while showing a significantly lower mass media percentage than whites, is accounted for by the comparatively higher black differences on almost all personal sources.

There is one additional mass media effect to be noted. It is an orientation main effect significant at the .05 level on the "printed media" category.

<u>Printed Media</u>		
	Male	Female
College	9.618	10.324
Non-College	7.559	9.471

The college bound give a higher influence rating to printed media than do the non-college bound.

Several mass media sex differences do not reach the established significance level of .05, but are significant at less than the .10 level; females give higher influence ratings to "electronic media," "printed media," "all mass media," and "% mass media."

INTERACTION STYLE AND AGREEMENT EXTENT

Page 6 of the questionnaire addressed two additional questions relevant to communication patterns. These were, for a set of identified communication sources:

1. The kind of interaction typical most of the time among the following choices:
 - (1) No contact (source is absent or just no contact)
 - (2) You transmit your opinion to them
 - (3) They transmit their opinion to you
 - (4) An exchange of opinion occurs (You transmit your opinion to them and they transmit their opinion to you)
2. How often there is agreement on most issues with each of the sources, using the following choices:
 - (1) Very, very seldom
 - (2) Very seldom
 - (3) Seldom
 - (4) Moderate
 - (5) Often
 - (6) Very often
 - (7) Very, very often

The latter question was to be answered only by those indicating some form of interaction in the first question, that is a (2), (3), or (4) contact response.

Table 12 summarizes the responses to these questions for the total sample.

Interaction Style

As anticipated, the most common interaction style with any source is an exchange of opinion. This is most particularly true for peers (male and female friends) and mothers; "exchange" is the prevalent style. An age factor appears to dominate ratings for "your opinion" and "their opinion." That is, for "your opinion," the fact that the respondent is older than a source leads to a sizeable percentage identifying the interaction style as one way in direction. Thus,

younger sisters and younger brothers are the target, with the interaction going from the respondent to the source. Conversely, for "their opinion," the fact that the respondent is younger than a source leads to comparatively larger percentages identifying their interaction style with father, neighbor, mother, older sisters and brothers, etc. as being one way, to the respondent from the source.

Agreement Extent

The mean and standard deviation for extent of agreement with each source is presented in the last column of Table 12. Ordering the sources by mean extent of agreement, the sequence from highest to lowest amount of agreement is:

TABLE 13
EXTENT OF AGREEMENT RANK

Female friends your age	(4.887)
Male friends your age	(4.746)
Mother	(4.744)
Adult male friends	(4.344)
Older sisters	(4.304)
Adult female friends	(4.294)
Older brothers	(4.236)
Father	(4.235)
Other relatives not home	(3.895)
Neighbors	(3.619)
Younger sisters	(3.441)
Younger brothers	(3.441)
Other relatives at home	(3.325)

As this sequencing would suggest, there are statistically significant differences in the extent of agreement accorded discrete sources. In particular, fathers are significantly lower than both mothers and male peers. The comparison between father and mother yields a t value of 2.44 ($df = 232$), significant at the

TABLE 12

INTERACTION STYLE AND AGREEMENT EXTENT⁽¹⁾

<u>Source</u>	<u>No Contact</u>	<u>Your Opinion</u>	<u>Their Opinion</u>	<u>Exchange Opinion</u>	<u>Avg. Agreement (S. D.)</u>
Mother (or Guardian)	2%	1%	11%	85%	4.744 (1.565) N=133
Father (or Guardian)	24%	3%	15%	57%	4.235 (1.630) N=106
Older Sister(s)	42%	7%	10%	41%	4.304 (1.479) N=79
Younger Sister(s)	35%	30%	3%	32%	3.441 (1.624) N=8
Older Brother(s)	48%	3%	11%	38%	4.436 (1.804) N=72
Younger Brother(s)	52%	22%	1%	24%	3.441 (1.624) N=68
Other Relatives at Home	74%	5%	5%	16%	3.325 (1.559) N=40
Other Relatives Not Home	26%	4%	10%	60%	3.895 (1.372) N=105
Neighbor(s)	34%	1%	14%	51%	3.619 (1.365) N=97
Adult Male Friends	9%	7%	9%	75%	4.344 (1.232) N=125
Adult Female Friends	7%	5%	9%	79%	4.294 (1.259) N=126
Male Friend(s) Your Age	1%	3%	4%	91%	4.746 (1.243) N=134
Female Friend(s) Your Age	1%	4%	5%	89%	4.887 (1.312) N=133

(1) 1 - Very, very seldom; 2 - Very seldom; 3 - Seldom; 4 - Moderate; 5 - Often; 6 - Very often; 7 - Very, very often

.02 level. Comparing fathers and male peers yields a t value of 2.67 (df = 238), significant at the .01 level. This age difference also holds when comparing adult males with male peers, and adult females with female peers (p's less than .01 and .001, respectively). Interestingly enough, mothers are not significantly different in extent of agreement compared to either male or female peers.

There were no significant differences for college and non-college bound respondents with respect to extent of parental agreement. This appears supportive of the recent "middling" trend noted by Yankelovich [1]: non-college youth are not substantially different in values from college youth.

1. Daniel Yankelovich, "Changing Youth Values in the 70's," JRD 3rd Fund, 1974.

V. OCCUPATIONAL DECISION-MAKING

Are the same occupational characteristics evaluated differentially, along a cost/reward continuum, by various population groups? To what extent is each of these occupational characteristics judged to be present in a particular occupational choice, such as the armed services? What image, then, does the armed services present as a function of these characteristics? Does assessment of the value of these characteristics and the extent to which they exist in a particular career choice provide an insight into occupational decision-making?

A review of the literature was conducted on job satisfaction and related matters, and an examination was made of occupational characteristics particularly relevant to the armed services.* From this effort a list of 15 job related attributes was developed:

Characteristic

High Pay

Security (No danger of being released)

Advancement (Chance for increasing rewards)

Worthwhile activity (Activity is socially important)

Prestige (Respect of friends)

Personal restrictions (Many rules and regulations)

Friendly people (Involved with others who are friendly)

Opportunity for self-improvement (Education, learn . skill)

Travel (Moving from place to place often)

* Interviews were conducted with 116 high school seniors, half of whom had some interest in joining the armed services and half of whom were disinterested in joining the armed services during the first year of this project (as described in "First Year Final Report, Methods for Estimating and Enhancing the Military Potential of Selected Manpower Segments," August 1973). Subsequently, an effort was made to include in the occupational characteristics set the important satisfaction/dissatisfaction dimensions that had been identified during the course of these interviews.

Freedom to carry out assigned activities on your own

Uninteresting tasks

Fringe benefits (Medical care, pension, paid holidays, etc.)

Possibility of physical danger

Responsibility (In charge of others)

Easy work (Slow pace, not demanding)

It was intended that the characteristics be applicable to any career choice (including the role of housewife, for example) and cover potentially negative as well as positive attributes. Pages 7-10 and page 14 of the questionnaire deal with these characteristics and their relation to occupational decision-making.

Respondents first were asked to rate the desirability of each characteristic according to these definitions:

Undesirability

-5 Very high

-4 High

-3 Average

-2 Low

-1 Very Low

Desirability

5 Very high

4 High

3 Average

2 Low

1 Very Low

0 Neutral

A negative, or undesirable, response was assumed to constitute a "cost," a positive, or desirable, response was assumed to constitute a "reward."

Next, three series of questions were asked concerning how much of each characteristic was available in each of three alternatives:

1. The "average" job that a person might typically get for the first few years after high school.
2. Joining the armed services (for example, the Air Force).
3. The respondent's perceived major activity for the first few years after high school. The specific choice to be indicated was one of the following:

* The order of these three series (one series per questionnaire page) was randomly sequenced to counteract the possibility of a response order effect.

- a. Join the armed services
- b. Go to college
- c. Other education (e.g., vocational school)
- d. Get a civilian job (full-time)
- e. Get a civilian job (part-time)
- f. Not work (get married, travel, etc.)
- g. Other (to be specified)

(Those answering "join the armed services" in this question were asked to check their next alternative as well, and rate the latter on each of the 15 job characteristics listed on this page, since all respondents would rate the armed services specifically on one of the other pages.)

For each rating in these three series of questions, a 9-point scale was to be used:

- 9 Very, very much
- 8 Very much
- 7 Much
- 6 Slightly more than average
- 5 An average amount
- 4 Slightly less than average
- 3 Little
- 2 Very little
- 1 Very, very little

On page 14 of the questionnaire were questions on attraction toward, and probability of engaging in:

- 1. armed services enlistment
- 2. the respondent's present career choice (indicated as the "major activity" on a preceding page)

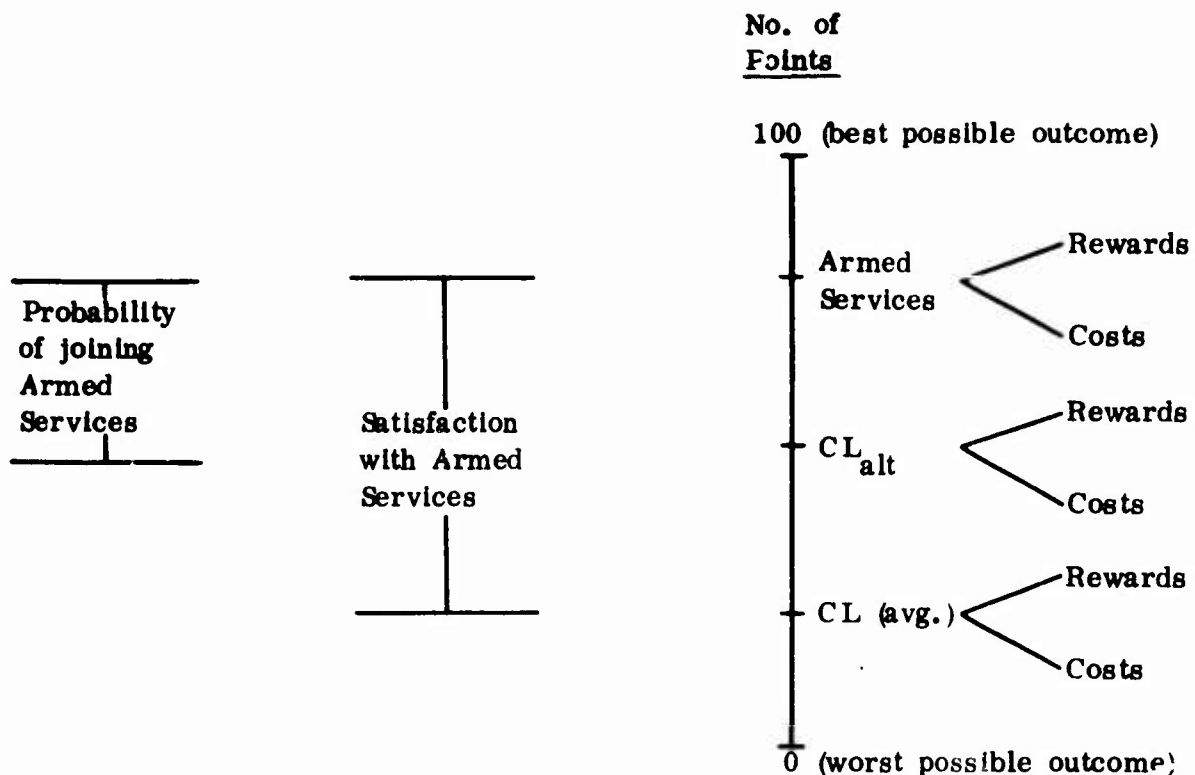
THEORETICAL RELATIONSHIPS

The earlier interviews carried out on this project suggested that the rejection of the armed services as an occupational choice often is due to a positive choice of some better alternative, rather than to a negative reaction to the armed services as an institution. Exchange theory, devised originally by Thibaut and Kelley [1] for examining the likelihood of a particular social relationship developing, is a useful framework for evaluating anticipated outcomes of one occupational alternative against outcomes available from other alternatives.

The principles of this theory were used in devising a model for predicting occupational decision-making, particularly with respect to attraction towards, and probability of joining, the armed services. The costs and rewards expected in the armed services, the average job, and current career choice ("major activity"), presumably are a function of the 15 job characteristics which the respondent rated. The structure of the model is shown in Figure 1.

A test of this model requires the assessment of the perceived outcomes that is, rewards less costs, available from the armed services, from the average job, and from the student's "major activity." Also required are measures of attraction to, and probability of choosing, the armed services and the "major activity" alternatives. This information is obtained through the questionnaire, as indicated above. The outcomes available from the average job constitutes the respondent's "comparison level," and the outcomes available from his second best choice constitutes his "comparison level for alternatives." The theory's predictions differ in six possible cases as indicated in Table 14 following.

-
1. J. W. Thibaut and H. H. Kelley, The Social Psychology of Groups, New York: John Wiley and Sons, 1959.



Definitions

CL (Avg.)

Comparison Level, Average - Standard by which a person evaluates the rewards and costs of a relationship in terms of what he feels he deserves; his perception of the "average" outcome level.

CL_{alt}

Comparison Level, Alternative - The level of outcomes obtainable from the second best alternative.

Satisfaction with Armed Services

The difference between the individual's perception of costs and rewards of (1) an armed services job and of (2) an "average" job. This difference represents the satisfaction level of the armed services job.

Probability of joining Armed Services

The difference between the individual's perception of the costs and rewards of (1) an armed services job and of (2) his best available non-armed services alternative. This difference represents the probability of his choosing the armed services.

Figure 1. MODEL OF OCCUPATIONAL DECISION MAKING
WITH ARMED SERVICES AS DESIRED OUTCOME

TABLE 14
THEORETICAL PREDICTIONS

	<u>Satisfaction Level</u>	<u>Probability of Doing</u>
(1) outcome (AS)* CL _{alt} (civ. job) CL	AS -Very satisfied Civ. job-Moderately satisfied	AS over civilian job- Moderate probability
(2) outcome (AS) CL CL _{alt} (civ. job)	AS -Moderately satisfied Civ. job-Moderately dissatisfied	AS over civilian job- High probability
(3) CL outcome (AS) CL _{alt} (civ. job)	AS -Moderately dissatisfied Civ. job-Highly dissatisfied	AS over civilian job- Moderate probability
(4) CL _{alt} (civ. job) outcome (AS) CL	AS -Moderately satisfied Civ. job-Highly satisfied	Civilian job over AS Moderate probability
(5) CL _{alt} (civ. job) CL outcome (AS)	AS -Moderately dissatisfied Civ. job-Moderately satisfied	Civilian job over AS High probability
(6) CL CL _{alt} (civ. job) outcome (AS)	AS -Highly dissatisfied Civ. job-Moderately dissatisfied	Civilian job over AS Moderate probability

* Armed Services

The remainder of this section is limited to dealing with the cost/reward (scale responses) perceptions of different population groups relative to the desirability of the 15 job characteristics and the extent to which they are perceived to be achieved through the armed services. The additional analyses necessary for testing the predictive capability of this occupational decision-making model will be completed at a future date. The full usable sample, rather than the ANOVA sample alone, will be utilized in these forthcoming analyses.

VALUES AND ARMED SERVICES RATINGS

Table 15 displays values and armed services ratings given to each job characteristic by the major population groups. Significant effects are also noted. Means for the individual population groups are included later in this section. It should be noted that a three-way analysis of variance design was utilized for this data analysis, using as independent variables sex, race, and orientation. This allowed a test of a possible three-way interaction.

Job Characteristics

Only five of the job characteristics showed significant differences in value ratings given by the groups. They were "Prestige," "Opportunity for Self-Improvement," "Physical Danger," "Travel," and "Uninteresting Tasks."

There was a significant race main effect at the .05 level for "prestige." Blacks gave this value a higher mean rating (3.956) than whites (3.382). Respect from friends appears to be more important to blacks, perhaps as a function of greater group insularity due to historic prejudice. "Opportunity for self-improvement" shows an orientation main effect. College-bound respondents found this characteristic significantly more desirable than the non-college bound ($p < .001$). Although all of the respondents considered this characteristic highly desirable (the college bound mean is 4.721 and the non-college bound mean 4.294), it is not surprising that the college bound give this characteristic greater emphasis. "Physical danger" produced a sex main effect. The significantly lower mean rating of females (-2.279) compared to males (-1.059) shows the greater female aversion to this characteristic. This finding certainly is consistent with current cultural norms for males and females relative to risk-taking and aggressiveness.

The significant effect for travel is a sex-by-orientation interaction ($p < .025$). The means are:

TABLE 15

JOB CHARACTERISTICS - SUMMARY OF GROUP VALUES,
ARMED SERVICES QUANTITY RATINGS AND SIGNIFICANT EFFECTS (1), (2)

	High Pay		Security		Advancement		Worthwhile Act.		Prestige	
	<u>Value</u>	<u>A. S.</u>	<u>Value</u>	<u>A. S.</u>	<u>Value</u>	<u>A. S.</u>	<u>Value</u>	<u>A. S.</u>	<u>Value</u>	<u>A. S.</u>
Male	4.265	5.706	4.030	6.677	4.353	6.574	3.853	5.971	3.544	5.897
Female	3.971	6.279	4.029	6.118	3.941	6.853	3.544	6.456	3.794	7.147
Black	4.191	6.411	3.927	6.382	3.912	6.588	3.949	6.382	3.956	6.750
White	4.044	5.574	4.132	6.412	4.383	6.838	3.471	6.044	3.382	6.294
College	4.088	5.824	4.221	6.750	4.309	6.618	3.838	6.338	3.329	6.471
NC	4.147	6.161	4.838	6.044	3.985	6.809	3.559	6.088	3.691	6.573

Significant
EffectsRace
< .05Race
< .05Sex
< .001

(1) Value Scale Undesirability: -5 Very high, -4 High, -3 Average, -2 Low, -1 Very low; Neutral: 0
Desirability: 5 Very high, 4 High, 3 Average, 2 Low, 1 Very low

(2) Armed Services Rating: 1 Very, very little; 2 Very little; 3 Little; 4 Slightly less than average; 5 An average amount; 6 Slightly more than average; 7 Much; 8 Very much; 9 Very, very much

TABLE 15 (Continued) JOB CHARACTERISTICS - SUMMARY OF GROUP VALUES, ARMED SERVICES QUANTITY RATINGS AND SIGNIFICANT EFFECTS (1), (2)

	Personal Restrict.		Friendly People		Opport. for Self-Improv.		Travel		Freedom	
	Value	A. S.	Value	A. S.	Value	A. S.	Value	A. S.	Value	A. S.
Male	.103	6.455	4.059	5.721	4.441	7.515	1.177	7.176	3.912	5.456
Female	.530	6.456	4.353	6.835	4.574	7.309	.353	7.115	3.471	6.352
Black	.044	6.235	4.191	6.397	4.574	7.250	.574	6.7	3.530	5.926
White	.559	6.677	4.250	6.162	4.441	7.544	.956	7.555	3.553	5.92
College	.397	6.633	4.335	6.206	4.721	7.471	1.044	7.559	3.565	5.971
NC	.235	6.309	4.103	6.353	4.294	7.353	.455	6.735	3.515	5.565
Significant Effects				Sex <.01	Orient <.001		SXO <.025	Race <.025		Sex <.05
								Orient <.025		

- (1) Value Scale Undesirability: -5 Very high, -4 High, -3 Average, -2 Low, -1 Very low; Neutral: 0
Desirability: 5 Very high, 4 High, 3 Average, 2 Low, 1 Very low
- (2) Armed Services Rating: 1 Very, very little, 2 Very little, 3 Little, 4 Slightly less than average, 5 An average amount, 6 Slightly more than average, 7 Much, 8 Very much, 9 Very, very much

TABLE 15 (Continued) JOB CHARACTERISTICS - SUMMARY OF GROUP VALUES, ARMED SERVICES QUANTITY RATINGS AND SIGNIFICANT EFFECTS (1), (2)

	Uninteresting Tasks		Fringe Benefits		Physical Danger		Responsibility		Easy Work	
	<u>Value</u>	<u>A.S.</u>	<u>Value</u>	<u>A.S.</u>	<u>Value</u>	<u>A.S.</u>	<u>Value</u>	<u>A.S.</u>	<u>Value</u>	<u>A.S.</u>
Male	-2.132	4.927	4.059	6.834	-1.059	6.309	2.280	6.574	.057	3.971
Female	-1.794	4.353	4.000	6.574	-2.279	5.000	2.162	6.338	.691	3.882
Black	-1.515	4.853	3.882	6.515	-1.559	5.441	2.280	6.941	.442	4.324
White	-2.412	4.427	4.177	6.897	-1.779	5.868	3.162	5.971	.109	3.529
College	-2.456	4.985	3.941	6.834	-1.721	5.956	2.485	6.632	.147	3.971
NC	-1.471	4.294	4.114	6.574	-1.618	5.353	1.956	6.280	.603	3.882

Significant Effects
RXO
 $< .05$

Sex
 $< .05$

Sex
 $< .001$

Race
 $< .01$

RXO
 $< .01$

- (1) Value Scale Undesirability: -5 Very high, -4 High, -3 Average, -2 Low, -1 Very low; Neutral: 0
 Desirability: 5 Very high, 4 High, 3 Average, 2 Low, 1 Very low
- (2) Armed Services Rating: 1 Very, very little; 2 Very little; 3 Little; 4 Slightly less than average; 5 An average amount; 6 Slightly more than average; 7 Much; 8 Very much; 9 Very, very much

Travel

	Male	Female
College	.795	1.294
Non-College	1.559	-.588

College bound males accord this characteristic a lower rating than non-college bound males, but non-college bound females show a lower rating than college bound females. College bound females and non-college bound males thus are the most favorable toward this characteristic.

Finally, "uninteresting tasks" produced a race-by-orientation interaction significant at the .05 level. The means are:

Uninteresting Tasks

	Black	White
College	-1.441	-3.471
Non-College	-1.588	-1.353

There is relatively little difference between college and non-college bound blacks, but college bound whites are much more negative on this characteristic than are non-college bound whites. This characteristic is generally dislike, but college bound whites appear to evaluate boring or repetitive tasks as particularly distasteful.

The means for these value ratings are rank ordered for each major group in Appendix C.

Armed Services Ratings

The ratings of the armed services produced significant effects on seven of the job characteristics. These effects are summarized below:

TABLE 16
ARMED SERVICES RATING EFFECTS

<u>Job Characteristic</u>	<u>Type of Effect</u>	<u>Direction of Effect</u>	<u>Significance Level</u>
High Pay	Race main effect	Blacks higher	.05
Prestige	Sex main effect	Females higher	.001
Friendly People	Sex main effect	Females higher	.01
	Sex-by-race-by-orientation interaction	See discussion	.05
Travel	Race main effect	Whites higher	.025
	Orientation main effect	College bound higher	.025
Freedom	Sex main effect	Females higher	.05
Physical Danger	Sex main effect	Males higher	.001
	Race-by-orientation interaction	See discussion	.01
Responsibility	Race main effect	Blacks higher	.01

Although both groups rate the salary to be achieved by joining the armed services ("high pay") above average, the mean for blacks is significantly higher than for whites (6.411 vs. 5.574). This may reflect lower incomes achieved by blacks; that is, among blacks the baseline may be perceived as lower. The relatively higher mean prestige rating accorded to the armed services by females (7.147) than by males (5.897) is, perhaps, due to the lower number of women who are in the armed services. That role may be seen as more unusual for females (less "common") and therefore more respected by the respondent's peers.

"Friendly people" are considered to be prevalent in the armed services. The comparatively higher rating by females (6.838 vs. 5.721 for males) may reflect the greater affiliative motives of females, as hypothesized by Bardwick [1]

-
1. Judith M. Bardwick, The Psychology of Women, New York, Harper and Row, 1971.

or perhaps their perception of the friendliness of their dominantly opposite-sexed co-workers. There is also an interesting three-way interaction associated with this characteristic. The means are:

		<u>Friendly People</u>			
		Male		Female	
		Black	White	Black	White
College		5.412	6.176	7.412	5.824
Non-College		5.882	5.412	6.882	7.235

For blacks, non-college bound males are slightly higher than the college bound males, while the non-college bound females are lower than the college bound females. For whites, the non-college bound males are lower than the college bound males, while the non-college bound females are higher than the college bound females.

The significantly greater travel expected in the armed services by whites (compared to blacks) and by the college bound (compared to the non-college bound) suggest no readily apparent explanation. The mean for whites is 7.588, and the mean for blacks is 6.706.

Females perceive more "freedom to carry out assigned activities on your own" in the armed services than do males, although both gave the armed services an average or above rating for this characteristic. On the other hand, males perceive more "physical danger." The latter is reasonable in light of the fact that only males are involved in combat assignments. There is also a race-by-orientation interaction on the "physical danger" characteristic:

		<u>Physical Danger</u>	
		Black	White
College		6.295	5.618
Non-College		4.588	6.118

College bound blacks perceive more physical danger than non-college bound blacks, while college bound whites perceive less than do non-college bound whites. Perhaps

college bound whites perceive themselves as filling armed services roles outside combat zones while college bound blacks have less confidence that their assignments would be of this nature.

Finally, blacks perceive job "responsibility" in the armed services to be greater than do whites (6.941 compared to 5.971).

EVALUATING THE JOB DESIRABILITY OF THE ARMED SERVICES

In evaluating the desirability of a specific job, it is useful to examine the ratings for the value of a certain job characteristic in conjunction with how much of that characteristic is in that particular job. This can be done for each of the 15 job characteristics previously mentioned.

One manner of doing this for the job choice of the armed services is presented in Figure 2 . To develop a job characteristic profile for the armed services, "costs" and "rewards" have been conceptualized as follows:

- Rewards - Presence of a characteristic valued as desirable
 - Absence of a characteristic valued as undesirable
- Costs - Presence of a characteristic valued as undesirable
 - Absence of a characteristic valued as desirable

For the purposes of looking at the positive and negative attractions of the armed services, "presence" is defined as being above average (thus, possessing more of the characteristic than the average job), and "absence" as being less than the average job would offer. "Undesirable" is defined as being of low desirability or less, and "desirable" as being of average desirability or more. These terms will be recognized as readily translatable from the questionnaire ratings. Numerically, +2 or less (low desirability) on the value ratings is set as the cost/reward dividing line, and +6 or more (slightly more than average) on the amount achieved ratings is set as the reward/cost dividing line. (The horizontal and vertical broken lines shown in Figure 2 represent these thresholds.) Obviously, these thresholds could be established at more or less stringent levels. This, then, results in four quadrants which can be denoted as cost or reward

VALUE	EXTENT EXPERIENCED THROUGH ARMED SERVICES JOB		
	Little	Slightly Less than Avg.	Slightly More than Avg.
<u>Desirability</u>			
High			
Average			
Low			
Neutral			
<u>Undesirability</u>			
Low			
Average			
High			

Friendly People
 High Pay
 Security
 Worthwhile Activity
 Freedom
 Opport. for Self-Improve.
 Advancement
 Fringe Benefits
 Prestige
2. REWARD

1. COST

Responsibility

Travel

Personal Restrictions

Physical Danger

Uninteresting Tasks

3. REWARD

4. COST

Figure 2. PROFILE OF ARMED SERVICES JOB CHARACTERISTICS
 (BASED ON TOTAL SAMPLE RATINGS)

sectors: Quadrant 1 (cost) is the absence of a characteristic valued as desirable, quadrant 2 (reward) the presence of a characteristic valued desirable, quadrant 3 (reward) the absence of a characteristic valued as undesirable, and quadrant 4 (cost) the presence of a characteristic valued as undesirable.

Within these definitions, the armed services are judged by the total sample to be undesirable for four of the fifteen characteristics rated: responsibility, travel, personal restrictions, and physical danger. The armed services are considered above average (in ascending order) on freedom, worthwhile activity, security, high pay, and friendly people. The armed services are considered to be much above average (again in ascending order) with respect to prestige, fringe benefits, advancement, and opportunity for self-improvement. In addition, the armed services are considered to exhibit a relative "absence" of the negatively valued characteristics of easy work and uninteresting tasks.

Products and Sums

Another way to evaluate the armed forces is to combine the value and extent achieved ratings through algebraic multiplication. Table 17 presents the job characteristic means and standard deviations for both value and the armed services quantity ratings. Also presented for each population group is the product derived from multiplying the value rating by the armed services quantity rating. This is a systematic approach for comparing the composite evaluation for any job characteristic between different population groups. The rank order of these products for each population group is shown in Appendix D.

The total outcome (cost-reward composite) can be calculated by summing the value-quantity products across job characteristics. Summed products for the armed services, as derived for the various population groups are presented in Table 18. These products, it should be noted, can be misleading without comparison levels for other possible job choices. Such comparison levels are necessary to permit examining decision-making in terms of the theoretical

TABLE 17

JOB CHARACTERISTICS - VALUES AND ARMED SERVICES QUANTITY RATINGS BY GROUP (1), (2)

Group	Statistic	High Pay		Security		Advancement		Worthwhile Activity		Prestige	
		Value	A. S.	Value	A. S.	Value	A. S.	Value	A. S.	Value	A. S.
Male White NC	X	4,412	5,588	3,882	6,412	4,353	6,941	3,588	5,765	3,588	5,588
	S	1,870	2,063	1,654	2,351	1,786	2,015	1,562	2,386	1,228	2,476
	Product		24,654		24,891		30,214		20,685		20,050
Male Black College	X	4,176	5,882	4,111	6,647	3,941	6,353	4,325	6,294	3,412	6,000
	S	1,334	2,522	1,317	2,262	1,713	2,893	1,033	1,929	2,238	2,894
	Product		24,563		27,372		25,037		27,222		20,472
Female Black NC	X	3,941	6,702	3,647	5,235	3,176	6,294	3,765	6,000	4,176	7,647
	S	1,519	2,365	2,120	2,562	2,984	1,929	752	2,424	1,912	1,730
	Product		26,413		19,092		19,990		22,590		31,934
Female Black College	X	4,176	6,706	4,111	7,000	4,176	6,941	3,647	7,176	4,471	7,471
	S	1,883	1,611	1,317	1,768	1,951	1,886	1,222	1,425	624	1,505
	Product		28,004		28,826		28,986		26,171		33,403
Female White NC	X	3,765	6,000	4,000	5,882	4,059	7,235	2,824	6,529	3,235	7,176
	S	1,091	2,622	1,061	2,312	1,029	1,480	2,555	1,772	1,921	1,590
	Product		22,590		23,528		29,367		18,438		23,214
Male Black NC	X	4,171	6,353	3,821	6,617	4,353	6,765	4,059	6,059	3,765	5,882
	S	1,800	2,344	1,811	2,534	1,931	1,821	1,029	2,410	1,562	2,395
	Product		28,404		25,418		29,448		24,593		22,146
Male White College	X	4,000	5,000	4,291	7,000	4,765	6,235	3,529	5,765	3,412	6,118
	S	1,069	2,372	1,190	2,121	1,137	2,333	1,736	2,278	1,661	2,088
	Product		20,000		30,058		29,710		20,345		20,875
Female White College	X	4,000	5,706	4,153	6,353	4,153	6,353	3,941	6,118	3,294	6,294
	S	1,707	1,687	1,702	1,869	1,931	1,713	1,600	2,261	1,312	1,929
	Product		22,824		27,655		30,214		24,111		20,732

(1) Value Scale: Undesirability: -5 Very high, -4 High, -3 Average, -2 Low, -1 Very low, Neutral: 0 Desirability: 5 Very high, 4 High, 3 Average, 2 Low, 1 Very low

(2) Armed Services Rating: 1 Very, very little; 2 Very little; 3 Little; 4 Slightly less than average; 5 An average amount; 6 Slightly more than average; 7 Much; 8 Very much; 9 Very, very much

TABLE 17 (Continued) JOB CHARACTERISTICS - VALUES AND ARMED SERVICES QUANTITY RATINGS BY GROUP^{(1), (2)}

Group	Statistic	Personal Restrictions		Friendly People		Opportunity for Self-Improvement		Travel		Freedom	
		Value	A.S.	Value	A.S.	Value	A.S.	Value	A.S.	Value	A.S.
Male White NC	X	.412	6,294	3,424	5,412	4,176	6,294	1,500	7,235	3,824	5,647
	S	1,022	2,519	1,245	2,347	.728	1,404	3,001	1,855	1,360	2,262
	Product		2,593		20,695		30,460		11,489		21,594
Male Black College	X	.235	6,059	3,941	5,412	4,529	7,176	.471	7,235	4,059	5,588
	S	3,419	2,277	1,345	2,293	.717	2,157	3,393	2,137	1,088	2,894
	Product		-1,424		21,329		32,500		3,408		22,682
Female Black NC	X	.529	6,000	4,118	6,882	4,529	6,824	-1,235	6,412	3,118	6,176
	S	1,590	2,669	1,900	1,986	.874	2,531	3,165	2,575	2,522	2,628
	Product		3,174		28,340		30,906		-7,919		19,257
Female Black College	X	.706	6,353	4,647	7,412	4,821	7,353	1,529	7,118	3,471	6,647
	S	1,541	1,656	.606	1,593	.393	2,147	2,896	2,176	1,625	2,120
	Product		4,485		34,444		38,471		10,883		23,072
Female White NC	X	.724	6,412	4,412	7,235	4,059	7,529	.059	7,235	3,647	6,353
	S	2,759	2,347	.795	1,678	.966	1,463	3,491	1,921	.996	2,262
	Product		5,283		31,921		30,560		.427		23,169
Male Black NC	X	.724	6,529	4,059	5,882	4,412	7,765	1,529	6,059	3,471	5,294
	S	1,245	2,065	1,298	2,147	.712	1,678	2,939	2,817	1,807	2,687
	Product		-5,380		23,875		34,259		9,264		18,375
Male White College	X	1,059	6,941	4,412	6,176	4,647	7,274	1,118	8,176	4,294	5,294
	S	2,410	2,221	.712	2,298	.490	1,468	3,238	1,131	.772	3,037
	Product		7,351		27,249		36,358		9,141		22,732
Female White College	X	.059	7,059	4,353	5,824	4,882	7,529	1,059	7,706	3,647	6,353
	S	3,172	2,076	.786	2,325	.332	1,419	3,010	1,359	1,115	1,801
	Product		.416		25,352		36,747		8,161		23,169

(1) Value Scale: Undesirability: -5 Very high, -4 High, -3 Average, -2 Low, -1 Very low; Neutral: 0
Desirability: 5 Very high, 4 High, 3 Average, 2 Low, 1 Very low

(2) Armed Services Rating: 1 Very, very little; 2 Very little; 3 Little; 4 Slightly less than average; 5 An average amount; 6 Slightly more than average; 7 Much; 8 Very much; 9 Very, very much

TABLE 17 (Continued) JOB CHARACTERISTICS - VALUES AND ARMED SERVICES QUANTITY RATINGS BY GROUP (1), (2)

Group	Statistic	Uninteresting Tasks		Fringe Benefits		Physical Danger		Responsibility		Easy Work	
		Value	A.S.	Value	A.S.	Value	A.S.	Value	A.S.	Value	A.S.
Male White NC	X	-1.11*	3.706	3.882	6.882	- .11*	7.000	1.647	6.000	-.235	3.176
	S	2.956	2.67	1.166	2.11*	3.665	1.696	2.849	2.151	1.704	1.704
	Product	-4.143		26.716			-.826		9.882		-.746
Male Black College	X	-1.941	5.765	4.000	6.706	-1.294	7.11*	2.059	7.176	.118	4.882
	S	3.092	2.705	1.369	2.469	3.704	2.205	2.926	1.944	3.120	2.804
	Product	-11.190		26.824			-9.211		14.775		.576
Female Black NC	X	-1.294	4.11*	4.000	6.353	-2.529	3.941	2.471	6.706	.412	4.353
	S	3.384	2.28*	1.173	2.317	3.484	2.487	2.764	2.469	3.692	2.621
	Product	-5.329		25.41*			-9.967		16.571		1.793
Female Black College	X	-.941	4.235	3.294	6.412	-1.11*	5.471	2.235	7.235	.412	3.941
	S	3.892	3.412	2.173	1.69*	3.551	2.577	3.251	2.223	3.759	2.680
	Product	-3.385		21.121			-6.117		16.170		1.624
Female White NC	X	-1.58*	4.059	4.353	6.471	-2.529	5.235	1.353	5.765	1.412	3.882
	S	2.852	1.886	.862	2.065	3.319	2.016	2.317	2.251	2.210	2.497
	Product	-6.446		28.16*			-13.239		7.800		5.481
Male Black NC	X	-1.882	5.294	4.235	6.58*	-1.294	5.235	2.353	6.647	.824	4.118
	S	3.426	2.756	1.147	2.526	3.405	2.840	2.782	1.998	3.661	2.848
	Product	-9.963		27.405			-6.774		15.640		3.393
Male White College	X	-3.58*	4.941	4.11*	7.176	-1.529	5.882	3.059	6.471	-.471	3.706
	S	2.425	2.817	1.219	2.675	3.939	2.497	1.345	2.065	3.685	2.845
	Product	-17.72*		29.531			-8.994		19.795		-1.746
Female White College	X	-3.353	5.000	4.353	7.059	-2.941	5.353	2.58*	5.647	.529	3.353
	S	2.290	2.264	.702	1.600	2.883	2.120	1.970	1.169	2.294	1.801
	Product	-16.765		30.72*			-15.743		14.614		1.774

(1) Value Scale Undesirability: -5 Very high, -4 High, -3 Average, -2 Low, -1 Very low; Neutral: 0
Desirability: 5 Very high, 4 High, 3 Average, 2 Low, 1 Very low

(2) Armed Services Rating: 1 Very, very little; 2 Very little; 3 Little; 4 Slightly less than average; 5 An average amount; 6 Slightly more than average; 7 Much; 8 Very much; 9 Very, very much

TABLE 18

SUMMED PRODUCTS FOR ARMED SERVICES

Overall	Male		Female		Male		Female		Male		Female		White		Black		College		NC	
	White	Black	White	Black	White	Black	White	Black	White	Black	White	Black	Total	Total	Total	Total	Total	Total	Total	Total
239,603	238,208	224,935	222,257	222,558	230,261	239,923	241,097	233,989	236,941	242,266	242,418	236,789	246,585	232,662						

model presented in Figure 1 . The additional analyses for these comparison levels (average job, major activity chosen) are presently underway.

ATTRACTION AND PROBABILITY

Sex, race, and orientation decision-making patterns also were investigated directly through these questions:

1. How attracted are you to the idea of joining the armed services for the first few years after high school?
2. What is the probability that you actually will join the armed services for the first few years after high school?
3. If the draft were reinstated, what is the probability that you would voluntarily join the armed services for the first few years after high school?
4. How attracted are you to engaging in your major activity choice (go to college, other education, civilian job, not work, etc.) for the first few years after high school? (Those planning o enlistment rated a second alternative here.)
5. What is the probability that you actually will engage in that activity for the first few years after high school?

A 1 to 9 response scale was used for each of these questions, ranging from 1 (very, very little) to 9 (very, very much). One other question was asked in this set: how many different occupational alternatives do you realistically have to choose from following high school? Respondents wrote in the actual number of options they considered open to them. Mean responses to these questions, and significant effects, are displayed in Table 19.

Armed Services

As would be expected for most of the population, mean attraction and probability figures for the armed services were low, ranging typically on the scale from 1 to 3. There were no statistically significant differences in response to the "attraction" question. Nominally, black males who were college bound scored the lowest, and black males non-college bound the highest. The same trend continues on "probability." In addition, there is a main effect on

TABLE 19

**ARMED SERVICES AND MAJOR ACTIVITY ATTRACTION AND SATISFACTION,
GROUP MEANS AND SIGNIFICANT EFFECTS**

		Attraction A. S. (1)	Prob. of Joining A. S. (2)	Draft Prob. of Joining (3)	No. of Alternates	Attraction to Major Activity (4)	Prob. of Doing Major Activity (5)
Male	X	2,412	2,059	2,765	9,000	6,882	7,235
White No	S	2,181	2,164	2,488	9,070	1,616	1,751
Male	X	1,412	1,471	2,000	4,471	7,235	7,353
Black College	S	1,939	1,874	1,414	3,760	2,223	1,967
Female	X	1,841	1,588	1,765	4,000	6,647	6,412
Black No	S	1,144	1,004	1,033	3,694	2,523	2,238
Female	X	1,647	1,353	1,765	4,235	7,765	7,412
Black College	S	1,222	1,202	1,194	12,101	1,562	1,543
Female	X	2,059	2,000	2,153	6,529	7,412	7,118
White No	S	2,331	2,500	2,473	6,578	1,839	2,261
Male	X	1,118	1,235	1,647	3,125	6	6,235
Black No	S	2,027	2,137	2,128	2,604	1,878	1,878
Male	X	2,521	2,059	1,471	4,127	4	7,871
White College	S	1,663	1,806	2,649	2,382	7,829	1,625
Female	X	2,294	1,647	1,647	4,824	7,647	8,000
White College	S	1,929	1,167	1,115	3,148	7,120	1,369

**Significant
Effects**

Percent
0.025

SR (1)
0.025

(1) 1 - Very, very little; 2 - Very little; 3 - Little; 4 - Some; 5 - A moderate amount; 6 - A substantial amount; 7 - Much.

1 - Very much; 9 - Very, very much.

(2) 1 - Very, very low; 2 - Very low; 3 - Low; 4 - Medium; 5 - High; 6 - Fairly high; 7 - High; 8 - Very high; 9 - Very, very high.

probability of joining the armed services for orientation. The overall college bound mean of 1.633 is significantly lower, at the .05 level, than the non-college bound mean of 2.221. The nominal difference between attraction and probability is generally descending; that is, attraction is higher than probability. This trend reverses slightly for black males, both college and non-college bound.

Probability of joining tends to go up somewhat in the case of reinstatement of the draft, the largest jump occurring for the white males who are presently college bound. Whether this is a patriotic statement, assuming draft reinstatement due to some national emergency, or a decision to volunteer rather than be drafted, is a matter of conjecture. Although the mean scale rating here still exceeds "low" for only one group, black males who are non-college bound, there are statistically significant differences. There is a sex main effect and a sex-by-race-by-orientation interaction, significant at the .001 and .025 levels, respectively. Men are more likely to enlist than women; the means for these two groups are 2.971 vs. 1.883. The interaction means are:

Probability of Joining - Draft Reinstated

	Male		Female	
	Black	White	Black	White
College	2.000	3.471	1.765	1.647
Non-College	3.647	2.765	1.765	2.353

Non-college bound black males rated willingness to enlist during the reimposition of the draft higher than college bound black males, and non-college bound white males rated willingness to enlist under these conditions lower than college bound white males. In contrast, college and non-college bound black females showed no rating difference, while non-college bound white females indicated a greater willingness to enlist than did white college bound females.

Major Activity

The mean number of alternative occupational activities that the various population groups perceive to be available to them ranges from a low of four,

for black females who are non-college bound, to a high of nine for white males who are non-college bound. There is a race-by-orientation difference significant at the .025 level. The means are:

<u>Number of Occupational Alternatives</u>		
	Black	White
College	6.353	4.506
Non-College	4.063	7.765

College bound blacks perceive more options than non-college bound blacks, while for whites the non-college bound see more options than the college bound.

Both "attraction" to and "probability" of doing the respondent's "major activity" show an orientation main effect significant at the .025 level. In both cases, the college bound means are significantly higher than the non-college bound means (7.673 compared to 6.897 for "attraction," and 7.559 compared to 6.750 for "probability"). The college bound thus show more attraction towards their choice and a greater probability of carrying it out than do the non-college bound.

In contrast to the armed services ratings, the attraction/probability ratings for "major activity" are quite high. Mean attraction scores for "major activity" range from a low of "much" (6.647, shared by black males and females who are non-college bound) to "very much" (8.059 for white males who are college bound). For "probability," a low of "a substantial amount" is shared by black males and females who are non-college bound (means of 6.235 and 6.412, respectively); white females who are college bound have the highest rating, a mean of 8.000, or "very much." Again, attraction generally is rated higher than probability. However, this trend reverses for black males who are college bound, for white males who are non-college bound, and for white females who are college bound. For those three groups, probability exceeds attraction.

VI. OCCUPATIONAL ROLE OF WOMEN

The 55-item "Attitudes Toward Women" scale was developed by Spence and Helmreich [1]. They administered it to two samples of male and female introductory psychology students at the University of Texas at Austin in 1971-1972, as well as to a sample of mothers and fathers of these students. The scale measures attitudes toward women's rights and roles, with low scores indicating traditional and conservative attitudes and high scores indicating liberal and pro-feminist attitudes.

Spence and Helmreich found, among their college students, that women were more liberal than men on the majority of the items. The mean scores of mothers were higher (that is, more liberal) than those of fathers; the scores of the older group tended to be more conservative than those of the students; and the difference between the sexes was more marked in the student groups. Finally, the daughters were more markedly liberal compared to their mothers than the sons when compared to their fathers.

We were interested in examining, some two years later, the degree of liberality evidenced by urban high school seniors. Would there be differential responses to these occupational roles as a function of the respondent's sex, race, and orientation? What implications would such findings hold for armed services recruitment? Also, since parents play an influential role relative to the careers of their offspring (as specifically demonstrated in the context of job influence in Section IV), how liberal or conservative would the responses of the parents of these students be? Two surprising results from the present study were the lack of significant differences between fathers and mothers and between fathers and sons.

-
1. Janet T. Spence and Robert Helmreich, "The Attitudes Toward Women Scale: An Objective Instrument to Measure Attitudes Toward the Rights and Roles of Women in Contemporary Society," Abstracted in JSAS Catalog of Selected Documents in Psychology, 1972, 2, 66.

The last page of the student questionnaire asked the high school seniors to provide the names and addresses of their parents. For all of the 310 students who filled in questionnaires, 88% provided the name of one or both parents. The highest rate of "non-compliance" was on the part of white college bound students, particularly females. For those who did not decline, 40% provided the name of one parent only. A questionnaire was subsequently mailed to the parents whose names were given. The mailed questionnaire was basically the same as page 5 of the student questionnaire, the statements dealing with attitudes toward women.

SCALE CONSTRUCTION AND SCORING

For descriptive purposes, Spence and Helmreich categorized their scale items into six content groups:

- | | | | |
|----|---|---|----|
| 1. | Vocational, Educational, and Intellectual Roles | N | 17 |
| 2. | Freedom and Independence | N | 4 |
| 3. | Dating, Courtship and Etiquette | N | 7 |
| 4. | Drinking, Swearing and Dirty Jokes | N | 3 |
| 5. | Sexual Behavior | N | 7 |
| 6. | Marital Relationships and Obligations | N | 17 |

For the purposes of this project, all of the items from content group 1 were selected, as well as three from content group 2, and administered to high school seniors. The items appeared on page 5 of the student questionnaire. Omitted from content group 2 was one statement that was considered nonrelevant to the occupational emphasis desired in this investigation: "Most women need and want the kind of protection and support that men have traditionally given them." In addition, one completely new item was added: "It is ridiculous for a woman to work as a mechanic." (This closely parallels in wording an existing item in content group 1: "It is ridiculous for a woman to run a locomotive and for a man to darn socks.") The women mechanics item was of special interest due to a current campaign to intensify Air Force recruitment of women for this kind of activity. Although the anticipated extensive Air Force advertising campaign to

enlist women mechanics did not materialize, recruitment for this purpose was carried out at local recruiting stations. Hence, the reaction to this particular occupational role, within the larger context of 'appropriate' occupational roles for women, was considered to be of interest. The item provides a specific example of attitudes toward an actual kind of nontraditional, but available, occupation for women.

Mean student responses to each of the 21 questions, plus each of the two content clusters and their sum, are presented in Tables 20 A and B for each population group. Note that high scores always reflect values in the liberal or "progressive" direction, in spite of the fact that many of the items originally appeared with negative wording. The present scheme thus is the same as used by Spence and Helmreich.

Comparison with the specific wording of some of the questions used (a copy of the questionnaire is included as Appendix A of this report) will show a reversal in wording for questions 5, 6, 7, 9, 10, 11, 12, 14, 16, 17 and 20; however, to repeat, all items were scored in the liberal direction, and each question mean has been converted to reflect the liberal direction of the descriptive phrase given in the tabulation. An additional conversion was used, transforming the 1-4 questionnaire responses to a 0-3 scale, to ensure comparability with the Spence and Helmreich data. (The overall characteristics of the student questionnaire required administration under a 1-4 scale.) With the conversion to 0-3, the definitions are:

- | | |
|---|-------------------|
| 3 | Agree strongly |
| 2 | Agree mildly |
| 1 | Disagree mildly |
| 0 | Disagree strongly |

For the large cluster (the seventeen content area 1 questions), then, the highest possible score is 51, reflecting an extremely liberal (pro-women's liberation) view. For the small cluster (the three content area 2 questions), the

TABLE 20 A

ATTITUDES TOWARD WOMEN SCALE, GROUP MEANS AND SIGNIFICANT EFFECTS⁽¹⁾

Sum of 20 Questions*	Male	Female	College	NC	Black	White	Significant Effects		
							Sex	Orient	Race
Large Cluster (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .001	< .05	
Small Cluster (2)	1,894	1,894	1,894	1,894	1,894	1,894	< .001	< .05	
1. Problem Leadership (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .025	< .025	
2. School Admission (1)	1,894	1,894	1,894	1,894	1,894	1,894			< .05
3. Int. Mgmt. Systems (1)	1,894	1,894	1,894	1,894	1,894	1,894			< .05
4. Women in Business (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .001	< .05	
5. Freedom of Actions (2)	1,894	1,894	1,894	1,894	1,894	1,894	< .01		
6. College Encouragement of	1,894	1,894	1,894	1,894	1,894	1,894	< .025		
7. Run a Gasoline (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .01		
8. Valuable Services (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .01	< .01	< .01
9. Equal Pay (1)	1,894	1,894	1,894	1,894	1,894	1,894			
10. All Jobs Suitable (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .01		
11. Career vs. Homemaking (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .001	< .05	
12. Intellectual Leadership (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .001		
13. Freedom vs. Feminine Skilled (1)	1,894	1,894	1,894	1,894	1,894	1,894	< .001		
14. Contribution to Economic (1)	1,894	1,894	1,894	1,894	1,894	1,894			
15. Intellectual Equality (1)	1,894	1,894	1,894	1,894	1,894	1,894			
16. Equal Hiring and Promotion (1)	1,894	1,894	1,894	1,894	1,894	1,894			
17. Working Mothers (1)	1,894	1,894	1,894	1,894	1,894	1,894			
18. Apprenticeship Opportunities (1)	1,894	1,894	1,894	1,894	1,894	1,894			
19. Individual Choice (1)	1,894	1,894	1,894	1,894	1,894	1,894			
20. Women Mechanics*	1,894	1,894	1,894	1,894	1,894	1,894			
21. Freedom from Regulations (2)	1,894	1,894	1,894	1,894	1,894	1,894		< .01	

* Sum of 20 includes all questions but number 20, which was not a part of the original scale.

(1) 0 = Disagree strongly, 1 = Disagree mildly, 2 = Agree mildly, 3 = Agree strongly.

TABLE 20 B

ATTITUDES TOWARD WOMEN SCALE, GROUP MEANS AND SIGNIFICANT EFFECTS (1)

	Male College	Male No	Female College	Female No	Male Black	Male White	Female Black	Female White	Significant Effects	
									SSO	SSR
Sum of 20 Questions*	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
Large Cluster of	1,784	1,784	1,784	1,784	31,235	29,441	35,442	39,176		
Small Cluster (S)	600	600	600	600	15,177	5,170	6,029	6,589		
1. Problem Leadership (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
2. School Admission (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
3. Job-Market Systems (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
4. Women in Business (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
5. Progress of Actions (S)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
6. College for Advancement (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
7. Run a Locomotive (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
8. Valuable Services (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
9. Equal Pay (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
10. All Jobs Suitable (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
11. Career vs. Housemaking (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
12. Intellectual Leadership (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
13. Freshman vs. Feminine Ideal (S)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
14. Contribution to Economic Good (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
15. Intellectual Equality (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
16. Equal Hiring and Promotion (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
17. Working Mothers (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
18. Apprenticeship Opportunities (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
19. Intellectual Balance (L)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
20. Women Mechanics*	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		
21. Restrictions from Regulations (S)	2,382	2,382	2,382	2,382	46,412	14,611	41,912	45,765		

* Sum of 20 includes all questions but number 20 which was not a part of the original scale.

(1) Significant strength in the Negroes' attitudes. * Agrees with the Negroes' strength.

highest possible score is 9. The sum of these 20 questions, then, would allow a score as high as 60. Question 20, the women mechanics question, is treated separately, since it was not a part of the original scale.

STUDENT RESPONSES

Table 20A presents means for each sex, race, and orientation group and significant main effects. Table 20B presents means for the sex-by-orientation and sex-by-race groups and significant interactions.

As would be expected, the female mean for the ANOVA sample is significantly more liberal than the male mean on the sum of 20 scores (43.838 vs. 35.515), a difference significant at the .001 level. This also is true for the large cluster, the small cluster, and the women mechanics item as well. Of the 21 individual questions, females were more liberal on fifteen of them at varying levels of significance (ranging from .025 to .001). Items on which females were not significantly different from the males were: (2) vocational and professional school admission, (3) job merit system, (9) equal pay for equal work, (13) social and economic freedom vs. the feminine ideal, (15) intellectual equality, and (17) working mothers.

The college - non-college comparison also yielded some significant differences. The college bound were more liberal at the .05 level on the sum of 20 questions (a mean of 41.309 compared to 38.044 for the non-college bound). The college bound also had a significantly more liberal score on the large cluster, and for five individual items. These items were (1) problem leadership, (4) women in business and the professions, (8) valuable services of working women, (11) careers vs. homemaking, and (21) freedom from regulation and control.

Overall, extent of liberality for the sum of 20 questions declines by sex and orientation; the female college bound mean is 45.235; the female non-college bound mean, 42.441; the male college bound mean, 37.382; and the male non-college bound mean, 33.647.

There were only three items which showed any significant differences by race. Blacks were more liberal on the statement: "There should be a strict merit system a job appointment and promotion without regard to sex." The black mean response to this statement was 2.368, compared to 2.044 for whites, which was significant at the .05 level. It seems likely that this question may tap the related question of employment discrimination because of race, fostering a relatively greater liberal response on the part of blacks. Whites were significantly more liberal than blacks on two statements: "Vocational and professional schools should admit the best qualified students, independent of sex," and "Society should regard the services rendered by the women workers as valuable as those of men." The black and white means were 1.897 compared to 2.294, and 2.338 compared to 2.706, significant at the .05 and .01 levels respectively.

There were three statements which showed sex-by-orientation interactions significant at the .05 level, and two which showed sex-by-race interactions at the .025 level. These statements are:

- Question 7 It is ridiculous for a woman to run a locomotive and for a man to darn socks.
- Question 8 Society should regard the services rendered by the women workers as valuable as those of men.
- Question 11 Women should be concerned with their duties of childbearing and housekeeping, rather than with desires for professional and business careers.

And,

- Question 14 On the average, women should be regarded as less capable of contributing to economic production than are men.
- Question 21 The modern girl is entitled to the same freedom from regulation and control that is given the modern boy.

The means for the sex-by-orientation interactions are:

<u>Locomotive</u>			<u>Valuable Services</u>		
	Male	Female		Male	Female
College	1.588	2.529	College	2.618	2.735
Non-College	1.706	1.824	Non-College	2.059	2.676

<u>Career vs. Housekeeping</u>		
	Male	Female
College	2.176	2.382
Non-College	1.500	2.382

On the "locomotive" statement, the male college bound students were the least liberal and the female college bound the most liberal. Despite the sex main effect mentioned previously, female non-college bound students had a mean somewhat closer to that of male non-college bound students than to female college bound students. Because it is a two part statement, it is difficult to say whether the reactions are for or against female locomotive running or for against male sock darning.

On the "Valuable services" item, white female college bound students are the most liberal; male non-college bound students are the least liberal of the respondents. The latter group may be showing a "vested interest" effect - they have the most to lose from additional competition prestigewise in the world of work. "Career vs. housekeeping" also shows the male college bound versus non-college bound difference. The small non-college group is the least liberal on that item as well, perhaps for the same reason.

The means for the sex-by-race interactions are:

<u>Economic Production</u>			<u>Freedom from Regulation and Control</u>		
	Male	Female		Male	Female
Black	1.824	1.941	Black	2.235	2.353
White	1.588	2.529	White	1.941	2.794

In both cases white males are less liberal than black males, while black females are less liberal than white females. For these economic and social mores questions, white males thus are the more traditional.

Recruitment Implications

With the plan to increase the percent of women in the armed services in the 1970's from 2% to 4%, Goldman [1] suggests two alternative hypotheses:

1. If there is no possibility of effective equality (i.e., precisely the same roles, including combat) for women in the military, increasing the number and roles of women in the armed forces will produce greater women's militancy.
2. Selective recruitment will limit the strain.

The attitudes towards women data from our students appears relevant to the latter hypothesis. Overall, the college bound are the most "militant" and, according to the data presented in Section V on attraction/probability, the group least likely to enlist. Further, it is interesting to note a lack of college/non-college difference on some basic issues: (a) equal pay (no significant differences for the sex, race, or orientation combinations tested); (b) all jobs suitable for both sexes (females more liberal than males -- but a very low scale value overall for all groups, indicating some agreement with the original statement that there are many jobs in which men should be given preference over women in being hired or promoted); and (c) women mechanics (females more liberal than males, but even the lowest mean, for males, indicating "mild agreement" on the 3-point scale).

The small number in our total sample who indicated that their current career choice is to join the armed services (five "non-college" males and three "non-college" females) are of interest here. Their scores on the attitudes toward women portion of the questionnaire were lower than the respective sample means for the

-
1. Nancy Goldman, "The Changing Role of Women in the Armed Forces," Changing Women in a Changing Society, Joan Huber, editor, The University of Chicago Press, 1973.

non-college males and for the non-college females. However, the sample comparisons were not statistically significant for the extremely small number involved.

STUDENT-PARENT COMPARISONS

The responses to the questionnaire mailed to the parents (basically the 21 statements dealing with attitudes toward women) were discussed in detail in the Fourth Quarter report for this project, covering the period April - June 1974.* For the questionnaires mailed out to parents, a return rate of approximately 25% was experienced. A total of 94 questionnaires were usable.

Table 21 presents means of the sum of 20 questions from the Attitudes Toward Women scale. The data are presented separately for three groups: the ANOVA sample of students, students whose parents also filled out the AWS questionnaire, and the parents. The "student subsample" represents those students for whom at least one parent also responded. These student scores appear to be substantially closer to those of the ANOVA sample than do those of the parents (with the exception of the female non-college group). However, direct comparisons are misleading because of an overlap between the two student groups. (The 33 subsample students who also were in the ANOVA sample were distributed as follows: male college - 6, male non-college - 11, female college - 6, female non-college - 10; male black - 4, male white - 9, female black - 8, female white - 8.)

For the student subsample, there is a significant difference between the means for female college bound and female non-college bound students ($t = 3.83$, $df = 43$, $p < .001$). Even more intriguing, although the differences for the sample size involved are not sufficient to yield statistical significance, are the comparisons between parent and child. The mother and daughter comparison shows a reversal in pattern for the mothers of college bound versus non-college bound

* In summary, for the 438 questionnaires mailed out, black parents had an 18% response rate compared to 28% for white. Black males had a significantly lower return rate than black females, with no appreciable sex differences for whites. Where questionnaires were sent to both parents, only 8% of this group provided two returns.

TABLE 21

ATTITUDES TOWARD WOMEN
STUDENT AND PARENT COMPARISONS - SUM OF 20 QUESTIONS

A. Comparison of ANOVA Sample and Student Subsample with own Parent of Same Sex

	<u>Male College</u>		<u>Male Non-College</u>		<u>Female College</u>		<u>Female Non-College</u>		<u>Male Black</u>		<u>Male White</u>		<u>Female Black</u>		<u>Female White</u>	
	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
Students	37.382	9.954	33.047	9.541	45.235	8.079	42.441	6.986	36.412	9.294	34.618	10.453	41.912	5.786	45.765	8.775
	N 34		N 34		N 34		N 34		N 34		N 34		N 34		N 34	
Student Sub-sample	39.875	7.434	34.167	7.360	40.333	8.593	37.389	7.022	38.833	8.035	35.375	7.800	42.794	8.679	42.636	10.661
	N 8		N 6		N 27		N 14		N 6		N 8		N 34		N 11	
Same Sex parent	41.750	14.626	41.167	17.209	44.074	8.810	40.774	8.640	36.167	18.989	45.500	11.199	42.324	9.723	44.091	5.088
	N 8		N 6		N 27		N 14		N 6		N 8		N 34		N 11	

B. All Parents and All Subsample Students

	<u>Males</u>			<u>Females</u>		
	$\bar{X}$	S	N	$\bar{X}$	S	N
Student Subsample	36.547	8.690	34	42.933	9.264	60
	N 34			N 60		
Parents	40.586	13.674	29	43.335	8.761	65
	N 29			N 65		

TABLE 21 (Continued) ATTITUDES TOWARD WOMEN, STUDENT AND PARENT COMPARISONS -
SUM OF 20 QUESTIONS

C. Opposite Sex Comparisons for Student Subsample and own Parents

Daughter		Son	
$\bar{X}$	43.467	$\bar{X}$	36.100
S	10.141	S	9.441
N	15	N	20
Father		Mother	
$\bar{X}$	39.733	$\bar{X}$	44.650
S	12.629	S	8.762
N	15	N	20

D. All Parents by Sex and All Subsample Students (regardless of sex) by Race and Orientation

Fathers of College Bound Students		Mothers of College Bound Students		Fathers of Non-College Bound Students		Mothers of Non-College Bound Students	
$\bar{X}$	41.774	$\bar{X}$	44.349	$\bar{X}$	38.636	$\bar{X}$	42.034
S	13.765	S	8.313	S	13.952	S	9.264
N	16	N	36	N	11	N	29
Subsample College Bound Students		Subsample Non-College Bound Students		Subsample College Bound Students		Subsample Non-College Bound Students	
$\bar{X}$	44.093	$\bar{X}$	44.093	$\bar{X}$	36.025	$\bar{X}$	36.025
S	8.928	S	8.928	S	7.316	S	7.316
N	54	N	54	N	40	N	40
Black Fathers		Black Mothers		White Fathers		White Mothers	
$\bar{X}$	38.000	$\bar{X}$	43.109	$\bar{X}$	43.351	$\bar{X}$	43.895
S	16.093	S	9.426	S	10.382	S	7.094
N	15	N	46	N	14	N	19
Subsample Black Students		Subsample White Students		Subsample Black Students		Subsample White Students	
$\bar{X}$	41.902	$\bar{X}$	41.902	$\bar{X}$	38.364	$\bar{X}$	38.364
S	8.664	S	8.664	S	10.674	S	10.674
N	61	N	61	N	33	N	33

daughters. Mothers of non-college bound daughters were slightly more liberal than their daughters (40.778 vs. 37.389), while mothers of college bound daughters were slightly less liberal than their daughters (44.074 compared to 46.333). For the father and son comparisons, fathers were consistently more liberal than their own sons, regardless of career orientation; the white father versus son comparison approached significance ($p < .10$). Black fathers and their sons tend to be closer to one another (36.167 vs. 38.833) than the white fathers and sons (45.500 vs. 36.375).

Combining the scores for all fathers, all mothers, all subsample males, and all subsample females, the pattern continues to be visible. Fathers are more liberal than sons (though this comparison is not with their own sons), and mothers and daughters are quite close together in their scores (43.338 compared to 42.933). The male subsample and female subsample difference is significant (36.647 compared to 42.933, $t = 3.29$, $df = 92$, $p < .01$) while the comparison of all mothers and all fathers is not. Fathers are not significantly less liberal than all of the female subsample respondents; however, the mean for all mothers, when compared to that for all male subsample respondents, is significantly different, mothers being considerably more liberal ($t = 3.63$, $df = 97$, $p < .001$).

This pattern also holds up when examining the means for mothers and their own sons. Mothers scored 44.650 compared to their sons' mean of 36.100 ($t = 2.96$, $df = 38$, $p < .01$). The opposite sex comparison for fathers and their own daughters does not quite yield statistical significance, but daughters tended to be more liberal than their own fathers (43.467 compared to 39.733).

Comparing parents and subsample students (regardless of sex) by career orientation yields one statistically significant pairing; mothers of non-college bound students were more liberal than those non-college bound students ($t = 2.77$, $df = 67$, $p < .01$). In the same manner, comparing parents and subsample students by race demonstrates a greater liberality for white mothers compared to the mean for all of the white subsample students ($t = 2.24$, $df = 50$, $p < .05$).

An important cautionary note should be mentioned here. The findings involving the parents' data, especially where parent - own child pairings are absent, should be treated with caution. The reason, of course, is that the parent sample responding to the mailed questionnaire may not have been particularly representative of all the other possible parents in the study.

For this reason further parent-student discussion is limited to the parent-own child combinations. Some of the Spence and Helmreich findings are replicated for this particular sample (although only a selected portion of the full AWS scale was used in the present study), while others are not. A summary appears below of the present findings:

1. Female students are more liberal than male students (statistically significant).
2. Mean scores of mothers tended to be higher than those for fathers (but not at a statistically significant level).
3. Scores for the older group were not consistently more conservative than those of the students; mothers were more liberal than their own sons (statistically significant), fathers tended to be more liberal than their own sons (not statistically significant).
4. The difference between sexes is more marked in the student groups; mothers and fathers are relatively quite close together in their scores.
5. Daughters were not markedly more liberal than their mothers. Comparing mothers and daughters of different career orientations, the mothers of non-college bound daughters tended to be more liberal than their own daughters (not statistically significant).

Parent comparisons on the "women as mechanics" question yielded no statistically significant results. However, blacks tended to be less liberal than whites, particularly in the case of black fathers:

TABLE 22

WOMEN MECHANICS - PARENT AND STUDENT MEANS

	All		White		Black	
	Mothers	Fathers	Fathers	Mothers	Fathers	Mothers
$\bar{X}$	2.354	2.034	2.357	2.632	1.733	2.239
S	.991	1.267	1.082	.955	1.387	.993
N	65	29	14	19	15	46

Previous trends for college/non-college bound also hold true. The parents of college bound students tended to score more in the liberal direction than parents of non-college bound students.

Since the role of female mechanic is considered a "non-traditional" career choice for women, the most "positive" influencer would appear to be the female parent, even if she is the mother of a non-college bound daughter. The most potentially "negative" category of influencer (relatively speaking) appears to be black fathers. However, it should be recognized that this positive attitude on the part of mothers may or may not extend beyond the abstract; that is, a liberal attitude toward the non-traditional occupational roles for women in general does not necessary imply a positive attitude toward such an occupation as mechanic for "my daughter."

VII. RECRUITMENT INFORMATION AND INFLUENCE

Pages 12 and 13 of the questionnaire were devoted to assessing recent exposure, information sources, and the reactions of potential influencers with respect to recruitment. In this sense, the questions were organized as an armed services parallel to section IV, Communication Patterns. Comparable information is discussed here relative to recent exposure to a multiplicity of communication sources. The identification of job information and job influence sources is included.

Questions about exposure to armed services ads in the last month were directed toward the number of ads seen, the content and source of the ads, and subsequent communication patterns relative to this exposure. Only those reporting exposure to ads within the last month answered subsequent questions in this question set. The next group of questions addressed sources of information and contact relative to recruitment without regard to any particular time frame. The last set of questions inquired about the attitudes of parents, other relatives, peers, and other friends relative to armed services enlistment.

RECENT EXPOSURE

Approximately 70% of the total sample indicated that they had noticed at least one recruiting ad in the last month. Some 25% of the sample indicated that they had seen 5 or more ads. Table 23 shows the percentages for each population group. Perhaps the most interesting aspect of these responses is the rather remarkable low mid-range response for nearly all population groups, as well as the total sample. Most of the students checked either 0, on the one hand, or 5 or more, on the other. All population groups contained significant percentages who noticed 5 or more recruiting ads in the last month. (The data presented in the rest of this subsection is based on the replies of the 70% of the total sample who did report seeing ads during the past month.)

TABLE 3

RECRUITING ADS SEEN IN LAST MONTH (PERCENT)

	<u>0</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5 or more</u>
Male	26.5	8.8	10.3	19.1	7.4	27.9
Female	33.8	7.4	13.2	14.7	8.8	22.1
Blacks	38.2	5.9	4.4	14.7	8.8	27.9
Whites	22.1	10.3	17.1	19.1	7.3	22.1
College	27.9	8.8	10.3	17.6	11.8	23.5
Non-College	32.4	5.4	13.2	16.2	4.4	26.5
Black Male	32.4	5.9	2.9	17.6	8.8	32.4
White Male	20.6	11.8	17.6	20.6	5.9	23.5
Black Female	44.1	5.9	5.9	11.8	8.8	23.5
White Female	23.5	8.8	20.6	17.6	8.8	20.6
Male College	26.4	11.8	8.8	17.6	5.8	29.4
Male Non-College	26.4	5.9	11.8	20.6	8.8	26.5
Female College	29.4	5.9	11.8	17.6	17.6	17.6
Female Non-College	<u>38.2</u>	<u>8.8</u>	<u>14.7</u>	<u>11.7</u>	<u>0.0</u>	<u>26.4</u>
Total Sample	30.1	8.1	11.8	16.9	8.1	25.0

Among those who did report seeing one or more ad, over three quarters indicated that the ads were about both males and females. The "female only" ads were seen by the least number of respondents (3%), while 19% saw ads directed to "male only" recruitment. Although there were some sex differences in response (males did not report "female only" at all, but some females did), Table 24 indicates that the great majority of all groups reported seeing ads about both men and women.

The most frequently mentioned source was posters and billboards (76%), followed by TV (58%), for the total sample (Table 25). This parallels the recent findings of Friedman for enlistees [1]. Clustered close together near the 30% level were magazines, brochures (other than through the mail), newspapers, and radio. Brochures through the mail was last with a 20% response. Only one source, magazines, was reported by less than 10% of any group: only 5% of the black females indicated seeing ads in magazines. Although the sample size is quite small, this low percentage suggests that magazines have been less effective in carrying recruiting messages to black females.

For those who had seen ads, 20% subsequently attempted to get additional information. As shown in Table 26, black males sought additional information more frequently than white males (30% compared to 7%). For females, whites sought information more than blacks (27% compared to 16%). Orientation and sex showed an interesting relationship: 28% of non-college bound males sought information compared to 8% of the college bound males, while college bound females (29%) predominated in seeking information when compared to non-college bound females (14%). Perhaps the college bound females were more interested in educational assistance than in recruitment per se.

-
1. Lawrence Friedman, "A Survey of Advertising Awareness and Enlistment Planning by Recent Enlistees in the Armed Services," Mathematica Inc., prepared for the Office of Naval Research, October 17, 1972.

TABLE 24
TYPE OF AD (PERCENT)

	<u>N</u>	<u>Female Only</u>	<u>Male Only</u>	<u>Both</u>
Male	(50)	0.0	30.0	70.0
Female	(45)	6.7	6.7	84.4
Black	(42)	4.8	23.8	69.0
White	(53)	1.9	15.1	83.0
College	(49)	4.1	22.4	73.4
Non-College	(46)	2.2	15.2	80.4
Black Male	(23)	0.0	34.8	65.2
White Male	(27)	0.0	25.9	74.1
Black Female	(19)	10.5	10.5	73.7
White Female	(26)	3.8	3.8	92.3
Male College	(23)	0.0	36.0	64.0
Male Non-College	(25)	0.0	24.0	76.0
Female College	(24)	8.3	8.3	83.3
Female Non-College	<u>(21)</u>	<u>4.8</u>	<u>4.8</u>	<u>85.7</u>
Total Sample	(95)	3.2	18.9	76.8

TABLE 25
SOURCE OF AD (PERCENT)

	Bill- board or Poster	News- paper	Radio	Mag.	TV	Broch. Mail	Broch. Else- where
Male	76.0	34.0	34.0	32.0	56.0	20.0	32.0
Female	75.6	24.4	22.2	31.1	60.0	20.0	28.9
Black	66.7	40.4	28.5	23.8	59.5	26.2	33.3
White	83.0	20.8	28.3	37.7	56.6	15.1	28.3
College	75.5	36.7	26.5	34.7	59.2	20.4	34.7
Non-College	76.1	21.7	30.4	28.3	56.5	19.6	26.1
Black Male	69.6	47.8	39.1	37.1	60.9	26.1	39.1
White Male	81.4	22.2	29.6	25.9	51.9	14.8	25.9
Black Female	63.2	31.6	15.8	5.3	57.9	26.3	25.3
White Female	84.6	19.2	26.9	50.0	61.5	15.4	30.8
Male College	76.0	44.0	40.0	40.0	60.0	20.0	36.0
Male Non-College	76.0	24.0	28.0	24.0	52.0	20.0	28.0
Female College	65.0	29.2	12.5	29.2	58.3	20.5	33.3
Female Non-College	<u>76.2</u>	<u>19.0</u>	<u>33.3</u>	<u>33.3</u>	<u>61.9</u>	<u>19.0</u>	<u>23.8</u>
Total	75.8	29.4	28.4	31.6	57.9	20.0	30.5

TABLE #6

FOLLOW-UP ON ADS BY THOSE INTERESTED

	<u>% Seeking Additional Information</u>
Male	18.0
Female	22.2
Black	23.8
White	17.0
College	18.4
Non-College	21.7
Black Male	30.5
White Male	7.4
Black Female	15.8
White Female	22.9
Male College	8.0
Male Non-College	28.0
Female College	29.2
Female Non-College	<u>14.3</u>
Total	20.0

<u>Sources of Additional Information</u>	<u>% Response (Total Only) (N = 19)</u>
Recruiter	10
Sent in Coupon	8
School Counselor	8
Friend	4
Relative	1

Sources of additional information are also shown in Table 26. However, these figures should be considered with caution, since overall, only 19 individuals were involved (9 males, 7 black and 2 white; plus 10 females, 3 black and 7 white). For this group, the most frequent follow-up was recruiter contact, followed closely by sending in a coupon or talking to the school counselor. The least likely follow-up was with friends and relatives, as shown in the table. These "rankings" seem quite logical; the small number who took some initiative went to the more formal information sources.

Follow-up discussions were assessed by asking about subsequent conversations with male and female friends. As shown in Table 27, 32% of those seeing ads in the last month did discuss them with male friends, and 19% discussed them with female friends. Looked at by population groups, males for the most part talked to male friends, but females talked to females as often as they talked to males. College bound males were the least likely to have talked to females, and black males talked to females more frequently than did white males. Females, black or white, college or non-college bound, talked equally with males and females.

INFORMATION SOURCES

All respondents were asked questions concerning discussions initiated by male or female friends about recruiting ads they had seen, recruitment content and occasion, media information sources for those requesting literature, parents as a source of armed services information, and the importance of various interpersonal sources when considering enlistment.

As shown in Table 28, 42% of the total sample had male friends who had seen recruiting ads and talked to the respondents about them. Eighteen percent of the sample had female friends who had seen recruiting ads and talked to the respondents about them. Again, males talked with males far more often than with females. Females talked more often with males also, but to a lesser degree.

TABLE 27

PEER INTERACTION FOLLOW UP

(Percent Response)

	<u>Male Friends</u>	<u>Female Friends</u>
Male	38.0	14.0
Female	24.4	24.4
Black	33.3	19.0
White	30.2	18.9
College	28.6	14.5
Non-College	34.8	23.9
Black Male	47.8	21.7
White Male	29.6	7.4
Black Female	15.8	15.8
White Female	30.6	30.8
Male College	32.0	4.0
Male Non-College	44.0	24.0
Female College	25.0	25.0
Female Non-College	<u>23.8</u>	<u>23.8</u>
Total	31.6	18.9

TABLE 28

DISCUSSION ABOUT RECRUITING ADS INITIATED BY FRIENDS (PERCENT)

	<u>Male Friends</u>	<u>Female Friends</u>
Male	52.9	14.7
Female	30.9	20.6
Black	42.6	22.1
White	41.2	13.2
College	45.6	17.6
Non-College	38.2	17.6
Black Male	52.9	20.6
White Male	52.9	8.8
Black Female	32.4	23.5
White Female	29.4	17.6
Male College	52.9	14.7
Male Non-College	52.9	14.7
Female College	38.2	20.6
Female Non-College	<u>23.5</u>	<u>20.6</u>
Total	41.9	17.6

Comparing the different population groups, an approximately equal proportion of blacks and whites had "male friends" who talked to them (43% and 41%, respectively). For the college bound, 46% had male friends who had talked to them and the non-college bound, 38%. However, 53% of the males had male friends who had talked to them, while 31% of the females reported that male friends had talked to them. For the category of "female friends," there is some variation for race, but not for orientation. Twenty-two percent of the blacks had female friends who had talked to them, while 13% of the whites reported this had occurred. Eighteen percent of both the college and non-college bound reported having female friends who had talked to them. Females were more likely to have had female friends talk to them (21%) than did males (15%).

Approximately 35% of the sample indicated that they had had some contact with a recruiter. Males show more contact than females, as can be seen in Table 29. Blacks show more contact than whites, and the college bound show more contact than the non-college bound. It is probable that contact on the part of the college bound, primarily during school, was in reference to enrollment in the military academies. The major recruiter contact for most groups was during school visits. This is true for all groups except male non-college bound: they are as likely to have had contact at a recruiting station as at school.

Eighteen percent of the sample indicated that they had at one time mailed a coupon or telephoned to ask for armed services literature. Black males and non-college bound males were the groups most likely to have done so -- 23.5% of each group had requested literature. For those that had requested armed services literature, the major sources of contact information were, first, the school counselor and, second, magazines. This was true for all groups. For blacks, both male and female, school counselor contact was particularly evident (see Table 30).

When respondents ranked in importance the sources they would like to talk to if they were interested in joining the armed services, the formal sources

TABLE 29

CONVERSATION WITH RECRUITER AND OCCASION (PERCENT)

	<u>Had Contact</u>	<u>During School</u>	<u>At Recruiting Station</u>	<u>Else- where</u>
Male	41.2	28.0	13.6	4.4
Female	28.0	19.2	4.4	4.4
Black	45.6	35.2	10.2	3.0
White	23.6	11.8	7.4	5.8
College	41.2	29.4	8.8	4.4
Non-College	28.0	17.6	8.8	4.4
Black Male	52.8	41.2	17.6	0.0
White Male	29.6	14.8	8.8	8.8
Black Female	38.4	29.6	3.0	6.0
White Female	17.0	8.8	6.0	3.0
Male College	50.0	41.2	11.6	0.0
Male Non-College	32.4	14.8	14.8	8.8
Female College	32.4	17.6	6.0	8.8
Female Non-College	<u>23.6</u>	<u>20.4</u>	<u>3.0</u>	<u>0.0</u>
Total Sample	34.6	23.5	8.8	4.4

TABLE 30

LITERATURE REQUEST AND SOURCE OF CONTACT INFORMATION (PERCENT)

	<u>Requested Literature</u>	<u>Magazine</u>	<u>News- paper</u>	<u>School Counselor</u>	<u>TV</u>	<u>Else- where</u>
Male	20.6	7.4	2.9	7.4	2.9	8.8
Female	14.8	7.4	0.0	7.4	1.5	1.5
Black	19.2	7.4	2.9	11.8	1.5	4.4
White	16.2	7.4	0.0	2.9	2.9	5.8
College	17.6	5.9	1.4	7.4	2.9	7.4
Non-College	17.6	8.8	1.4	7.4	2.9	7.4
Black Male	23.5	11.8	5.9	11.6	0.0	8.8
White Male	17.6	2.9	0.0	2.9	5.9	8.8
Black Female	14.7	2.9	0.0	11.8	2.9	0.0
White Female	14.7	11.8	0.0	2.9	0.0	2.9
Male College	17.6	2.9	2.9	5.9	2.9	5.9
Male Non-College	23.5	11.8	2.9	8.8	2.9	11.8
Female College	17.6	8.8	0.0	8.8	0.0	0.0
Female Non-College	<u>11.8</u>	<u>5.9</u>	<u>0.0</u>	<u>5.9</u>	<u>2.9</u>	<u>2.9</u>
Total Sample	17.6	7.4	1.4	7.4	2.2	5.1

(armed services recruiter and school counselor) were considered to be most important. The next most important source was knowledgeable older friends or relatives, as shown in Table 31. (These priorities parallel the information seeking behavior of that small group who actually followed-up on ads during the last month to obtain additional information, as indicated in Table 26.) In fourth and fifth place were male peers and female peers, respectively.

TABLE 31. RANKING OF INFORMATION SOURCES

First	Armed Services Recruiter
Second	School Counselor
Third	Knowledgeable Older Friend or Relative
Fourth	Boys in Your Age Group
Fifth	Girls in Your Age Group

All groups ranked the armed services recruiter first. Although there were minor variations among the groups for rankings of second, third, etc., no group departed markedly from the rankings of the total sample.

In a separate question, the students were asked if their mothers or fathers actually did, at any time, provide information to them about the armed services. Thirteen percent of the total sample indicated that their mothers had supplied information, and 27% indicated that their fathers had supplied information.

ATTITUDES OF POTENTIAL INFLUENCERS

Respondents were asked if they had talked to various people (mothers, fathers, brothers, sisters, older friends, male friends, female friends) during their senior year about what a job or career in the armed services would be like, and the reactions of these people. Also, they were asked if they had themselves advised male or female friends of their own reaction with respect to their friends' enlistment. Responses are reported in Table 32 for the total sample. Discussions were most likely to have been with older friends (42%) or

TABLE 32

ATTITUDES OF RELATIVES AND FRIENDS TOWARD ENLISTMENT

	% that Have <u>Discussed</u>	<u>Encouraged</u>	<u>Neutral</u>	<u>Discouraged</u>
Mother	35%	9%	19%	7%
Father	27%	6%	15%	6%
Brother	19%	5%	10%	4%
Sister	25%	10%	12%	3%
Older Friend	42%	10%	22%	10%
Male Peers	35%	10%	14%	12%
Female Peers	24%	3%	12%	9%
Respondent - Advice to Male Peers	44%	10%	28%	7%
Respondent - Advice to Female Peers	22%	4%	13%	4%

male peers (35%). Parents are the next most likely discussants; mothers are somewhat more likely (35%) than fathers (27%). Enlistment was discussed with sisters and female peers by approximately one-fourth of the sample. Respondents were twice as likely to have advised their male peers about enlistment (44%) than their female peers (22%).

A remarkable balance of encouragement vs. discouragement, along with a high degree of neutrality, was reported for these discussions. Only two notable departures occurred from this pattern: there was more encouragement than discouragement from sisters, and more discouragement than encouragement from female peers. The "encouragement" pattern reported from, and to, peers is almost perfectly consistent. Three percent of the respondents were encouraged to enlist by their female peers, and 4% of the respondents encouraged their female peers to enlist. Ten percent of the respondents were encouraged to enlist by their male peers, and 10% of the respondents encouraged their male peers to enlist. However, there is some variation in the "discouragement" pattern. Twelve percent of the respondents were discouraged by their male peers and 7% of the respondents discouraged their male peers. Nine percent of the respondents were discouraged by their female peers, and 4% of the respondents discouraged their female peers.

Male peers were perceived as the least likely to be neutral towards enlistment. They were neutral 39% of the time that any attitude was expressed, compared to about 50% for the other sources. The respondents themselves were most often neutral; 62% of the attitudes they expressed to both male and female peers were neutral.*

* Only those respondents who reported having discussed enlistment were used in calculating these percentages.

VIII. REFERENCES

- Bardwick, J. M. The Psychology of Women. New York: Harper and Row, 1971.
- Clyde, D. J.; Cramer, E. M.; & Sherin, R. J. Multivariate Statistical Programs. Coral Gables, Florida: University of Miami, Biometrics Laboratory, 1968.
- Friedman, L. "A Survey of Advertising Awareness and Enlistment Planning by Recent Enlistees in the Armed Services," Mathematica Inc., prepared for the Office of Naval Research, October 17, 1972.
- Goldman, N. "The Changing Role of Women in the Armed Forces," in Joan Huber (Ed.), Changing Women in a Changing Society. Chicago: University of Chicago Press, 1973.
- Spence, J. T. & Helmreich, R. "The Attitudes Toward Women Scale: An Objective Instrument to Measure Attitudes Towards the Rights and Roles of Women in Contemporary Society," Abstracted in JSAS Catalog of Selected Documents in Psychology, 1972, 2, 66.
- Thibaut, J. W. & Kelley, H. H. The Social Psychology of Groups. New York: John Wiley and Sons, 1959.
- Yankelovich, D. "Changing Youth Values in the 70's," JRD 3rd Fund, 1974.

APPENDIX A

HIGH SCHOOL SENIORS QUESTIONNAIRE

Reproduced from
best available copy.



Please print the following on the removable label to the right:

First line: First and Last Name

Second line: Home Address

Third line: City, State, Zip Code

Fourth line: Home Telephone No.

Name of High School _____

We may be selecting students to fill out questionnaires again before the school semester is out, and would like to give you the first opportunity to participate at that time also. The information on the label will be used to contact you about the second survey. This label will be removed from your questionnaire when it is collected. The label will be kept separately. In that way your name will not appear with any of your answers. All of the questionnaires will be treated confidentially.

There are several sets of questions attached which we would like you to answer. They are about your plans after high school, your ideas about work and school, and who you have talked to about these plans or how you arrived at them. Except for some background information such as your curriculum, these questions have no right or wrong answers. We are only interested in your own ideas. Read each question carefully. Each is different although some are similar. Please answer every question as best you can. You may erase and change an answer if you like, but most questions should only have one answer entered when you are finished.

Col.

1-6
7
8
9

Office use only

1					
---	--	--	--	--	--

First, some preliminary information:

1. What is your sex (Check one)?

___ Male ___ Female
1 2

2. What is your race (Check one)?

___ Black ___ White ___ Oriental ___ Spanish American ___ Other
1 2 3 4 5

3. What is your school curriculum (Check one)?

___ College preparatory ___ Job Preparatory ___ Vocational-Technical
1 2 3

___ General ___ Other _____
4 5 (Write in Name)

4. What are you going to do after high school? (For example, if you are going to college, write in your major. If you are going to get a job, list the particular job(s) you are considering, etc.)

College Major

Type of job(s) or other plans

During the past week you may have been involved in a number of different communication activities. You may have used a number of media, such as television, newspapers, etc. You have probably also had conversations with a number of different people. We would like to know how many hours you have spent personally talking to the different people listed below during the past week, and how much you read, watched, or listened to different media. We also would like to know how much of your involvement with each source was for informational and/or entertainment purposes.

How much time did you spend last week in communication activities with each of the following sources?

Please indicate in the blanks below the number of hours of contact you have had during the past week with each source. (If none, write a "0" instead of a number.)
Do not count time related to school assignments only (such as assigned reading).

To what extent was contact with each of the sources at an on the left important for entertainment and important for information?

Rate each source for which you have entered hours, on the following 7-point scale:

- 7 Information only
- 6 Mostly information
- 5 More information but some entertainment
- 4 Half entertainment, half information
- 3 More entertainment but some information
- 2 Mostly entertainment
- 1 Entertainment only

During the Past Week

	Col.	(Write in number)	Col.	(Put one check on each line)
Television	10-11	No. of Hours/wk. ___	10	1 2 3 4 5 6 7
Radio	12-13	No. of Hours/wk. ___	11	1 2 3 4 5 6 7
Newspapers	14-15	No. of Hours/wk. ___	12	1 2 3 4 5 6 7
Magazines	16-17	No. of Hours/wk. ___	13	1 2 3 4 5 6 7
Father or Guardian	18-19	No. of Hours/wk. ___	14	1 2 3 4 5 6 7
Mother or Guardian	20-21	No. of Hours/wk. ___	15	1 2 3 4 5 6 7
Brother(s)	22-23	No. of Hours/wk. ___	16	1 2 3 4 5 6 7
Sister(s)	24-25	No. of Hours/wk. ___	17	1 2 3 4 5 6 7
Other relatives at home	26-27	No. of Hours/wk. ___	18	1 2 3 4 5 6 7
Boys your age who are going on to college	28-29	No. of Hours/wk. ___	19	1 2 3 4 5 6 7
Girls your age who are going on to college	30-31	No. of Hours/wk. ___	20	1 2 3 4 5 6 7
Boys your age who <u>are not</u> going on to college	32-33	No. of Hours/wk. ___	21	1 2 3 4 5 6 7
Girls your age who <u>are not</u> going on to college	34-35	No. of Hours/wk. ___	22	1 2 3 4 5 6 7
Neighbor(s)	36-37	No. of Hours/wk. ___	23	1 2 3 4 5 6 7
Teachers	38-39	No. of Hours/wk. ___	24	1 2 3 4 5 6 7

There are other media and people you may not come into contact with as often as those shown on the previous page. We would like to know how many hours you have spent personally talking to the different people listed below during the past month, and how much you read the different media listed. We also would like to know how much of your involvement with each source was for informational and/or entertainment purposes.

How much time did you spend last month in communication, including with each of the following sources?

Please indicate in the blanks below the number of hours of contact you have had during the past month with each source. (If none, write in "0" instead of a number.) Do not count time related to school assignments only (such as assigned reading).

To what extent was contact with each of the sources shown on the left important for entertainment and important for information?

Rate each source for which you have entered hours, on the following 7-point scale:

- 7 Information only
- 6 Mostly information
- 5 More information but some entertainment
- 4 Half entertainment, half information
- 3 More entertainment but some information
- 2 Mostly entertainment
- 1 Entertainment only

During the Past Month

	Col.	(Write in number)	Col.	Col. Use Only Dist. Code, 1-9
Books	56-59	No. of Hours/mo. _____	10	1 2 3 4 5 6 7
Newspapers	60-63	No. of Hours/mo. _____	11	1 2 3 4 5 6 7
Posters and Billboards	64-67	No. of Hours/mo. _____	12	1 2 3 4 5 6 7
Other relatives not living at your house	68-71	No. of Hours/mo. _____	13	1 2 3 4 5 6 7
Adult male friends	72-75	No. of Hours/mo. _____	14	1 2 3 4 5 6 7
Adult female friends	76-79	No. of Hours/mo. _____	15	1 2 3 4 5 6 7
School Counselor	80-83	No. of Hours/mo. _____	16	1 2 3 4 5 6 7
Armed Services Recruiter	84-87	No. of Hours/mo. _____	17	1 2 3 4 5 6 7
College representatives	88-91	No. of Hours/mo. _____	18	1 2 3 4 5 6 7
Business representatives	92-95	No. of Hours/mo. _____	19	1 2 3 4 5 6 7
Religious leader	96-99	No. of Hours/mo. _____	20	1 2 3 4 5 6 7
Other _____ please specify	100-103	No. of Hours/mo. _____	21	1 2 3 4 5 6 7

Overall, how much job information have you gotten from each of these sources? If you added an additional source under "Other" on the previous page, please include it here as well. Rate each source according to the following 7-point scale:

- 7 Very, very much
6 Very much
5 Much
4 Moderate
3 Little
2 Very little
1 None

Source	Col.	(Put one check on each line)	Source	Col.	(Put one check on each line)
Television	27	1 2 3 4 5 6 7	Books	27	1 2 3 4 5 6 7
Radio	28	1 2 3 4 5 6 7	Brochures	28	1 2 3 4 5 6 7
Newspapers	29	1 2 3 4 5 6 7	Posters & Billboards	29	1 2 3 4 5 6 7
Magazines	30	1 2 3 4 5 6 7	Other relatives not living at your house	30	1 2 3 4 5 6 7
Father or Guardian	31	1 2 3 4 5 6 7	Adult male friends	31	1 2 3 4 5 6 7
Mother or Guardian	32	1 2 3 4 5 6 7	Adult female friends	32	1 2 3 4 5 6 7
Brother(s)	33	1 2 3 4 5 6 7	School Counselor	33	1 2 3 4 5 6 7
Sister(s)	34	1 2 3 4 5 6 7	Armed Services Recruiter	34	1 2 3 4 5 6 7
Other relatives at home	35	1 2 3 4 5 6 7	College Representatives	35	1 2 3 4 5 6 7
Boys your age who are going on to college	36	1 2 3 4 5 6 7	Business Representatives	36	1 2 3 4 5 6 7
Girls your age who are going on to college	37	1 2 3 4 5 6 7	Religious leader	37	1 2 3 4 5 6 7
Boys your age who are NOT going on to college	38	1 2 3 4 5 6 7	Other	38	1 2 3 4 5 6 7
Girls your age who are NOT going on to college	39	1 2 3 4 5 6 7	please specify		
Neighbors(s)	40	1 2 3 4 5 6 7			
Teachers	41	1 2 3 4 5 6 7			

Overall, how influential would you say that each of these sources has been in your present career or job plans? Rate each source according to the following 7-point scale:

- 7 Very, very much
6 Very much
5 Much
4 Moderate
3 Little
2 Very little
1 None

If there is an influential source missing from this list, please write that source in after "Other," and check the appropriate number. Be sure that this source is also entered and rated on the previous two pages as well.

SOURCE	Col.	(Put one check on each line)	SOURCE	Col.	(Put one check on each line)
Television	10	1 2 3 4 5 6 7	Books	10	1 2 3 4 5 6 7
Radio	10	1 2 3 4 5 6 7	Brochures	10	1 2 3 4 5 6 7
Newspapers	10	1 2 3 4 5 6 7	Pastors & Ministers	10	1 2 3 4 5 6 7
Magazines	10	1 2 3 4 5 6 7	Other relatives not living at your house	10	1 2 3 4 5 6 7
Father or Guardian	10	1 2 3 4 5 6 7	Adult male friends	10	1 2 3 4 5 6 7
Mother or Guardian	10	1 2 3 4 5 6 7	Adult female friends	10	1 2 3 4 5 6 7
Brother(s)	10	1 2 3 4 5 6 7	School Counselor	10	1 2 3 4 5 6 7
Sister(s)	10	1 2 3 4 5 6 7	Armed Services Recruiter	10	1 2 3 4 5 6 7
Other relatives at home	10	1 2 3 4 5 6 7	College Representatives	10	1 2 3 4 5 6 7
Boys your age who are going on to college	10	1 2 3 4 5 6 7	Business Representatives	10	1 2 3 4 5 6 7
Girls your age who are going on to college	10	1 2 3 4 5 6 7	Religious leader	10	1 2 3 4 5 6 7
Boys your age who are <u>not</u> going on to college	10	1 2 3 4 5 6 7	Other	10	1 2 3 4 5 6 7
Girls your age who are <u>not</u> going on to college	10	1 2 3 4 5 6 7	please specify		
Neighbor(s)	10	1 2 3 4 5 6 7			
Teachers	10	1 2 3 4 5 6 7			

For each of the statements below, please indicate how strongly you agree or disagree by circling the appropriate number (1 to 4) in the blank next to each statement. Be sure to read each statement carefully.

- 4 Agree strongly
3 Agree mildly
2 Disagree mildly
1 Disagree strongly

Office Use Only

100-100-2-2
[] [] [] [] [] [] [] [] [] []

(Put one number in each blank)

Statements

- | | | |
|----|-------|---|
| 10 | _____ | Women should take increasing responsibility for leadership in solving the intellectual and social problems of the day. |
| 11 | _____ | Vocational and professional schools should admit the best qualified students, regardless of sex. |
| 12 | _____ | There should be a strict merit system in job appointments and promotion without regard to sex. |
| 13 | _____ | Women should assume their rightful place in business and all the professions along with men. |
| 14 | _____ | A woman should not expect to go to exactly the same place or to have quite the same freedom of action as a man. |
| 15 | _____ | Mom in a family should be given more encouragement to go to college than daughters. |
| 16 | _____ | It is ridiculous for a woman to run a business and for a man to clean up. |
| 17 | _____ | Men should regard the services rendered by the women workers as valuable as those of men. |
| 18 | _____ | It is only fair that male workers should receive more pay than women even for identical work. |
| 19 | _____ | There are some professions and types of businesses that are more suitable for men than women. |
| 20 | _____ | Women should be concerned with their duties of childbearing and housekeeping, rather than with careers in professional and business careers. |
| 21 | _____ | The intellectual leadership of a community should be largely in the hands of men. |
| 22 | _____ | Economic and social freedom is worth far more to women than acceptance of the ideal of femininity which has been set up by men. |
| 23 | _____ | On the average, women should be regarded as less capable of contributing to economic production than are men. |
| 24 | _____ | The intellectual equality of women with men is perfectly obvious. |
| 25 | _____ | There are many jobs in which men should be given preference over women in being hired or promoted. |
| 26 | _____ | Women with children should not work outside the home if they don't have to financially. |
| 27 | _____ | Women should be given opportunity with men for apprenticeship in the various trades. |
| 28 | _____ | The relative amounts of time and energy to be devoted to household duties on the one hand and to a career on the other should be determined by personal desires and interests rather than by sex. |
| 29 | _____ | It is ridiculous for a woman to work as a mechanic. |
| 30 | _____ | The modern girl is entitled to the same freedom from regulation and control that is given the modern boy. |

For each of the sources below, indicate which kind of interaction is typical most of the time. Do this by entering the appropriate number (1 to 4) into the blank to the left of each source.

Kind of Interaction

- 1 No contact (source is absent, or just no contact)
- 2 You transmit your opinion to them
- 3 They transmit their opinion to you
- 4 An exchange of opinion occurs
(You transmit your opinion to them and they transmit their opinion to you)

SOURCE

(Put one number, 1 to 4, in the left hand blank for each source.)

Col.
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

- ___ Mother or Guardian
- ___ Father or Guardian
- ___ Older Sister(s)
- ___ Younger Sister(s)
- ___ Older Brother(s)
- ___ Younger Brother(s)
- ___ Other Relatives at home
- ___ Other Relatives not living at your house
- ___ Neighbor(s)
- ___ Adult Male Friend(s)
- ___ Adult Female Friend(s)
- ___ Male Friend(s) your age
- ___ Female Friend(s) your age

How often are you in agreement on most issues with each of the following sources? Leave blank those sources that you have no contact with (marked 1 in the previous question). For the others, use the following 7-point scale:

- 7 Very, very often
- 6 Very often
- 5 Often
- 4 Moderate
- 3 Seldom
- 2 Very seldom
- 1 Very, very seldom

Source	Col.	Check one number for each line:						
Mother or Guardian	33	1	2	3	4	5	6	7
Father or Guardian	34	1	2	3	4	5	6	7
Older Sister(s)	35	1	2	3	4	5	6	7
Younger Sister(s)	36	1	2	3	4	5	6	7
Older Brother(s)	37	1	2	3	4	5	6	7
Younger Brother(s)	38	1	2	3	4	5	6	7
Other Relatives at home	39	1	2	3	4	5	6	7
Other Relatives not living at your house	40	1	2	3	4	5	6	7
Neighbor(s)	41	1	2	3	4	5	6	7
Adult Male Friend(s)	42	1	2	3	4	5	6	7
Adult Female Friend(s)	43	1	2	3	4	5	6	7
Male Friend(s) your age	44	1	2	3	4	5	6	7
Female Friend(s) your age	45	1	2	3	4	5	6	7

This section of the questionnaire is concerned with your views about various kinds of job activities or career roles. Below are some characteristics which might be found in different kinds of activities. Think of each characteristic as desirable, undesirable or neutral, and the degree of its desirability or undesirability. Rate each characteristic according to the following scale:

Undesirability

- 5 Very High
-4 High
-3 Average
-2 Low
-1 Very Low

0 Neutral

Desirability

- 5 Very High
4 High
3 Average
2 Low
1 Very Low

CharacteristicRating of Characteristic
(Put one check on each line)

High pay

Col.

57-64

-5 -4 -3 -2 -1 0 1 2 3 4 5

Security

(No danger of being released)

65-68

-5 -4 -3 -2 -1 0 1 2 3 4 5

Advancement

(Chance for increasing rewards)

61-62

-5 -4 -3 -2 -1 0 1 2 3 4 5

Worthwhile activity

(Activity is socially important)

63-64

-5 -4 -3 -2 -1 0 1 2 3 4 5

Prestige

(Respect of friends)

65-66

-5 -4 -3 -2 -1 0 1 2 3 4 5

Personal restrictions

(Many rules and regulations)

67-68

-5 -4 -3 -2 -1 0 1 2 3 4 5

Friendly people

(Involved with others who are friendly)

69-70

-5 -4 -3 -2 -1 0 1 2 3 4 5

Opportunity for self-improvement

(Education, learn a skill)

71-72

-5 -4 -3 -2 -1 0 1 2 3 4 5

Office Use Only

Date, Circle 2-5

Col.

1-10

4 5 6 7 8 9 10

Travel

(Moving from place to place often)

81-82

-5 -4 -3 -2 -1 0 1 2 3 4 5

Freedom to carry out assigned activities on your own

83-84

-5 -4 -3 -2 -1 0 1 2 3 4 5

Uninteresting tasks

85-86

-5 -4 -3 -2 -1 0 1 2 3 4 5

Fringe benefits

(Medical care, pension, paid holidays, etc.)

87-88

-5 -4 -3 -2 -1 0 1 2 3 4 5

Possibility of physical danger

89-90

-5 -4 -3 -2 -1 0 1 2 3 4 5

Responsibility

(In charge of others)

91-92

-5 -4 -3 -2 -1 0 1 2 3 4 5

Easy work

(Slow pace, not demanding)

93-94

-5 -4 -3 -2 -1 0 1 2 3 4 5

Consider the "average job" that a person like you might typically get for the first few years after high school. How much of each of the following characteristics do you think this average job will help you to achieve? Mark the following 9-point scale:

- 9 Very, very much
- 8 Very much
- 7 Much
- 6 Slightly more than average
- 5 An average amount
- 4 Slightly less than average
- 3 Little
- 2 Very little
- 1 Very, very little

Characteristic	Col.	Amount of Characteristic (Put one check on each line)								
High pay	30	1	2	3	4	5	6	7	8	9
Security (No danger of being released)	31	1	2	3	4	5	6	7	8	9
Advancement (Chance for increasing rewards)	32	1	2	3	4	5	6	7	8	9
Worthwhile activity (Activity is socially important)	33	1	2	3	4	5	6	7	8	9
Prestige (Respect of friends)	34	1	2	3	4	5	6	7	8	9
Personal restrictions (Many rules and regulations)	35	1	2	3	4	5	6	7	8	9
Friendly people (Involved with others who are friendly)	36	1	2	3	4	5	6	7	8	9
Opportunity for self-improvement (Education, learn a skill)	37	1	2	3	4	5	6	7	8	9
Travel (Moving from place to place often)	38	1	2	3	4	5	6	7	8	9
Freedom to carry out assigned activities on your own	39	1	2	3	4	5	6	7	8	9
Uninteresting tasks	40	1	2	3	4	5	6	7	8	9
Fringe benefits (Medical care, pension, paid holidays, etc.)	41	1	2	3	4	5	6	7	8	9
Possibility of physical danger	42	1	2	3	4	5	6	7	8	9
Responsibility (In charge of others)	43	1	2	3	4	5	6	7	8	9
Easy work (Slow pace, not demanding)	44	1	2	3	4	5	6	7	8	9

Consider joining the special assignment (for outposts, the Air Force) for the first few years after high school. How much of each of the following characteristics do you think this activity (being in the Air Force) will help you to achieve? Use the following 9-point scale:

- 9 Very, very much
- 8 Very much
- 7 Much
- 6 Slightly more than average
- 5 An average amount
- 4 Slightly less than average
- 3 Little
- 2 Very little
- 1 Very, very little

Characteristic	Col.	Amount of Characteristic (Put one check on each line)								
High pay	36	1	2	3	4	5	6	7	8	9
Security (No danger of being released)	37	1	2	3	4	5	6	7	8	9
Advancement (Chance for increasing rewards)	38	1	2	3	4	5	6	7	8	9
Wardship activity (Activity is socially important)	39	1	2	3	4	5	6	7	8	9
Prestige (Respect of friends)	40	1	2	3	4	5	6	7	8	9
Personal restrictions (Many rules and regulations)	41	1	2	3	4	5	6	7	8	9
Friendly people (Involved with others who are friendly)	42	1	2	3	4	5	6	7	8	9
Opportunity for self-improvement (Education, learn a skill)	43	1	2	3	4	5	6	7	8	9
Travel (Moving from place to place often)	44	1	2	3	4	5	6	7	8	9
Freedom to carry out assigned activities on your own	45	1	2	3	4	5	6	7	8	9
Uninteresting tasks	46	1	2	3	4	5	6	7	8	9
Fringe benefits (Medical care, pension, paid holidays, etc.)	47	1	2	3	4	5	6	7	8	9
Possibility of physical danger	48	1	2	3	4	5	6	7	8	9
Responsibility (In charge of others)	49	1	2	3	4	5	6	7	8	9
Easy work (Slow pace, not demanding)	50	1	2	3	4	5	6	7	8	9

What do you think your major activity actually will be for the next four years after high school?

Col.

(Please check only one)

- ☐ Join the armed services
- ☐ Go to college
- ☐ Other education (e.g., vocational school)
- ☐ Get a civilian job (full-time)
- ☐ Get a civilian job (part-time)
- ☐ Not work (get married, travel, etc.)
- ☐ Other _____
please specify

How much of each of the following characteristics do you think this activity (the checked activity) will help you to achieve? Use the following 9-point scale:

- 9 Very, very much
- 8 Very much
- 7 Much
- 6 Slightly more than average
- 5 An average amount
- 4 Slightly less than average
- 3 Little
- 2 Very little
- 1 Very, very little

(If you checked "Join the armed services" above, then please check a second alternative, i.e., your second most likely activity. " as rare that second alternative below.)

Characteristics

Amount of Characteristic (Put one check on each line)

Col.

Characteristics	1	2	3	4	5	6	7	8	9
High pay									
Security (No danger of being released)									
Advancement (Chance for increasing rewards)									
Wardable activity (Activity is socially important)									
Prestige (Respect of friends)									
Personal restrictions (Many rules and regulations)									
Friendly people (Involved with others who are friendly)									
Opportunity for self-improvement (Education, learn a skill)									
Travel (Moving from place to place often)									
Freedom to carry out assigned activities on your own									
Uninteresting tasks									
Fringe benefits (Medical care, pension, paid holidays, etc.)									
Possibility of physical danger									
Responsibility (In charge of others)									
Long work (Long hours, not a weekend)									

Circle the only
one that is 1-5

1 2 3 4 5

Below are some general questions about yourself and your activities. Please check the appropriate answer to each one.

1. Are you presently working a part-time job? Check one: 1 Yes; 2 No.
2. How many older sisters do you have? Check one:
1 0; 2 1; 3 2; 4 3; 5 4 or more.
3. How many younger sisters do you have? Check one:
1 0; 2 1; 3 2; 4 3; 5 4 or more.
4. How many older brothers do you have? Check one:
1 0; 2 1; 3 2; 4 3; 5 4 or more.
5. How many younger brothers do you have? Check one:
1 0; 2 1; 3 2; 4 3; 5 4 or more.
6. Overall, what would you say your average letter grade is in high school so far?
1 A; 2 B; 3 C; 4 D; 5 F.
7. How many extracurricular activities do you participate in after school? Check one:
1 0; 2 1; 3 2; 4 3; 5 4 or more.
8. How many clubs or organizations do you belong to outside of school? Check one:
1 0; 2 1; 3 2; 4 3; 5 4 or more.
9. If you were asked to use one of these names for your social class, which would you say you belonged to? Check one:
1 Upper Class; 2 Upper Middle Class; 3 Lower Middle Class; 4 Working Class; 5 Lower Class.
10. How often do you engage in competitive activity where winning or doing better than someone else is the primary concern? Check one:
1 Very, Very Seldom 2 Very Seldom 3 Seldom 4 Slightly Less Than Average 5 Average 6 Slightly Above Average 7 Often 8 Very Often 9 Very, Very Often
11. How would you rate your leadership activities in comparison to most students in your high school? Check one:
1 Very, Very Low 2 Very Low 3 Low 4 Slightly Below Average 5 Average 6 Slightly Above Average 7 High 8 Very High 9 Very, Very High
12. Some people say that people get ahead by their own hard work; others say that lucky breaks or help from other people are most important. Which do you think is more important? Check one:
1 Hard work more important; 2 Hard work, luck equally important; 3 Luck most important.
13. After high school, are most of your friends planning to (Check one): 1 Go to college; 2 Get a job; 3 Other.
14. Which of these two alternatives do you prefer? Please check the alternative which is your preferred one.
1 A. I often wish I could be a mountain climber.
2 B. I can't understand people who risk their necks climbing mountains.
15. Which of these two alternatives do you prefer? Please check the alternative which is your preferred one.
1 A. I would not like to learn to fly an airplane.
2 B. I would like to learn to fly an airplane.
16. Would you prefer to work with a pleasant but incompetent partner, rather than with a difficult but highly competent one? Check one: 1 Yes; 2 No.

- Rank the sources below by their importance, using a different number for every one. (Enter a 1 for most important source, a 2 for second most important source, a 3 for third most important source, etc.) If there is a source you would want to talk to missing from the list, write it in on the last blank, and rank this source also.

- | | |
|----|--|
| 56 | _____ School counselor |
| 57 | _____ Armed services recruiter |
| 58 | _____ Knowledgeable older friend or relative |
| 59 | _____ Boys in your age group |
| 60 | _____ Girls in your age group |
| 61 | _____ Other _____ |

13. Have you ever talked to either or both of your parents (or guardians) about joining the armed services, and if so, what was their reaction?

Check one for each source:

Parent

Mother or
Female

Guardian: 1 Have not talked about it; 1 Encouraged you; 3 Was neutral; 4 Discouraged you.

Father
or Male

Guardian: 1 Have not talked about it; 1 Encouraged you; 3 Was neutral; 4 Discouraged you.

14. Has either of your parents (or guardians) ever supplied information to you about the armed services?

Check one for each source:

Parent

Mother or
Female

Guardian: 1 Supplied information; 2 Did not supply information.

Father
or Male

Guardian: 1 Supplied information; 2 Did not supply information.

15. During your senior year, have you talked to any other friends, or any of your brothers or sisters about what a job or career in the armed services would be like, and if so, what was their reaction?

Check one for each source:

Brother: 1 Have not discussed; 1 Encouraged you; 3 Was neutral; 4 Discouraged you.

Sister: 1 Have not discussed; 1 Encouraged you; 3 Was neutral; 4 Discouraged you.

Other Friend: 1 Have not discussed; 1 Encouraged you; 3 Was neutral; 4 Discouraged you.

16. During your senior year have you talked to any of the boys in your age group about the armed services as a possible job or career for you after high school, and if yes, what did most of them think?

Check one:

1 Have not discussed; 2 Encouraged you; 3 Was neutral; 4 Discouraged you.

17. During your senior year have you talked to any of the girls in your age group about the armed services as a possible job or career for you after high school, and if yes, what did most of them think?

Check one:

1 Have not discussed; 2 Encouraged you; 3 Was neutral; 4 Discouraged you.

18. During your senior year, have you talked to any of the boys in your age group about the armed services as a possible job or career for them after high school, and if yes, what did you tell most of them?

Check one:

1 Have not discussed; 2 Encouraged them; 3 Was neutral; 4 Discouraged them.

19. During your senior year, have you talked to any of the girls in your age group about the armed services as a possible job or career for them after high school, and if yes, what did you tell most of them?

Check one:

1 Have not discussed; 1 Encouraged them; 3 Was neutral; 4 Discouraged them.

10. Everything considered, how attracted are you to the idea of joining the armed services (for example, the Air Force) for the first few years after high school?

Check one:

<u>1</u> Very, Very Little	<u>2</u> Very Little	<u>3</u> Little	<u>4</u> Some	<u>5</u> A Moderate Amount	<u>6</u> A Substan- tial Amount	<u>7</u> Much	<u>8</u> Very Much	<u>9</u> Very, Very Much
-------------------------------------	----------------------------	--------------------	------------------	----------------------------------	---------------------------------------	------------------	--------------------------	-----------------------------------

20. What is the probability that you actually will join the armed services for the first few years after high school?

Check one:

<u>1</u> Very, Very Low	<u>2</u> Very Low	<u>3</u> Low	<u>4</u> Moderate- ly Low	<u>5</u> Fifty- fifty	<u>6</u> Moderate- ly High	<u>7</u> High	<u>8</u> Very High	<u>9</u> Very, Very High
----------------------------------	-------------------------	-----------------	---------------------------------	-----------------------------	----------------------------------	------------------	--------------------------	-----------------------------------

21. Suppose that the draft was reinstated. In this situation, what is the probability that you would voluntarily join the armed services for the first few years after high school?

Check one:

<u>1</u> Very, Very Low	<u>2</u> Very Low	<u>3</u> Low	<u>4</u> Moderate- ly Low	<u>5</u> Fifty- fifty	<u>6</u> Moderate- ly High	<u>7</u> High	<u>8</u> Very High	<u>9</u> Very, Very High
----------------------------------	-------------------------	-----------------	---------------------------------	-----------------------------	----------------------------------	------------------	--------------------------	-----------------------------------

25. Everything considered, how many different occupational alternatives (examples: bookkeeping job, firefighting job, secretarial job, gas station job, etc.; college, get married, enlist in armed services, etc.) do you realistically have to choose from following high school?

Write that number (or your best estimate of it) here: _____

We may want to get some information later from some parents about parental attitudes concerning occupations. If you do not object, please fill in the names and addresses of your parents or guardians below. Your parents or guardians will not know your answers to any of these questions. There is no obligation on your part to fill out this particular page, but it will help us if you do. This page will be detached from the rest of the questionnaire and used separately.

Check One:

☐ Mother or
☐ Female Guardian

Name _____

Address _____

City, State, Zip _____

Check One:

☐ Father or
☐ Male Guardian

Name _____

Address _____

City, State, Zip _____

Please go back and check to see if each question is answered on the previous pages.

APPENDIX 3

ORDERED MEANS FOR HOURS OF EXPOSURE,
JOB INFORMATION RATINGS, AND JOB INFLUENCE RATINGS
BY POPULATION GROUP

Hrs. ExposureJob InformationJob Influence

1. TOTAL

83.9 Mother	4.8 Newspaper	4.4 Mother
80.2 Radio	4.2 Mother	3.9 Teacher
74.4 TV	3.6 Teacher	3.7 School Counselor
64.2 Girls NC	3.5 School Counselor	3.6 Father
57.4 Teacher	3.4 Adult Male Friends	3.5 Adult Male Friends
55.1 Boys NC	3.4 Father	3.4 Newspaper
49.1 Sisters	3.3 TV	3.3 Books
42.6 Father	3.2 Radio	3.1 Adult Female Friends
41.6 Girls College	3.1 Adult Female Friends	3.0 Brochures
38.7 Brothers	3.1 Boys NC	2.9 TV
38.3 Boys College	3.0 Books	2.8 Radio
22.2 Neighbors	2.9 Girls NC	2.7 Boys NC
2.1 Newspapers	2.8 Brochures	2.6 Girls College
20.4 Books	2.7 Posters & Billboards	2.6 Magazines
18.2 Adult Male Friends	2.7 Girls College	2.6 College Rep.
15.8 Magazines	2.6 Boys College	2.6 Girls NC
15.1 Adult Female Friends	2.6 Sisters	2.5 Boys College
11.1 Other Relatives Not Home	2.6 Magazines	2.5 Sisters
8.7 Other Relatives Home	2.5 Other Relatives Not Home	2.4 Brothers
6.1 Posters & Billboards	2.3 Business Rep.	2.3 Other Relatives Not Home
4.5 School Counselor	2.3 Brothers	2.2 Posters & Billboards
4.3 Brochures	2.2 College Rep.	2.1 Business Rep.
3.4 Religious Leader	2.0 Neighbors	1.9 Neighbors
3.1 Business Rep.	1.8 Religious Leader	1.7 Religious Leader
2.4 College Rep.	1.8 Other Relatives Home	1.6 Other Relatives Home
0.6 Armed Services Rep.	1.4 A.S. Rep.	1.5 A.S. Rep.

2. FEMALE

<u>Hrs. Exposure</u>	<u>Job Information</u>	<u>Job Influence</u>
94.3	Mother	4.4 Mother
80.4	TV	4.0 Teacher
76.2	Radio	2.9 School Counselor
67.9	Girls NC	3.7 Newspapers
54.1	Teachers	3.6 Books
53.6	Sisters	2.4 Father
52.6	Boys NC	3.3 Adult Female Friends
49.1	Father	3.3 Adult Male Friends
44.4	Girls College	3.2 TV
37.0	Brothers	3.1 Brochures
35.1	Boys College	3.0 Radio
26.4	Neighbors	2.8 Girls College
24.7	Books	2.7 Magazines
22.0	Adult Male Friends	2.7 Girls NC
19.8	Newspapers	2.6 Boys NC
18.2	Adult Female Friends	2.6 Sisters
15.5	Magazines	2.5 College Rep.
14.5	Other Relatives Home	2.4 Brothers
11.4	Other Relatives Not Home	2.4 Business Rep.
7.7	Posters & Billboards	2.4 Other Relatives Not Home
5.3	Brochures	2.4 Posters & Billboards
4.8	Religious Leader	2.3 Boys College
4.8	School Counselor	2.0 Religious Leader
3.7	Business Rep.	2.0 Neighbors
3.4	College Rep.	1.7 Other Relatives Home
0.7	A.S. Rep.	1.4 A. S. Rep.

Hrs. Exposure

Job Information

Job Influence

4. COLLEGE

<u>Hrs. Exposure</u>	<u>Job Information</u>	<u>Job Influence</u>
92.8	Mother	4.7 Mother
74.8	Radio	4.2 Teacher
66.5	TV	3.9 School Counselor
65.1	Teacher	3.7 Books
58.3	Girls College	3.6 Father
55.0	Boys College	3.6 College Rep.
54.8	Sister	3.5 Adult Male Friends
54.4	Girls NC	3.5 Brochures
50.0	Boys NC	3.4 Newspapers
44.7	Father	3.2 Adult Female Friends
44.1	Brothers	3.1 Girls College
26.9	Newspapers	3.1 Boys College
22.8	Books	3.0 Girls College
20.9	Neighbors	3.0 TV
15.2	Magazines	2.9 Magazines
12.6	Adult Male Friends	2.7 Sisters
11.3	Other Relatives Home	2.7 Radio
10.7	Adult Female Friends	2.6 Boys NC
8.8	Other Relatives Not Home	2.6 Girls NC
5.5	Posters & Billboards	2.5 Brothers
5.5	Brochures	2.1 Other Relatives Not Home
4.8	School Counselor	2.1 Posters & Billboards
3.5	College Rep.	1.9 Neighbors
3.4	Religious Leader	1.8 Business Rep.
1.0	Business Rep.	1.7 Other Relatives Home
0.1	Armed Services Rep.	1.7 Religious Leader
		1.4 A. S. Rep.

Mrs. Exposure		Job Information	Job Influence
5. NON COLLEGE	85.7 Radio	4.7 Newspaper	4.1 Mother
	82.4 TV	4.2 Mother	3.6 Teacher
	74.9 Mother	3.6 Adult Male Friend	3.5 Father
	74.0 Girls NC	3.6 Teacher	3.5 School Counselor
	60.3 Boys NC	3.5 School Counselor	3.4 Adult Male Friend
	49.7 Teachers	3.4 Father	3.3 Newspaper
	43.4 Sisters	3.4 TV	3.0 Radio
	40.6 Father	3.3 Radio	3.0 Adult Female Friend
	33.3 Brothers	3.2 Adult Female Friend	2.9 Books
	24.9 Girls College	3.1 Boys NC	2.7 Boys NC
	23.8 Adult Male Friends	3.0 Girls NC	2.7 TV
	23.5 Neighbors	2.7 Posters & Billboards	2.6 Brochures
	21.7 Boys College	2.7 Books	2.6 Girls NC
	19.6 Adult Female Friends	2.6 Business Rep.	2.5 Other Relatives Not Home
	18.0 Books	2.6 Other Relatives Not Home	2.4 Business Rep.
	16.4 Magazines	2.6 Brochures	2.3 Sisters
	15.4 Newspapers	2.5 Sisters	2.3 Brothers
	13.4 Other Relatives Not Home	2.4 Girls College	2.3 Magazines
	6.7 Posters & Billboards	2.4 Magazines	2.3 Posters & Billboards
	6.1 Other Relatives Home	2.2 Brothers	2.1 Girls College
	5.2 Business Rep.	2.1 Boys College	2.0 Boys College
	4.1 School Counselor	2.0 Neighbors	1.9 Neighbors
	3.4 Religious Leader	1.9 Other Relatives Home	1.8 Religious Leader
	3.1 Brochures	1.7 Religious Leader	1.6 College Rep.
	1.4 College Rep.	1.6 A. S. Rep.	1.6 A. S. Rep.
	0.1 A. S. Rep.	1.5 College Rep.	1.5 Other Relatives Home

6. BLACK

<u>Hrs. Exposure</u>	<u>Job Information</u>	<u>Job Influence</u>
92.4 Mother	5.0 Newspapers	4.6 Mother
87.1 Radio	4.4 Mother	4.4 School Counselor
79.8 TV	3.9 School Counselor	4.3 Teacher
75.3 Teacher	3.8 Teacher	3.8 Adult Male Friends
60.2 Girls NC	3.7 Radio	3.6 Newspaper
60.6 Sister	3.6 TV	3.5 Father
53.2 Boys NC	3.5 Adult Male Friends	3.5 Books
47.3 Brother	3.4 Adult Female Friends	3.4 Adult Female Friends
47.1 Girls College	3.3 Girls NC	3.3 Radio
40.7 Boys College	3.3 Father	3.1 TV
39.6 Father	3.2 Boys NC	3.1 College Rep.
27.1 Neighbors	3.0 Books	3.0 Girls NC
24.1 Newspapers	2.9 Other Relatives Not Home	2.9 Girls College
20.1 Adult Male Friends	2.9 Girls College	2.9 Other Relatives Not Home
19.7 Books	2.9 Boys College	2.8 Boys NC
15.5 Teachers	2.9 Sisters	2.8 Boys College
14.9 Magazines	2.6 Posters & Billboards	2.7 Brochures
13.7 Other Relatives Home	2.6 Magazines	2.5 Magazines
12.0 Other Relatives Not Home	2.5 Business Rep.	2.5 Business Rep.
8.5 Posters & Billboards	2.4 Brochures	2.4 Brothers
6.8 School Counselor	2.4 Brothers	2.3 Sisters
4.4 Brochures	2.3 College Rep.	2.3 Posters & Billboards
4.4 Religious Leader	2.2 Neighbors	2.3 Neighbors
3.6 Business Rep.	2.0 Religious Leader	2.2 Religious Leader
3.5 College Rep.	2.0 Other Relatives Home	1.7 Other Relatives Home
0.4 A. S. Rep.	1.4 A. S. Rep.	1.5 A. S. Rep.

7. WHITE

<u>Hrs. Exposure</u>	<u>Job Information</u>	<u>Job Influence</u>
75.3	Mother	4.2 Mother
73.4	Radio	3.6 Father
69.1	TV	3.4 Teacher
66.2	Girls NC	3.3 Brochures
57.1	Boys NC	3.1 Newspapers
45.7	Father	3.1 Adult Male Friends
39.5	Teachers	3.0 School Counselor
37.6	Sisters	3.0 Books
36.1	Girls College	2.8 Adult Female Friends
35.9	Boys College	2.7 Magazines
30.2	Brothers	2.7 TV
21.0	Books	2.6 Boys NC
18.2	Newspapers	2.7 Posters & Billboards
17.3	Neighbors	2.7 Magazines
16.7	Magazines	2.7 Radio
16.4	Adult Male Friends	2.6 Girls NC
14.8	Adult Female Friends	2.6 Girls College
10.2	Other Relatives Not Home	2.4 Boys College
4.2	Brochures	2.3 Sisters
3.8	Posters & Billboards	2.2 Business Rep.
3.7	Other Relatives Home	2.1 College Rep.
2.5	Business Rep.	2.1 Other Relatives Not Home
2.3	Religious Leader	2.1 Brothers
2.2	School Counselor	1.8 Neighbors
1.4	College Rep.	1.5 Religious Leader
0.9	A. S. Rep.	1.5 A. S. Rep.
		1.5 Other Relatives Home
		1.3 Religious Leader

8. FEMALE
COLLEGE

<u>Hrs. Exposure</u>	<u>Job Information</u>	<u>Job Influence</u>
101.2	Mother	4.3 Mother
79.7	TV	4.2 Teacher
70.8	Radio	3.9 School Counselor
63.2	Girls College	3.7 Books
60.1	Teacher	3.6 Newspapers
53.1	Sisters	3.5 College Rep.
51.2	Father	3.4 Brochures
49.8	Girls NC	3.4 TV
47.1	Boys College	3.2 Adult Male Friends
44.8	Brothers	3.2 Girls College
42.7	Boys NC	3.2 Father
29.2	Books	3.1 Magazines
23.7	Newspapers	3.1 Adult Female Friends
20.1	Neighbors	2.9 Radio
18.6	Other Relatives Home	2.8 Boys College
16.0	Magazines	2.5 Boys NC
13.1	Adult Male Friends	2.5 Sisters
10.2	Other Relatives Not Home	2.5 Brothers
9.9	Adult Female Friends	2.4 Posters & Billboards
8.6	Posters & Billboards	2.4 Girls NC
7.5	Brochures	2.3 Other Relatives Not Home
5.8	School Counselor	2.1 Religious Leader
5.4	Religious Leader	1.9 Neighbors
4.5	College Rep.	1.9 Other Relatives Home
0.7	Business Rep.	1.7 Business Rep.
0.1	A. S. Rep.	1.4 A. S. Rep.

Hrs. Exposure

Job Information

Job Influence

9. FEMALE NON COLLEGE

87.4	Mother	5.1	Newspapers	4.4	Mother
81.1	Girls NC	4.6	Mother	3.9	School Counselor
81.6	Radio	4.1	Teacher	3.9	Teacher
81.1	TV	4.0	TV	3.8	Newspapers
62.4	Boys NC	4.0	Adult Female Friends	3.6	Father
54.1	Sisters	3.9	Radio	3.5	Adult Female Friends
48.0	Teacher	3.9	School Counselor	3.4	Books
47.1	Father	3.6	Adult Male Friends	3.3	Adult Male Friends
32.6	Neighbors	3.6	Father	3.1	Radio
31.0	Adult Male Friends	3.5	Books	3.1	Business Rep.
29.3	Brothers	3.4	Neighbors	3.1	Girls NC
26.5	Adult Female Friends	3.2	Business Rep.	3.0	TV
25.6	Girls College	2.9	Posters & Billboards	2.7	Brochures
23.2	Boys College	2.9	Boys NC	2.7	Boys NC
20.2	Books	2.9	Sisters	2.7	Sisters
15.9	Newspapers	2.7	Brochures	2.4	Other Relatives Not Home
15.0	Magazines	2.7	Other Relatives Not Home	2.4	Brothers
12.5	Other Relatives Not Home	2.6	Magazines	2.3	Posters & Billboards
10.5	Other Relatives Home	2.4	Neighbors	2.3	Magazines
6.8	Posters & Billboards	2.4	Girls College	2.3	Girls College
6.8	Business Rep.	2.4	Brothers	2.1	Neighbors
4.2	Religious Leader	2.1	Other Relatives Home	1.9	Religious Leader
3.9	School Counselor	2.0	Religious Leader	1.8	Boys College
3.4	Brochures	1.9	Boys College	1.5	College Rep.
2.2	College Rep.	1.4	College Rep.	1.5	A. S. Rep.
1.2	A. S. Rep.	1.4	A. S. Rep.	1.5	Other Relatives Home

Hrs. Exposure

Job Information

Job Influence

10. MALE COLLEGE

84.4	Mother	4.9	Newspaper	5.1	Mother
78.9	Radio	4.7	Mother	4.1	Teacher
70.1	Teacher	3.8	Father	4.1	Father
62.8	Boys College	3.5	Teacher	3.9	School Counselor
59.0	Girls NC	3.3	Radio	3.8	College Rep.
57.3	Boys NC	3.3	Boys College	3.8	Adult Male Friends
56.5	Sisters	3.2	Boys NC	3.7	Books
53.5	Girls College	3.1	Books	3.5	Brochures
53.2	TV	3.1	School Counselor	3.4	Adult Female Friends
43.5	Brothers	3.1	Adult Male Friends	3.4	Boys College
38.3	Father	3.0	TV	3.3	Newspapers
30.2	Newspapers	2.9	College Rep.	2.9	Sisters
21.6	Neighbors	2.9	Girls NC	2.8	Girls NC
16.3	Books	2.9	Girls College	2.8	Boys NC
14.5	Magazines	2.7	Magazines	2.8	Girls College
12.2	Adult Male Friends	2.7	Adult Female Friends	2.6	Magazines
11.5	Adult Female Friends	2.7	Sisters	2.6	Radio
7.3	Other Relatives Not Home	2.6	Brochures	2.6	TV
4.0	Other Relatives Home	2.4	Posters & Billboards	2.6	Brothers
3.9	School Counselor	2.4	Other Relatives Not Home	1.9	Posters & Billboards
3.7	Brochures	2.4	Brothers	1.9	Business Rep.
2.5	Posters & Billboards	2.2	Business Rep.	1.9	Neighbors
2.5	College Rep.	2.0	Neighbors	1.9	Other Relatives Not Home
1.4	Religious Leader	1.7	Religious Leader	1.6	Other Relatives Home
1.3	Business Rep.	1.5	Other Relatives Home	1.4	Religious Leader
0.1	A. S. Rep.	1.2	A. S. Rep.	1.4	A. S. Rep.

Hrs. Exposure	Job Information	Job Influence
89.7	Radio	3.9 Mother
83.7	TV	3.6 Adult Male Friends
62.4	Mother	3.4 Father
58.1	Boys NC	3.3 Teacher
51.4	Teacher	3.0 School Counselor
37.4	Brothers	2.9 Newspapers
34.0	Father	2.9 Radio
32.8	Sisters	2.7 Boys NC
31.9	Girls NC	2.5 Adult Female Friends
24.3	Girls College	2.5 Other Relatives Not Home
20.2	Boys College	2.4 Brochures
17.8	Magazines	2.4 Magazines
16.6	Adult Male Friends	2.4 TV
15.7	Books	2.3 Books
14.8	Newspapers	2.2 Posters & Billboards
14.5	Neighbors	2.2 Girls NC
14.3	Other Relatives Not Home	2.2 Brothers
12.6	Adult Female Friends	2.1 Boys College
6.7	Posters & Billboards	1.9 Girls College
4.4	School Counselor	1.9 Sisters
3.5	Business Rep.	1.8 Business Rep.
2.9	Brochures	1.8 College Rep.
2.6	Religious Leader	1.7 Religious Leader
1.8	Other Relatives Home	1.7 A. S. Rep.
1.0	A. S. Rep.	1.6 Neighbors
0.5	College Rep.	1.4 Other Relatives Home

12. BLACK MALE

<u>Hrs. Exposure</u>	<u>Job Information</u>	<u>Job Influence</u>
96.6	Radio	4.9 Mother
83.5	Mother	4.0 School Counselor
77.0	Teacher	4.0 Teacher
68.7	TV	3.9 Adult Male Friends
62.1	Girls NC	3.8 Father
59.9	Sisters	3.3 College Rep.
53.5	Girls College	3.2 Adult Female Friends
52.8	Boys NC	3.1 Books
47.3	Boys College	3.1 Radio
45.2	Brothers	3.0 Newspapers
28.4	Father	2.9 Girls NC
26.6	Newspaper	2.8 Brochures
19.4	Magazines	2.8 Other Relatives Not Home
18.7	Neighbors	2.7 TV
16.4	Books	2.7 Boys NC
13.4	Adult Male Friends	2.7 Girls College
10.3	Adult Female Friends	2.7 Boys College
9.4	Other Relatives Not Home	2.4 Magazines
6.2	School Counselor	2.4 Sisters
5.6	Posters & Billboards	2.1 Posters & Billboards
2.9	Brochures	2.1 Business Rep.
2.6	Other Relatives Home	2.1 Neighbors
1.9	College Rep.	2.1 Brothers
1.8	Religious Leader	1.8 Religious Leader
1.1	Business Rep.	1.7 A. S. Rep.
0.4	A. S. Rep.	1.6 Other Relatives Home

Hrs. ExposureJob InformationJob Influence

13. BLACK FEMALE

101.3 Mother	5.1 Newspaper	4.7 School Counselor
90.8 TV	4.4 Teacher	4.7 Teacher
77.5 Radio	4.3 School Counselor	4.4 Mother
73.6 Teacher	4.3 Mother	4.2 Newspapers
62.3 Girls NC	4.1 TV	3.9 Books
61.4 Sisters	3.9 Radio	3.8 Adult Male Friends
53.6 Boys NC	3.9 Adult Female Friends	3.5 Radio
50.8 Father	3.7 Adult Male Friends	3.5 TV
49.4 Brothers	3.6 Books	3.5 Adult Female Friends
40.8 Girls College	3.5 Girls NC	3.3 Father
35.4 Neighbors	3.3 Father	3.2 Girls College
34.2 Boys College	3.2 Boys NC	3.1 Girls NC
26.7 Adult Male Friends	3.1 Sisters	3.0 College Rep.
24.8 Other Relatives Home	3.0 Girls College	3.0 Other Relatives Not Home
23.0 Books	3.0 Other Relatives Not Home	3.0 Sisters
21.5 Newspapers	2.8 Business Rep.	2.9 Boys College
20.6 Adult Female Friends	2.8 Boys College	2.8 Business Rep.
14.6 Other Relatives Not Home	2.7 Posters & Billboards	2.8 Boys NC
11.4 Posters & Billboards	2.7 Brothers	2.8 Brothers
10.4 Magazines	2.5 Brochures	2.7 Brochures
7.4 School Counselor	2.5 Magazines	2.6 Religious Leader
7.1 Religious Leader	2.4 Neighbors	2.5 Posters & Billboards
6.1 Business Rep.	2.4 Other Relatives Home	2.5 Magazines
5.9 Brochures	2.3 Religious Leader	2.5 Neighbors
5.0 College Rep.	2.1 College Rep.	1.9 Other Relatives Home
0.3 A. S. Rep.	1.3 A. S. Rep.	1.3 A. S. Rep.

Hrs. ExposureJob InformationJob Influence

14. WHITE MALE

74.8	Radio	4.6	Newspapers	4.2	Mother
70.0	TV	4.0	Mother	3.7	Father
63.3	Mother	3.6	Father	3.5	Adult Male Friends
62.6	Boys NC	3.4	Teacher	3.4	Teacher
58.9	Girls NC	3.4	Adult Male Friends	3.2	Brochures
43.9	Father	3.3	Boys NC	3.2	Newspapers
35.7	Boys College	2.8	Brochures	2.9	School Counselor
35.7	Brothers	2.8	Boys College	2.9	Boys College
34.5	Teacher	2.7	TV	2.8	Books
29.4	Sisters	2.7	School Counselor	2.8	Boys NC
26.5	Books	2.6	Books	2.8	Brothers
24.3	Girls College	2.4	Radio	2.6	Magazines
20.6	Magazines	2.4	Adult Female Friends	2.6	Adult Female Friends
18.0	Newspapers	2.4	Girls NC	2.4	TV
17.4	Neighbors	2.4	Girls College	2.4	Sisters
15.5	Adult Male Friends	2.4	Brothers	2.3	Radio
13.8	Adult Female Friends	2.3	Posters & Billboards	2.3	College Rep.
12.2	Other Relatives Not Home	2.2	Magazines	2.1	Girls NC
4.7	Brochures	2.2	Sisters	2.0	Girls College
4.0	Posters & Billboards	2.1	College Rep.	1.9	Posters & Billboards
3.2	Other Relatives Home	2.1	Other Relatives Not Home	1.7	Other Relatives Not Home
2.6	Religious Leader	2.0	Business Rep.	1.6	Business Rep.
2.3	School Counselor	1.6	Neighbors	1.5	A. S. Rep.
1.8	College Rep.	1.6	Other Relatives Home	1.4	Neighbors
1.4	Business Rep.	1.5	A. S. Rep.	1.4	Other Relatives Home
1.0	A. S. Rep.	1.4	Religious Leader	1.2	Religious Leader

Hrs. Exposure	Job Information	Job Influence
15. WHITE FEMALE		
87.3 Mother	4.9 Newspapers	4.3 Mother
74.8 Radio	4.0 Mother	3.4 Brochures
73.6 Girls NC	3.7 Brochures	3.4 Teacher
70.0 TV	3.5 TV	3.4 Father
51.6 Boys NC	3.5 Teacher	3.2 Books
48.0 Girls College	3.5 Adult Female Friends	3.1 Newspapers
47.5 Father	3.4 School Counselor	3.1 Adult Female Friends
45.8 Sisters	3.4 Fathers	3.0 TV
36.1 Boys College	3.2 Posters & Billboards	3.0 School Counselor
34.5 Teacher	3.2 Books	2.9 Magazines
26.5 Books	3.2 Magazines	2.7 Adult Male Friends
24.7 Brothers	3.2 Adult Male Friends	2.5 Radio
20.6 Magazines	3.1 Radio	2.4 Boys NC
18.0 Newspapers	2.8 Girls NC	2.4 Girls College
17.4 Adult Male Friends	2.7 Girls College	2.3 Posters & Billboards
17.3 Neighbors	2.6 Boys NC	2.3 Girls NC
15.8 Adult Female Friends	2.4 Sisters	2.2 Sisters
8.1 Other Relatives Not Home	2.3 Business Rep.	2.1 Brothers
4.7 Brochures	2.1 Boys College	2.0 Business Rep.
4.2 Other Relatives Home	2.1 Other Relatives Not Home	2.0 College Rep.
4.0 Posters & Billboards	2.0 College Rep.	1.7 Boys College
2.6 Religious Leader	2.0 Neighbors	1.7 Other Relatives Not Home
2.3 School Counselor	1.9 Brothers	1.6 A. S. Rep.
1.8 College Rep.	1.6 Religious Leader	1.6 Neighbors
1.4 Business Rep.	1.5 A. S. Rep.	1.4 Other Relatives Home
1.0 A. S. Rep.	1.4 Other Relatives Home	1.3 Religious Leaders

APPENDIX C

ORDERED MEANS FOR JOB CHARACTERISTICS
RATINGS BY MAJOR GROUPS

VALUES BY MAJOR GROUPS

Male

4.491	Opp. for Self-Improvement
4.353	Advancement
4.265	High Pay
4.059	Fringe Benefits
4.059	Friendly People
4.030	Security
3.912	Freedom
3.853	Worthwhile Activity
3.544	Prestige
2.280	Responsibility
1.177	Travel
0.103	Personal Restrictions
0.037	Easy Work
-1.059	Physical Danger
-2.132	Uninteresting Tasks

Female

4.574	Opp. for Self-Improvement
4.383	Friendly People
4.029	Security
4.000	Fringe Benefits
3.971	High Pay
3.941	Advancement
3.794	Prestige
3.544	Worthwhile Activity
3.471	Freedom
2.162	Responsibility
0.661	Easy Work
0.531	Personal Restrictions
0.353	Travel
-1.794	Uninteresting Tasks
-2.279	Physical Danger

Black

4.574	Opp. for Self-Improvement
4.191	Friendly People
4.191	High Pay
3.956	Prestige
3.949	Worthwhile Activity
3.927	Security
3.912	Advancement
3.882	Fringe Benefits
3.530	Freedom
2.280	Responsibility
0.574	Travel
0.442	Easy Work
0.044	Personal Restrictions
-1.515	Uninteresting Tasks
-1.559	Physical Danger

White

4.441	Opp. for Self-Improvement
4.383	Advancement
4.250	Friendly People
4.177	Fringe Benefits
4.132	Security
4.044	High Pay
3.853	Freedom
3.471	Worthwhile Activity
3.382	Prestige
2.162	Responsibility
0.866	Travel
0.589	Personal Restrictions
0.309	Easy Work
-1.779	Physical Danger
-2.412	Uninteresting Tasks

College

4.721 Opp. for Self-improvement
4.338 Friendly People
4.309 Advancement
4.221 Security
4.088 High Pay
3.941 Fringe Benefits
3.868 Freedom
3.836 Worthwhile Activity
3.329 Prestige
2.485 Responsibility
1.044 Travel
0.397 Personal Restrictions
0.147 Easy Work
-1.721 Physical Danger
-2.456 Uninteresting Tasks

Non-College

4.294 Opp. for Self-improvement
4.147 High Pay
4.118 Fringe Benefits
4.103 Friendly People
3.985 Advancement
3.838 Security
3.691 Prestige
3.559 Worthwhile Activity
3.515 Freedom
1.953 Responsibility
0.603 Easy Work
0.485 Travel
0.235 Personal Restrictions
-1.471 Uninteresting Tasks
-1.618 Physical Danger

APPENDIX D

ORDERED MEANS FOR PRODUCTS
OF JOB CHARACTERISTICS AND ARMED SERVICES
RATINGS BY POPULATION GROUPS

PRODUCTS FOR ARMED SERVICES

White Male Non-College

30.460 Opportunity for Self-Improvement
 30.214 Advancement
 26.716 Fringe Benefits
 24.891 Security
 24.654 High Pay
 21.594 Freedom
 20.685 Friendly People
 20.685 Worthwhile Activity
 20.050 Prestige
 11.489 Travel
 9.882 Responsibility
 2.593 Personal Restrictions
 -0.746 Easy Work
 -0.826 Physical Danger
 -4.143 Uninteresting Tasks

Black Male Non-College

34.259 Opportunity for Self-Improvement
 29.448 Advancement
 26.404 High Pay
 27.405 Fringe Benefits
 25.418 Security
 24.593 Worthwhile Activity
 23.874 Friendly People
 22.146 Prestige
 18.375 Freedom
 15.640 Responsibility
 9.264 Travel
 3.393 Easy Work
 -5.380 Personal Restrictions
 -6.774 Physical Danger
 -9.963 Uninteresting Tasks

White Male College

36.358 Opp. for Self-Improvement
 30.058 Security
 29.710 Advancement
 29.551 Fringe Benefits
 27.249 Friendly People
 22.732 Freedom
 20.875 Prestige
 20.345 Worthwhile Activity
 20.000 High Pay
 19.795 Responsibility
 9.141 Travel
 7.351 Personal Restrictions
 -1.746 Easy Work
 -8.994 Physical Danger
 -17.728 Uninteresting Tasks

Black Male College

32.500 Opp. for Self-Improvement
 27.372 Security
 27.222 Worthwhile Activity
 26.824 Fringe Benefits
 25.037 Advancement
 24.563 High Pay
 22.682 Freedom
 21.329 Friendly People
 20.472 Prestige
 14.775 Responsibility
 3.408 Travel
 0.576 Easy Work
 -1.424 Personal Restrictions
 -9.211 Physical Danger
 -11.190 Uninteresting Tasks

White Female Non-College

31.921 Friendly People
30.560 Opp. for Self-Improvement
29.367 Advancement
28.168 Fringe Benefits
23.528 Security
23.214 Prestige
23.169 Freedom
22.590 High Pay
18.438 Worthwhile Activity
7.800 Responsibility
5.481 Easy Work
5.283 Personal Restrictions
0.427 Travel
-6.446 Uninteresting Tasks
-13.239 Physical Danger

Black Female Non-College

31.934 Prestige
30.906 Opp. for Self-Improvement
28.340 Friendly People
26.413 High Pay
25.412 Fringe Benefits
22.590 Worthwhile Activity
19.990 Advancement
19.257 Freedom
19.092 Security
16.571 Responsibility
3.174 Personal Restrictions
1.793 Easy Work
-5.329 Uninteresting Tasks
-7.919 Travel
-9.967 Physical Danger

White Female College

36.747 Opp. for Self-Improvement
30.728 Fringe Benefits
30.214 Advancement
27.655 Security
25.352 Friendly People
24.111 Worthwhile Activity
23.169 Freedom
22.824 High Pay
20.732 Prestige
14.614 Responsibility
8.161 Travel
1.774 Easy Work
0.415 Personal Restrictions
-15.743 Physical Danger
-16.765 Uninteresting Tasks

Black Female College

36.471 Opp. for Self-Improvement
34.444 Friendly People
33.403 Prestige
28.986 Advancement
28.826 Security
28.004 High Pay
26.171 Worthwhile Activity
23.072 Freedom
21.121 Fringe Benefits
16.170 Responsibility
10.883 Travel
4.485 Personal Restrictions
1.624 Easy Work
-3.985 Uninteresting Tasks
-6.117 Physical Danger

APPENDIX E

**AN ANNOTATED BIBLIOGRAPHY OF
TECHNICAL REPORTS CONCERNING
ARMED SERVICES RECRUITMENT
AND RETENTION: 1972 - 1973**

**AN ANNOTATED BIBLIOGRAPHY OF
TECHNICAL REPORTS CONCERNING ARMED SERVICES
RECRUITMENT AND RETENTION: 1973 - 1973***

No one was drafted for military service in the United States in 1973, and authority for the draft expired in the middle of that year. Advent of the all-volunteer armed services is a topic of continuing importance and concern. Because of the recency of this change, most of the relevant reports are still unpublished, difficult to locate, and not easily accessible even when the full reference is available. Moreover, because of the specialized and applied nature of some of the reports, eventual journal publication of many of them is unlikely. For these reasons, this bibliography has been developed. This bibliography provides individual abstracts, classified by subtopic categories, that other investigators may use to assess the utility of a report for his or her own purposes, as well as supplying the appropriate information for accessing pertinent documents.

The six subtopic categories used are Minority Groups and Human Relations; Aptitude; Attitudes and Enlistment Incentives, Testing and Training; Manpower Recruitment, Motivation and Retention; Structure and Organizational Change. These are defined as follows:

- A. Minority Groups and Human Relations is a classification chosen to encompass those documents presenting information and data supporting questions of Black/White hypotheses and comparisons, race relations, cultural differences between races, and roles for women in the military.
- B. Aptitude in general addresses the question of suitability of persons for assignment to particular jobs, and the skills required for the proper performance of assignments.

*This is at the same time an extension and refinement of the annotated bibliography included in "Methods for Estimating and Enhancing the Military Potential of Selected Manpower Segments, First Year Final Report," Westinghouse Health Systems, August 1975. It is an extension in that more recent reports have been added. It is a refinement in that most reports published prior to 1972 have been excluded.

- C. Attitudes and Enlistment Incentives relates to those documents that deal with attitudes of both the serviceman (and his civilian counterpart) toward the Armed Forces, particularly the Air Force. Also described are devices used by the Services to elicit interest towards enlistment.
- D. Testing and Training specifically deals with personnel testing procedures for a wide variety of reasons, and with training situations, requirements, and assignments.
- E. Manpower Recruitment, Motivation and Retention is a very broad category which addresses the overall manpower requirements for the services and issues dealing with the problem of second term retention and career motivation. Documents dealing with these issues are concerned with officer personnel as well as enlisted persons.
- F. Structure and Organizational Change is an appropriate generic grouping for those documents which raise the issue of an All-Volunteer Service rather than one predicated on the draft. Abstracts are included for articles related to proposals dealing with comparative analysis of military/civilian wages, and other proposals for improving military conditions and making the military more attractive for the volunteer.

This bibliography was used as a working research base for the program "Methods for Estimating and Enhancing the Military Potential of Selected Manpower Segments" funded by the Air Force Office of Scientific Research. As such, the categories defined were predicated upon the needs and interests of the larger project of which it was a part.

Abstracts are listed in alphabetical order by author, with the categorical designation appearing in parentheses at the end of each individual abstract. The categories are not mutually exclusive, and more than one may be associated with a given document. Abstracts are original author generated unless otherwise indicated.

Belt, J. A. The relationship of satisfiers - dissatisfiers in a military unit to reenlistment. Paper presented to the Workshop on Research of Military Manpower - The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

A reduction in forces will mean that individuals will have more to do. Job enlargement alone is an important step forward in increasing satisfaction with military life. But extra work alone is not enough. It must be coupled with sufficient challenge, diversity and responsibility in order to make a military career meaningful and rewarding to volunteers. This will be absolutely essential if the Air Force is to continue to enlist and retain the highest caliber of men and women. (Excerpted)

Categories E/F

Bialek, H. M., Taylor, J. E., & Hauke, R. N. Instructional strategies for training men of high and low aptitude. Technical Report 73-10, April 1973, Human Resources Research Organization, research for the Department of the Army.

This report deals with research conducted to provide information that can be used to improve training of men of widely differing aptitudes, especially for the Army's high-density combat and combat support Military Occupational Specialties (MOSs). The research involved (a) a series of laboratory studies, using systematic manipulation of learning variables, and (b) a strategy of optimization applied in an operational setting, testing out promising guidelines. As in previous studies, major differences were observed in the performance of high and low aptitude groups, with the greatest differences in tasks making more cognitive demands and the least in tasks using manipulative motor skills. For low aptitude men, arrangements that maximize personal interaction during instruction were generally best. High aptitude men can learn many tasks themselves, given the minimum information, directions, and standards.

Category B

Brown, M. W. & Callahan, W. T. The all-volunteer Navy and the schools. Technical Report 766, February 12, 1972, Operations Research, Inc., Contract N00014-72-C-0525, Office of Naval Research.

This study examines the potential for integrating information on careers in the Navy environment into the career educational programs which are currently being developed with the public education community. This integration would result in the presentation of Navy employment information in the same educational context in which employment information on comparable careers in the civilian environment is presented.

Interviews were conducted with key personnel in the U. S. Office of Education, the National Institute of Education, and several other agencies and organizations involved in career education development, to verify the feasibility of the study concept, and to obtain information describing current manpower procurement procedures and Navy occupational information and career orientation materials.

Based on the results of interviews conducted and the review of materials assembled, the concept of integration of Navy careers into career education was deemed feasible, and recommendations were formulated pertaining to: a) development of career guidance materials describing occupations and career development opportunities in the Navy, b) Navy support of career education curriculum, and c) establishment of linkages between the Navy and agencies and organizations involved in career education.

Categories C/D/F

Bryan, O. F., Jr. Preliminary findings from the 1971 annual DOD survey. Draft, September 1972.

The services have changed a number of personnel policies, especially those dealing with living conditions, assignments, and the role of minority groups.

In November, 1971, the Department of Defense conducted a survey of approximately 43,000 officers and enlisted men. Over 100 questions were asked about individual characteristics and personal opinions. The purpose of the survey was to gather data for use in policy making by the Department. Responses to some 50 questions have been made available for study. The purpose of this paper is to present some preliminary results of the survey as a base point for measuring changes in the service.

Looking at the results it is apparent that two forces shape the American military. One is the draft. For over three decades the draft has directly or indirectly provided large numbers of men for the Armed Forces. The effects of the draft are shown in Table 1, where 44% of the enlisted men on active duty in 1971 said that draft pressure was the most important reason for their entry into the service. This is an increase of eight points since 1964.

Categories A/E/Y

Carpenter, J. B., & Christal, R. E. Predicting civilian position grades from occupational and background data. Report No. AFHRL-TR-72-74, Personnel Research Division, Lackland Air Force Base, Texas, March 1972.

A job analysis inventory was administered to civilian Air Force employees in the Accounting and Finance career field. Task performance data, provided by 5,455 job incumbents in seven General Schedule (GS) series, were analyzed using multiple regression techniques. The data were found to be highly predictive of the GS grade authorized for the position. Reported correlations are of a sufficient magnitude to suggest that knowledge of specific tasks performed can be used as a stable predictor of appropriate grade. Additionally, the data indicate that factors unrelated to job requirements, such as the incumbent's sex, age, or marital status, and unique job characteristics, such as geographical location and command to which assigned, do not act as a significant source of bias in grade determinations. In general, both the stability and the objectivity of existing civil service grade classifications are strongly supported.

Category E

Caylor, J. B., Sticht, T. G., Fox, L. C., & Ford, J. P. Methodologies for determining reading requirements of military occupational specialties. Technical Report 75-8, March 1973, Human Resources Research Organization, Research for the Department of the Army.

READNREED research was concerned with the development of methodologies for determining reading requirements of Army MOSs. Three approaches for assessing MOS literacy demands are described: (a) analysis of readability of Army MOS materials using a newly developed readability formula calibrated on Army personnel and Army job material; (b) use of information currently in Army data banks to study relationships between reading ability (estimated from AFQT) and job proficiency (advised by the

Primary Military Occupational Specialty/Evaluation Test); and (c) direct assessment of personnel reading skills in relation to proficiency on specially constructed Job Reading Task Tests (JRTT). Feasibility studies that indicate the relative merits of each approach, and certain conceptual and operational problems in determining literacy requirements of jobs are described.

Categories D/F

Christal, R. E. Analysis of racial differences in terms of work assignments, job interest and felt utilization of talent and training. Report No. AFHRL-TR-72-1, Personnel Research Division, Lackland Air Force Base, Texas, January 1972.

First-term Black airmen were compared with first-term Non-Blacks in 11 career ladders in terms of their work assignments, job interests, and felt utilization. The unique contribution of race in accounting for the number of tasks assigned and for the average difficulty level of tasks performed per unit time was not significant in any of the ladders. Race did make a unique contribution in predicting an overall job difficulty index in two ladders, but in each instance this contribution was less than one percent. There appeared to be no practical differences in the types of assignments given to Blacks and Non-Blacks within the 11 ladders investigated. Blacks in the 291X0 Communications Center and 702X0 Administrative ladders reported a higher level of job interest and a higher feeling of utilization. Although these differences were significant, but were relatively small.

Categories A/B/C

Clotfelter, J., & Peters, B. G. Profession and society: Attitudes of selected Army captains and majors. Paper presented at the Workshop of Research - The All-Volunteer Military, September 20-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

The study is based on personal interviews conducted during 1971 with 183 active-duty Army officers; all but three of them were captains and majors. The officers interviewed were at the point in their careers where almost all said they had made the decision to stay in the service for at least 20 years, but yet a large part of those 20 years lay in front of them. They were able to respond to questions in terms of expectations as well as in terms of actual experience. They had made their initial career

commitments by staying in beyond their obligatory period and by going to graduate school, career courses, or Command and General Staff College. This sector of the officer corps was selected because (a) captains and majors have received somewhat less research attention; (b) homogeneity in some characteristics hopefully permits sharper focus on other characteristics; (c) these are officers whose time in the military has been one of great tribulation; and (d) it is here that the services stand to lose some of their best young officers. (Excerpted)

Category E

Cobb, B. B., Mathews, J. J., & Lay, C. D. A comparative study of female and male air traffic controller trainees. Report No. FAA-AM-72-23, FAA Civil Aeromedical Institute, Oklahoma City, Oklahoma, May 1972.

This study compares age, education, pre-FAA experience, aptitudes, training-course performance measures, and post-Academy attrition rates of the 83 women who entered basic air traffic control (ATC) training at the FAA Academy during November 1968 through March 1970 with those of various samples of the 3,760 males who entered training during the same period. The study revealed no significant differences between the means of the female and male trainees with respect to age and educational level. When samples of the 83 females were compared with groups of male trainees in terms of performance on 36 different aptitude tests, only four mean differences, all of which favored the females, proved statistically significant. Only 45.8 per cent of the 83 women had pre-FAA ATC-related experience, while such experience was possessed by 63.9 per cent of a sample of 798 males; the difference was significant at the .01 level. The means of the training course grade averages of the two groups differed by only three-tenths of one point and there was no significant difference between the Academy attrition rate of 20.5 per cent for the females and 23.2 per cent for the 798 males. However, the groups differed markedly with respect to post-Academy attrition rates. It was determined that 33.3 per cent of the 66 females who completed Academy basic training were no longer in the air traffic management system as of April 1971 whereas only 19.1 per cent of the 613 males (within the sample of 798) who graduated from the Academy were subsequently attrited.

Category B

Daniel, S. F. An annotated bibliography: A volunteer military for the United States. Kensington, Maryland: American Institute for Research, 1972.

Because interest in reestablishing a voluntary military force in the United States is high and controversial in the 1970s, the Kensington Office of the American Institutes for Research has compiled this bibliography with a summary essay. Resulting from a systematic survey of the literature, it includes material on the broad topics of the draft, manpower requirements, costs, and effect on American Institutions, but excludes concentration on the Selective Service System or possible national service programs. Commission reports, Congressional hearings, research studies, journal articles, and monographs were selected for value, accuracy, and relevance to the topic, while superficial and dated newspaper and magazine articles were excluded. The abstracts present the reader with the basic facts contained in each source. The bibliography is divided into three broad categories corresponding to the sections of the brief summary essay, which also makes specific references to the abstracted entries.

Categories E/F

Dattel, W. E. The Fort Ord merit-reward system. Report No. 0601, June 8, 1972, Army Training Center, Fort Ord, California.

The paper described the development of a program of contingency management (incentive manipulation) in recruit training at Fort Ord, California. This program is called the Merit-Reward System (MRS). The MRS can be viewed as an applied outgrowth of behaviorism, specifically Skinnerian operant conditioning in a social system. The MRS was developed by conducting reinforcement surveys of the recruits, selecting those incentives rated as very strong and which could be manipulated, devising means for assigning/recording secondary reinforcement (token allocation), selecting/defining the behaviors to be shaped and maintained (i.e., rewarded), communicating the system to the participants, and constructing means for monitoring the execution of the system.

Category E

Dunham, A. D. Estimated cost of on-the-job training to the 3-skill level in the communications center operations specialty. Personnel Research Division, Lackland Air Force Base, Texas, June 1972.

Decisions concerned with the use of alternative Air Force training methods require several types of data. Among these are capacity to train, cost of the training, and quality of the trained airmen. The two methods of formal training in the Air Force are on-the-job training (OJT) and technical school training. The data currently being provided to decision makers for selecting the proper mix of these two training methods can be substantially improved.

The present publication reports on an examination of the relationship among the tests of the Army Classification Battery in various subgroups of the Army enlisted population consisting of men of different levels of mental ability, different educational levels, and Whites and Negroes for possible differences for different subgroups. (Excerpted)

Category D

Farris, J. H. Changing patterns of socialization in U. S. Army basic combat training. Paper presented at the Workshop on Research on Military Manpower - The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

The purpose of this paper is to describe and illustrate some of the specific devices of recent U. S. Army methods, mainly from the personal experience of the writer, who went through three courses of such training - basic combat training at Fort Lewis, from August to October 1969, and non-commissioned officers candidate school at Fort Benning, Georgia, from November 1969 to February 1970. A second purpose is to introduce and discuss some issues which emerge from changes in the military and in the social context of the military during the transition to an all-volunteer system. (Excerpted)

Categories E/F

Federman, P. J., Lantman, M. R., & Siegel, A. I. Factors involved in the adjustment of low aptitude personnel to the Navy and their use in predicting reenlistment. Final Technical Report, Applied Psychological Services, Inc., Contract N00014-73-C-0497, Personnel and Training Programs, Office of Naval Research, August 1973.

A longitudinal analysis of the reactions of a sample of low aptitude personnel to various aspects of Navy life is presented. Questionnaires were administered at various points during the first enlistment of a cohort sample of Category IV sailors. The assessment points sampled were: (1) first week of boot camp, (2) end of recruit training (three months after entering the service), (3) nine months after entry into the service, and (4) termination of the initial enlistment. Factors influencing perception of the Navy at the points sampled are isolated and the predictability of reenlistment from the factors of the first three time periods is stated.

Categories C/E

Fisher, A. H., Jr. Attitudes of youth toward military service. Consulting Report CR-D7-72-16, April 19, 1972, Human Resources Research Organization, for Office of Assistant Secretary of Defense (Manpower and Reserve Affairs).

This report provides information about the motivations and predispositions of contemporary American civilian youth as elicited in two independent surveys. The surveys, conducted in May 1971 and November 1971, encompass a six-month period during which the following major events transpired: (a) draft calls were lowered, (b) the troop level in Vietnam was reduced, and (c) the Army initiated an advertising campaign to announce the increased pay allowance to servicemen.

Results are derived from the two nationwide samples of young male civilians, ages 16 through 21, who expressed their opinions on these topics through the mechanism of personal interviews. This report compares and contrasts the reactions of youth to key topics and programs of military service in May 1971 and November 1971. Interpretations of the findings should be qualified by the fact that the study populations excludes a substantial proportion of men in the age group -- that is, those men who have entered the military service. (Excerpted)

Categories A/C/F

Fisher, A. H., Jr. Attitudes of youth toward military service: results of national surveys conducted in May 1971, November 1971, and June 1972. Consulting Report CR-D7-72-36, Human Resources Research Organization, prepared for the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs), August 1972.

This report provides information about the motivations and predispositions of contemporary American civilian youth as elicited in three independent surveys. The surveys, conducted in May 1971, November 1971, and June 1972, encompass a thirteen-month period during which the following major events transpired: (a) draft calls were lowered, (b) the troop level in Vietnam was reduced, and (c) an increase in bombing of North Vietnam occurred. November 1971 interviews were done after the Army initiated an advertising campaign to announce the increased pay allowance to servicemen. June 1972 interviews were done concurrently with the announcement that the Army was offering a new combat arms enlistment bonus.

Results derive from three nationwide samples of young male civilians, ages 17 through 21, who expressed their opinions and attitudes on a variety of topics through the mechanism of personal interviews. This report compares and contrasts the reactions of youth to key topics and programs of military service in May 1971, November 1971, and June 1972. Interpretations of the findings should be qualified by the fact that the study population excludes a substantial proportion of men in the 16-21 age group -- that is, those men who have entered the military service. (Excerpted)

Categories A/C/F

Fisher, A. H., Jr., & Harford, M. A. Trends in enlistment motivation: results of AFHRS surveys of enlisted men from April 1971 to April 1972. Consulting report AFHRL-TR-73-68, rev. September 1972, Human Resources Research Organization, Contract F41609-73-C-0030, Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs).

A year long survey was conducted at a sample of Armed Forces Entrance and Examining Stations to ascertain enlistment motivation of individuals entering military service. During the survey period of April 1971 to April 1972 there was a decline in draft motivated enlistments with learning skills or trade and the opportunity for advanced education as the most desirable motivators. The survey also showed the importance of family, friends, recruiter in determining in which service a man enlists.

Categories A/C/E

Friedman, L. A survey of advertising awareness and enlistment planning by recent enlistees in the Armed Services. Final report, October 17, 1972, Mathematica, Inc., Contract No. N00014-72-C-0532, Office of Naval Research, All Volunteer Force Program.

A sample of recent enlistees for all the services was interviewed at four AFKES centers. Questions were asked about awareness of advertising and the planning for their recent enlistment decision. Advertising awareness included (1) specific copy point recall, (2) slogan identification, (3) believability of advertising, and (4) recall of advertising media. Enlistment planning questions included (1) types of recruiter contacts with the various services, (2) second choice of service, (3) when the enlistment decision was made and (4) reasons for choice of service.

From the data developed, analyses were made on (1) the effectiveness of recent advertising and recruiting, (2) planning patterns of enlistees, and (3) possible advertising strategies.

Category C

Fugitt, J. W. K. Task difficulty and task aptitude benchmark scales for the mechanical and electronics career fields. Report No. AFHRL-TR-72-40, Personnel Research Division, Lackland Air Force Base, Texas, April 1972.

This exploratory study examined the feasibility of constructing benchmark scales on the dimensions of task difficulty and task aptitude for tasks in mechanical and electronics job areas. It was determined that small numbers of work supervisors and behavioral scientists can achieve high interrater agreement on the dimensions of task difficulty and task aptitude, respectively. The rank-difference correlation coefficients between the task difficulty and task aptitudes scales was 0.39 for the mechanical task statements and 0.92 for the electronics task statements. Assuming consistently high correlations between work supervisors' judgements of difficulty and behavioral scientists' judgements of aptitude, task aptitude requirements may be inferred directly from task difficulty values as designated by work supervisors in the field.

Category B

Gaines, R. N., & Hoins, H. An evaluation of a race relations seminar. Research branch report 10-73. Chief of Naval Technical Training, Naval Air Station Memphis (75), Millington, Tennessee, April 1973.

This report evaluates the effectiveness of a seminar approach to changing attitudes on race relations. The seminars were relatively open-ended dialogue between Black and White servicemen. The seminars had 16 members and were run by two facilitators that had only local or minimal training. Attitude change was measured by the Woodmensee Multifactor Racial Attitude Inventory.

A six group experimental design was used that provided for testing prior to the seminar, testing at the end of the one week seminar, and at a three month interval with appropriate control groups.

Results indicated that the seminar changed racial attitudes significantly in an equalitarian direction, at the one week and three month testing intervals.

Category A

Glickman, A. S., Goodstadt, B. E., Korman, A. K., & Romanczuk, A. P. Navy career motivation programs in an all-volunteer condition: I. A cognitive map of career motivation. Technical report AIR-32201-3/73-TR, March 1973, American Institutes for Research, Contract N00014-72-C-0387, Office of Naval Research, Personnel & Training Research Programs.

This report traces the development of a model of Navy career motivation under the all-volunteer condition. This is an outgrowth of three interview studies in which information about factors influential in enlistment and reenlistment decision was elicited. Interviewee samples included men who were at various stages of considering enlistment in the Navy, as well as personnel in three shortage ratings at four points in their first enlistment.

Key influences affecting enlistment decisions are explored. On the positive side, these include job training and educational opportunities, financial benefits, travel opportunities and support from peers. On the other side, associated with lack of interest in the Navy, are factors such as perceived loss of freedom, and incompatible job and educational goals. With personnel now in service, the latter factors were further explored in the context of actual experience. Perceived benefits of training and job satisfaction were associated with positive reenlistment intentions, and loss of freedom and unmet expectations were linked to separate intentions.

On the basis of these interview data, a longitudinal model of career motivation is described and key points that may be susceptible to administrative interventions are cited. A set of suggestions from administrative experiments and possible means for implementing indicated changes aiming to enhance career motivation are then offered.

Categories B/C/E/F

Glickman, A. S., Korman, A. K., Goodstadt, B. E., Frey, R. L., Jr., Romanowik, A. P. A study of experimental incentives as an influence on enlistment intention. Technical Memorandum No. 2, December 1972, American Institutes for Research, Contract N00014-72-C-0887, Office of Naval Research, Personnel & Training Research Programs.

Incentives such as enlistment bonuses are frequently suggested as a means of enhancing recruiting in the all-volunteer force setting. The basic assumption behind them is "more is better." Single incentives, double incentive packages, and triple incentive packages were compared for potential influence on enlistment. Also, in the same vein, the following comparisons were made: 1) \$1000 vs. \$3000 bonus, and 2) 2 years free college after 4 years of service vs. 4 years free college after 4 years of service. There was no support for "more is better." Furthermore, "more is sometimes worse."

The most attractive items showed a pervasive interest first in opportunities for self-determination as well as traditional incentives. Recruitment strategies will have to take both needs into account.

Categories C/F

Goffard, S. J., DeGracie, J. S., & Vineberg, R. Attitudinal studies of the VOLAR experiment: Permanent party personnel, li'l. Technical Report 72-26, August 1972, Human Resources Research Organization, research for the Department of the Army.

One purpose of Project VOLAR, a field experiment conducted during FY1971 as part of the Modern Volunteer Army (MVA) program, was to evaluate the effects of VOLAR innovations on attitudes toward the Army and Army career intentions of officers and enlisted men. In this report, data are discussed from questionnaires administered to random samples of permanent party officers and enlisted men (a) at Forts Ord, Jackson, Benning,

Carson, and Knox; (b) at Fort Bragg and three posts in USAREUR; and (c) in an Army-wide (except Southeast Asia) sample. The questionnaires covered backgrounds, attitudes, plans for the future, and evaluations of possible VOLAR innovations. The analyses of the data are discussed.

Categories B/E/F

Goffard, S. J., DeGracie, J. S., & Vineberg, R. Attitudinal studies of the VOLAR experiment: Men in training, 1971. Technical Report 72-81, October 1972, Human Resources Research Organization, research for the Department of the Army.

One purpose of Project VOLAR, a field experiment conducted during FY1971 as part of the Modern Volunteer Army (MVA) program, was to evaluate the effects of innovations under the program. In this report, data are discussed from the three questionnaires - VOLAR I, II, and III - that were administered to men during BCT and AIT at two posts (Forts Ord and Jackson). Included are substudies of (a) attitudes and absenteeism, (b) attitudes of a Midwestern sample, and (c) attitudinal effects of acceleration in the BCT cycle at Fort Jackson.

Categories B/E/F

Goffard, S. J., DeGracie, J. S., & Vineberg, R. Attitudinal studies of the VOLAR experiment: A longitudinal study, 1971-72. Technical Report 73-6, March 1973, Human Resources Research Organization, research for the Department of the Army.

One purpose of Project VOLAR, a field experiment conducted during FY1971 as part of the Modern Volunteer Army (MVA) program, was to evaluate the effects of VOLAR innovations on attitudes toward the Army and Army career intentions of officers and enlisted men. A longitudinal study was conducted to determine whether the attitudes and reactions of men stationed at posts where programs of VOLAR innovations were continued on into 1972 were influenced by the presence or absence of VOLAR 71 programs at their previous duty or training station. The sample finally studied consisted of men who had taken one or more questionnaires while they were in training at either Fort Ord (a VOLAR training post) or Fort Jackson (a non-VOLAR training post) sometime between January and June 1971, and were stationed at either Fort Bragg or Fort Benning in December 1971, when they took a final questionnaire.

Categories B/E/F

Goldman, M. The utilization of women in the military. In J. Huber (Ed.), Changing women in a changing society. Chicago: The University of Chicago Press, 1975. Pp. 130-140.

Although the introduction of women into the military during World War II was seen as a short-term wartime measure, even the most male-oriented officers were satisfied with the ability of the forces to use female personnel. However, after the Korean conflict in the late 1950's, the position of women in the armed forces remained doubtful and their future problematic with the prospect that they might become a vestigial element. In the last 1960's, changes in the civilian social structure and the advent of the all-volunteer force made reevaluations by the military necessary and resulted in a limited trend toward the revitalization of the women's element. (Excerpted)

Categories A/F

Griffin, G. R. A comparison of attitudes of Black and White cadets in AFROTC. Memorandum 71-011, Personnel Research and Analysis Division, Directorate of Personnel Planning, Headquarters USAF, The Pentagon, Washington, D.C., May 1972.

This study was designed to explore the attitudes of Black and White AFROTC cadets towards AFROTC, the Air Force, and certain economic and political situations. Officer Procurement Statistics are presented by race for Fiscal Years 1963-1971. An analysis of Draft Motivated (by race) in cadets differ in their attitudes on several important issues. Black cadets indicate more awareness concerning matters related to racial discrimination in the Air Force, but have more favorable attitudes toward AFROTC and the USAF than White cadets. A larger proportion of the Black cadets of this study are "true volunteers" than are White cadets. On foreign affairs the majority of both Black and White cadets indicate attitudes which are positive toward implied or stated government policy regarding Southeast Asia and Middle East. AFROTC cadets indicate that "doing work they liked" would be the most important factor in making a "career decision" and that "military life in general" would most influence AFROTC cadets to reject a career in the Air Force.

Categories A/C/E

Quinn, N., et al. Important factors in motivating AFROTC officer personnel in a zero-draft environment. Report No. AFHRL-TR-72-22, Personnel Research Division, Lackland Air Force Base, Texas, March 1972.

As the armed forces move toward a volunteer force, it becomes necessary to identify procurement and retention strategies which will be effective in maintaining viable force levels. A representative sample of AFROTC advanced cadets were surveyed to determine the effect of certain aspects of military life on career decision. Results indicate that choice of career field and pay comparable to civilian earning capacity had the most influence in attracting volunteer officers, although negligible differences in officer quality were found between incentives. The most satisfying aspects of a military assignment included perceived job security and the type of work for an Air Force officer, the outstanding dissatisfier was perceived lack of personal control over career. Isolated tours and separation from family were perceived as the most negative aspects of an Air Force career.

Categories C/E/F

Hill, W. A., Fox, W. M., & Eube, J. A. Black and White Marine squad leaders' perceptions of racially mixed squads. Technical Report No. 70-3, August 1973, University of Florida, Contract N00014-68-A-0173-0010, Office of Naval Research, Organizational Effectiveness Programs.

This paper reports Black and White Marine squad leaders' perceptions of Black, Puerto Rican, and White squad members on several dimensions. Results indicate significant differences in the actual and expected frequencies with which White squad leaders reported they reprimanded, praised, and felt their Black, Puerto Rican, and White subordinates were uncertain or undecided about what they were to do. Most differences were traced to reported differences between Black and White rather than Puerto Rican subordinates. These results suggest that White leaders may be keeping a certain "distance" from their Black subordinates and handling them with special care. There were few observed differences between the Black and White squad leaders about their Puerto Rican and/or White subordinates.

Category A

Hochst, A. J. Recruits' postservice occupational and educational plans: Nature and the extent of influence from early military experience. Technical Report 72-15, April 1972, Human Resources Research Organization, Contract F41609-70-C-0037, Air Force Human Resources Laboratory.

Data on the nature of recruits' postservice occupational and educational plans, and on the influence that the first few weeks of military service have on such plans, were collected in March-June 1971 at Army, Navy, Marine Corps, and Air Force sites. One questionnaire was administered at the beginning, and one near the end of basic training. Results show that most recruits planned to be working full-time one year after service, but were uncertain as to the type of work they would be doing. The data suggest that 30-40% of the men considered their initial assignment out of line with their job plans for one year after service. Results on occupational plans for age 35 closely paralleled those for one year after service, but the men seemed to be more definite about the kind of work they would be doing. About 40% said that they planned to be attending college one year after leaving service. Results generally showed early service experience to have little, if any, impact on postservice vocational and educational plans.

Category E

Hochst, A. J. Postservice occupational and educational plans of first-tour military personnel nearing separation from the service. Technical Report TR-72-19, May 1972, Human Resources Research Organization, Contract F41609-70-C-0037, Air Force Human Resources Laboratory.

A study was made of several aspects of the postservice educational and occupational plans of first-tour enlisted personnel nearing separation from military service. Data were collected using a questionnaire administered at military sites during September-December 1971. Usable returns were obtained from 3946 men from four services: Air Force, 481; Army, 942; Marine Corps, 783; and Navy, 1740. Analyses were made to characterize the postservice plans of the respondents and to identify correlates of these plans. A large majority of the men said they wanted to enter full-time employment soon after leaving the service. Almost half indicated they already had a part- or full-time job promised. Most men expected to be in full-time work one year postservice, but four out of ten were not very definite about the type of work they would be in. Although most men expect to pursue full-time work, results show a widespread interest in further training or education. The most prominent predictor of school versus work orientations for postservice plans is current educational level, although the relationship is not linear. Only about one of four men expected to use his

military job training experience either in a civilian job or in related education or training. Results are interpreted by the writer as implying the need for continued, or even improved, pre-separation counseling to assist men in formulating their postservice plans, in locating jobs, and in becoming more aware of the potential value of the job skills they have acquired while in military service.

Categories C/E

Hoehn, A. J., Wilson, T. R., & Richards, J. A. Recruits' civilian-acquired skills: Their potential value and their utilization in initial military assignments. Technical Report TR-72-6, February 1972, Human Resources Research Organization, Contract F41609-70-C-0037, Air Force Human Resources Laboratory.

The objective of the research reported here was to assess the potential value and the utilization of recruits' civilian-acquired skills. A recruit was defined as having a military-relevant civilian-acquired skill if he had had six months or more of job experience in any of 67 common civilian jobs. The research data was obtained during March through June 1971 for four services: two Army sites, one each for Navy, Marine Corps, and Air Force. Data were collected by administering questionnaires to recruits; obtaining judgments of classification interviewers; and extracting information on initial military assignment, enlistment commitment, and AFQT scores from official records. Results indicate about 40% of the entering personnel surveyed met the civilian-acquired skill (CAS) criterion. Job skills varied, but tended to concentrate in a few civilian job categories. Results suggest that 20-30% of the incoming personnel with six or more months of military-relevant work experience received assignments likely to make significant use of such experience.

Categories B/D/E

Hoehn, A. J., Wilson T. R., & Richards, J. A. Recruits' military preferences and their accommodation by the military services. Technical Report TR-72-10, March 1972, Human Resources Research Organization, Contract F41609-70-C-0037, Air Force Human Resources Laboratory.

The principal objective was to provide information on recruits' military occupational preferences, match of military assignments to recruits' preferences, and changes that occur in these preferences between service entry and completion of basic training. Questionnaires were administered

to recruits from four services just before classification interviewing and eight weeks later after initial military assignment. Small proportions of recruits' first choices were found to coincide with initial assignments in terms of DOD Occupational Groups. However, over 60% received assignments to DOD Occupational Areas to which they gave relatively high interest ratings. Perhaps, for this reason, most men expressed satisfaction with their initial assignments. Recruits considered the services did relatively well in getting and using information of preferences and pre-service work. Recruits need improved knowledge of the military work areas.

Categories B/D/E

Human Resources Research Organization. The experimental volunteer Army training program, a pictorial report. Research Product, January 1972, research for the Department of the Army.

This pictorial report provides a brief explanation of the HumRRO effort in developing and evaluating an Experimental Volunteer Army Training Program (EVATP). A performance-oriented system designed to minimize the learning lag caused by individual differences found in any large group of learners was developed. Under this concept, all trainees are challenged; the slow learners and those with language barriers succeed, and those with high aptitude have ample opportunity to progress rapidly while being provided the incentive of helping fellow students. The emphasis is on each individual learning those specific skills and knowledges he will actually need to perform a task. Each man must perform each skill in such a manner as to show complete mastery before he passes on to another facet of instruction.

Categories A/B/C/D/E/F

Human Resources Research Organization. Preliminary analysis of initial longitudinal data from the Gilbert Youth Survey: May 1971 and November 1971. Consulting Report, May 1972, prepared for the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs).

A national survey of civilian youth was designed in early 1971 to assist the Department of Defense in estimation of the enlistment propensity of American youth in terms of their voluntary enlistment in the Regular forces and the Reserves/National Guard. Denoted as the Gilbert Youth Survey, this important survey involves the periodic administration of personal interviews conducted with independent samples of male, civilian youth.

To date, interview waves have been conducted in May 1971, in November 1971, and are again being conducted in May 1972.

Prior to the November 1971 phase of interviews, an interesting research question was formulated: Would results from a November 1971 follow-up survey of selected May 1971 respondents indicate shifts in their willingness to enter military service? In addition to addressing this important question, many other results of the limited program of longitudinal research implied by this question were viewed as extremely beneficial. Analyses could be performed on the data to indicate if the differences in willingness to enlist by age group, noted in previous cross-sectional research, were a function of "aging" of the sample, or if differences in attitude exist between the age cohort groups, thereby resolving an important issue. The study could also investigate the stability of responses to key questions on enlistment propensity over an extended, 6 month interval, providing an initial, albeit conservative, estimate of the reliability of certain key items. Finally, the feasibility of attempting to perform longitudinal research on a sample of male, civilian youth could be explored with ramifications for other potential DoD manpower research projects involving this methodology.

Category C

Human Resources Research Organization. Bibliography of publications and presentations during fy 1972-73. Arlington, Virginia: Human Resources Research Organization, December 1973.

This Bibliography lists the publications and presentations by the Human Resources Research Organization during FY 1973. In the annotated section, it also incorporates the material from the Bibliography of Publications and Presentations During FY 1972. It thus provides a complete record for FY 1972-73 for use in conjunction with the cumulative Bibliography of Publications As of 30 June 1971, which lists research reports issued since HumRRO's establishment in 1951.

Categories A/B/C/D/E/F

Janowitz, M., & Sarkisian, S. C. Organizational adaptation to an all-volunteer military: Assessment of basic indicators. Unpublished manuscript, Loyola University of Chicago.

The four services have revealed varying patterns of response to the advent of the all-volunteer force. As anticipated, the ground forces face the greatest difficulty, but the problems of the Navy are also marked. Projection of the trends of the first two years of intensified effort during 1970-72, including the eight month period of January to August 1972, do not indicate that the required numbers or quality of manpower will be forthcoming for a 2.33 million total force with a ground force of 850,000 to 900,000. It may well be that the impact of the pay raise of 1972 is delayed and will produce more recruits. Internal changes in administration and professionalization are still to have their full impact; however, more drastic changes such as lateral entry and less job rotation are required.

The manpower quantity can be increased by a number of alternatives, including increasing the number of women, hiring more civilians, shifting non-combat personnel into combat positions, and increasing Category IV entries. All of these alternatives will require revised training procedures and job classifications. Obviously, greater incentives can be provided to increase recruitment in general.

If the manpower numbers can be solved, the services, with the exception of the Air Force, will still be faced with problems of quality. Given the experience of the past two years, it appears that there will be great concentration of Category III and IV personnel, and with such concentrations a probable increase in Black enlisted personnel. To utilize these lower mental category personnel, the services will have to give special attention to training techniques, job skills, and job classifications. Greater efforts of the military will have to be devoted to training and management of the enlisted structure. (Excerpted)

Categories A/B/D/E/F

Johnston, J., & Backham, J. G. Youth in transition, volume V, young men and military service. Ann Arbor, Michigan: Institute for Social Research, 1972.

This book is the fifth in a series of monographs documenting the Youth in Transition project, a longitudinal study of young men conducted by the Survey Research Center. It is concerned with military enlistment behavior, attitudes toward military service, and prospects for an all-volunteer armed force.

There are three parts to this monograph. The first part is a study of choice behavior of young men at the end of high school. It represents a search for the reasons why some young men choose to enlist after high school rather than take a civilian job or continue their education. The second part is an examination of some of the issues surrounding the debate over an all-volunteer armed force and an indication of the feasibility of attracting volunteers to such a force using various incentives. The third part presents a summary of the findings as well as the authors' view of the implications of the research for military manpower policy. (Excerpted)

Categories B/E/F

Karnes, J. M. L. Needed manpower research and possible recruiting strategies for the 1970's. Paper presented at the Workshop on Research on Military Manpower -- The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

The Vietnam conflict has dramatized the enormous subsidies which a select segment of American youth have annually contributed to the general welfare of our nation. Subsidies in this context are measured by the necessary wages needed to support an armed force in the absence of a draft. While subsidies may be worthwhile, they nevertheless create an environment for inefficiencies to abound. The consensus of America today is that the draft and resulting subsidies must end. An all-volunteer force must be developed which we all hope will be efficient. This report has as its purpose a discussion of needed research in manpower and relevant recruiting strategies to maintain that all-volunteer force. (Excerpted)

Categories E/F

Korman, A. K., Goodstadt, B. E., Glickman, A. S., & Romanчук, A. P. An exploratory study of enlistment incentives among junior college students. Technical Memorandum No. 1, June 1972, American Institutes for Research, Contract N00014-72-C-0387, Office of Naval Research, Personnel & Training Research Programs.

A questionnaire designed to assess reaction to possible enlistment incentives was administered to 100 junior college students. A factor-analysis of the measure indicated the importance both of traditional tangible incentives and of the "softer" incentives of control over one's work life.

The data also indicated that: a) low socio-economic individuals were less attracted to the Navy overall than those from middle-or-higher levels, and b) the traditional incentives were more important for the low socio-economic respondents while the newer incentives were more important for the higher level individuals.

Category C

Lecznar, W. B. The road to work: Technical school training or directed duty assignments. Report No. AFHRL-TR-72-29, Personnel Research Division, Lackland Air Force Base, Texas, April 1972.

This study explored the question of differences between airmen who were assigned to jobs following graduation from formal resident training schools and those who entered a field as on-the-job trainees. Eight career fields which had substantial numbers of Airman input as low ability personnel under Project 100,000 were studied. Evaluations of technical school graduates and directed duty assignees were made in terms of six criteria: a job difficulty index, average task difficulty, number of tasks performed, job interest, self-report of utilization of talent and training, and overall performance ratings. Using the multiple linear regression model, with time in service as a concomitant variable interacting with the training type membership categories (i.e., resident technical course or direct assignment) and with aptitude held constant, tests of the significance in difference between regression lines were made. In nearly every instance, the results indicate that the intercepts and slopes of the lines for the two groups were the same. That is, technical school graduates and directed duty assignees were not different on any of the six criterion comparisons. This is not to suggest, however, that formal school training can be wholly displaced by on-the-job training.

Categories B/D

Lockman, R. F., Stoloff, E. H., & Allbritton, A. S. Motivational factors in accession and retention behavior. Report No. INS-Research Contrib - 201, January 1972, Contract N00014-68-A-0091, Center for Naval Analyses, Institute of Naval Studies.

Motivational factors in accession and retention behavior of Navy men were identified in a reanalysis of 3 past surveys. Economic, psychological, and personal history variables were found to be of joint importance in

predicting enlistment and reenlistment behavior. Better measurement of these kinds of variables should result in improved predictions and policy control mechanisms.

Category E

Lund, D. A. Problems of junior officer retention in the modern volunteer Army: The case of the Military District of Washington. Paper presented at the Workshop on Military Manpower -- The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

The results of the survey of junior commissioned officers serving in the Military District of Washington during September of 1971 are reported. Elements of professionalism are found to have a greater impact on junior officer retention than those of life style. Officer Basic Course preparation for service is deemed inadequate by a large number of officers surveyed. The attitudes of the wives of these junior officers play a significant role in their husbands' decisions to stay on active duty or to leave active service. It is also clear from the data presented that the better educated junior officers are opting out of service for "better civilian jobs" while a large number of those staying on active duty are doing so because of the "bad civilian job market". The impact of this on the quality of the officer corps is considered.

Category E

Maier, M. H. Effects of educational level on prediction of training success with the ACB (Army Classification Battery). Report No. BESRL-TRN-825, June 1972, Army Behavior and Systems Research Laboratory.

The publication reports on a statistical analysis of educational level as it affects the prediction of enlisted performance in Army training courses. Samples of the men at each of four educational levels were formed: non-high school graduation, high school graduation, some college, and college graduation. Using the Oulliksen-Wilks analysis of covariance, ACB test scores and final training course grades were analyzed for the various samples to determine whether the predictors are equally effective for the different educational groups. Results of the present analysis suggest that for the less well educated, the ACB measures predict higher training performance than the individual is likely to achieve. On the other hand, the likely performance of the college graduate tends to be under-

estimated. Finds further suggest that effectiveness in predicting training performance could probably be improved by including level of education in the aptitude area composites used in classification.

Category B

Maier, M. H., & Fuchs, E. F. An improved differential Army classification system. Report No. BESRL-TR-1177, April 1972, Army Behavior and Systems Research Laboratory.

Army personnel managers have a continuing need to select, classify, and assign to training and jobs large numbers of young men who enter the services. Since the Army Classification Battery (ACB) is an integral part of the assignment process, accuracy of scores has a significant influence on the appropriateness of assignments. A new ACB and aptitude area system has been developed. The present technical research reports describes the new psychological test battery and new aptitude areas and assesses the effect of the changes on the utilization and performance of Army input.

Category B

Massey, I. H., et al. Aptitude levels in the enlisted manpower pool of the Air Force: 1971. Report No. AFHRL-TR-72-23, Personnel Research Division, Lackland Air Force Base, Texas, March 1972.

This report provides information concerning the aptitudes of active duty Air Force personnel as of 30 June 1971. Data are presented in a manner to allow for comparisons of Air Force enlisted personnel by length of service, career area, skill level, and military grade, or combinations of these factors. The data indicate that the Air Force continues to recruit and retain airmen capable of supporting the Air Force mission. The primary value of these data is for use in force planning.

Categories B/E

Moskos, C. C., Jr. The modest method: Participant observation in military sociology. Paper presented at the Workshop of Research on Military Manpower -- The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

To sum up, participant observation is best regarded as a method that need not necessarily be employed in isolation from other methods. Although possessing merit in its own right, participant observation can also balance and buttress the empirical findings generated by more customary research designs. That qualitative field research has had only occasional application in the study of the armed forces reflects more on the timidity of the military research establishment than it does on the merits of participant observation. (Excerpted)

Categories E/F

Padel, A. B. Attitudes of youth toward military. Management Report No AFHRL TR 73-66, Air Force Human Resources Laboratory, Manpower Development Division, June 1973.

Selected data tabulations were extracted from a HumRRO Consulting Report summarizing the results of three national surveys of attitudes of youth toward military service. Data from the fourth survey were added to complete the two year series of surveys so far available. The period covered included the two years of 1971-1972, with field surveys accomplished by Gilbert Youth Surveys Inc., and data analysis by HumRRO. The present report selected data from various tabulations, converted these data into graphic form, with certain few exceptions, and presented the data in a format believed useful to manpower management.

Category C

Nealey, S. M. Importance of job factors to Navy personnel. Final Report, May 1972, Colorado State University, Contract N00014-67-A-0299-0011, Office of Naval Research, Psychological Sciences Division.

The unsuccessful history of attempts to measure the relative importance of job factors is reviewed. The uses to which importance data could be put are reviewed and several hypotheses are advanced concerning the concept of importance of job factors. Seven methodological requirements for a measure of importance are advanced as improvements over past approaches.

Miller, R. E. Development and standardization of the Air Force Officer, Qualifying Test Form L. Report No. AFHRL-TR-72-47, Personnel Research Division, Lackland Air Force Base, Texas, May 1972.

In accordance with the normal replacement cycle, a new form of the Air Force Officer Qualifying Test (AFOQT) was developed for implementation in Fiscal Year 1972. The new form is designated Form L. It resembles other recent forms in type of content, organization, and scoring strategy. Like other forms, it yields Pilot, Navigator-Technical, Officer Quality, Verbal, and Quantitative composite scores for operational use. Standardization involved the use of the Project TALENT battery in a way which permits relating AFOQT scores to Air Force Academy candidates and to 12th grade males in the Project TALENT national survey. Form L differs from earlier forms by the introduction of Digitek answer sheets and by a slight shortening which does not reduce the total amount of allotted scorable behavior. Although new forms of the AFOQT can not be validated immediately, new validation data from older forms are assumed to characterize new forms also. Some new validation data for flying training criteria are presented.

Categories D/E

Mims, D., & Gaines, R. N. Preventive counseling and prescriptive remediation. Research Branch Report 9-72, Chief of Naval Technical Training, Naval Air Station Memphis (75), Millington, Tennessee, March 1973.

This report evaluates the effects of redefining the role of a counselor in the AV(A) School so that intensified counseling is administered to potential failures before the trainee takes the unit examination as opposed to normal post-failure counseling. In addition, two types of remediation were evaluated. An existing system of one week set back review remediation was compared with a self-paced programmed instruction.

Intensified preventive counseling was found to be significantly better than the normal post-examination counseling resulting in increased proportion of students completing the course. The one-hour remediation program was not found to be significantly different from the one-week setback program. Trainees did better on a post-remediation examination than they did on an examination given immediately prior to the remediation program.

Category D

The development of an indirect two-stage method for measuring importance is described. It meets all levels of the stated requirements.

The method was applied on four U.S. Navy destroyers. The resulting estimates of the relative importance of work, pay, supervision, and co-workers showed that situational determinants operated to vary mean importance from ship to ship. Respondents were grouped by means of cluster analyses into relatively homogeneous clusters with common patterns of job factor importance. Different personnel decisions may be appropriate for respondents from different clusters.

Categories B/E

Nealey, S. M. Perceptions of Navy basic training: Recruits before and during training. Final Report, October 1972, Bettelle Memorial Institute, Human Affairs Research Centers, Contract N00014-67-A-0299-0016, Office of Naval Research, Psychological Sciences Division, Organizational Effectiveness Research Programs.

Attitudes of enlisted men toward interpersonal influence (the rank and authority structure) in the Navy were explored by administering questionnaires to 165 recruits at the time they joined the Navy and to 365 basic trainees during the final week of Navy basic training. Recruits had fairly accurate expectations of basic training, but underestimated the amount of inconsiderate and punitive leadership they would face during basic. Both groups agreed that the organizational climate of basic training is "tougher" and more punitive than they expect in the Navy itself and much more negative than in most civilian jobs. The climate typical of civilian jobs was seen to be about right to promote good performance and morale. Basic trainees, after actual experience with the military, favored "softer" organizational climates than did recruits.

All five modes of leader power identified by French and Raven (1959) were seen to be effective in eliciting high effort to perform one's duty, but coercive and legitimate power were seen as detrimental to morale.

The research design will be completed under a new contract so conclusions must be tentative, but preliminary results suggest that an all-volunteer military may need to adopt leadership approaches more like those currently typical of civilian work environments.

Categories C/D/F

Penner, D. D., & Malone, D. M. Leadership as perceived by Black and White NCO's and subordinates. Paper presented at the Workshop on Research on Military Manpower -- The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

Previous studies relative to leadership have been done by the Army War College. These have set off a number of actions within the Army to improve Army leadership. A resulting action was the establishment of the CONARC Leadership Board. One of the actions of this Board was to establish a number of briefing teams which conducted leadership seminars at every Post, Camp, and Station in the world outside Vietnam. As an exercise in participative research, these teams administered the same questionnaire used in the earlier study to over 90,000 Army leaders, ranging from E-1s to General Officers. Summaries of these data were supplied to every command involved and have been used to varying degrees in leadership improvement programs within the units. (Excerpted)

Categories A/C/E

Schenk, F. Development and validation of scores to predict officer career status. Report No. AFHRL-TR-73-1, Personnel Research Division, Lackland Air Force Base, Texas, March 1973.

During 1963 a long-term study of officer input, from the principal Air Force commissioning sources, was initiated. This study was designed to determine the predictability of an officer's career decision and to evaluate relationships between career intent, various demographic, environmental and attitudinal factors, and career status. This report presents the development and validation of various scores designed to predict career status.

Survey data were collected from individuals before they entered active duty, and annually, through five years of active military service. The scores designed to predict career status were determined from each individual's yearly survey responses. Generally, the relationship between career status and the scores based on responses prior to commissioning were quite low; however, there was a definite increase in prediction after the subjects experienced active duty. This seems to indicate a plateau in the subject's attitude toward the military career. Offers of Air Force opportunities such as education, training, and Regular commissions might be more effective at this point, than at the time of commissioning. In addition, from an economical standpoint, the Air Force might realize

considerable savings in training costs by sending those junior officers most likely to remain on active duty to the more expensive educational and training programs. The Career Intent Score was the measurement device most predictive of future career status although correlations were only moderate.

Categories C/D/E

Sebold, B. L., Harrelson, E. F., Crawford, R. L., & Robinson, L. Methods for estimating and enhancing the military potential of selected manpower segments. Interim Report, August 1973, Westinghouse Health Systems, Contract F44620-72-C-0093, Air Force Office of Scientific Research.

The results of interviews with 116 Baltimore City high school students during April - May 1973 are presented. Interest in joining the Armed Services (particularly the Air Force) was assessed, as well as income level and academic achievement of the predominantly Black sample. Responses of interested and disinterested students are compared. Relative to Armed Services enlistment in an all-volunteer environment, the interested group was more likely to emphasize the positive attractions of education and training, and the disinterested group emphasized the negative aspects of loss of individual freedom. Students identified parents and school counselors as important influencers on career decisions. The recruiter was considered to be the most important source of military service information, both in school and outside of school. Interviews with school counselors and principals are also reported on.

Categories C/F

Short, C. W., & Marion R. Suitability of using common selection test standards for Negro and White airmen. Report No. AFHRL-TR-72-53, Personnel Research Division, Lackland Air Force Base, Texas, May 1972.

The effectiveness and equity of applying uniform selection standards to both Negro and White Air Force enlistees was investigated by regression analysis. For both racial groups, the relationship between the Air Force selection test (Airman Qualifying Examination) as the predictor and a measure of job knowledge (Specialty Knowledge Test) as the criterion was compared for Negro and White airmen belonging to one of 16 promotion groups. In no group were Negro criterion scores underpredicted by the selection tests. In nine groups there were racial differences in the regression lines, and in all instances of differences the Negro criterion scores were overpredicted by the common regression lines.

Categories A/E

Siegel, A. I., & Bergman, B. A. Nonverbal and culture fair performance prediction procedures: Background, test development, and initial results. Final Report, June 1972, Applied Psychological Services, Inc., Contract N00014-71-C-0319, Office of Naval Research, Personnel and Training Programs.

The logic and initial results are described of a program into the development of unique measures for assessing the potential of "low aptitude" personnel for certain Navy rates. The logic is based on the conjecture that recruits who can learn a sample of the job requisites on a mini on-the-job training situation will demonstrate the same ability on the job. This is held to apply regardless of the recruit's low score on the usual classification tests. The initial and criterion tests are described and the correlations among the mini job learning test results and the usual Navy predictors are given. The results of a factor relationship of the derived cultural deprivation are given, and the relationship of the derived cultural deprivation scores both to the usual Navy classification tests and the job learning tests is given.

Categories A/B

Singer, M., Armbruster, F. E., Newitt, J., Thomas, J., & Wilson, R. E., Jr. Ideas and trends for the modern volunteer Army. Final Report, June 5, 1972, Hudson Institute, Inc., Contract DAHC15 71 C 0281, Office of the Chief of Staff United States Army, Special Assistant for the Modern Volunteer Army.

This study assesses training and recruiting programs for the volunteer Army and evaluates the relationship of the structure and missions of the Army to American society. It recommends alternatives for Army policy to enhance a volunteer Army structure.

Categories C/E

Stanley, D. L. Evaluation staff report 72-5: Updated profile of U.S. servicemen. Data Support Service, Office of Information for the Armed Forces, Department of Defense, Washington, D.C., May 1972.

This is an updated "Profile of the U.S. Serviceman", with inputs as recent as April 1972. Data Support Service updates this document periodically. This compilation and synopsis of civilian and military studies, surveys and statistical data provides a profile of the U.S. serviceman

especially tailored to the needs of those involved in military internal/ command information. The source materials are available from Data Support Service, IAF. (Excerpted)

Categories B/C/E

Sticht, T. G., & Caylor, J. S. Development and evaluation of job reading task tests. Paper presented for symposium at annual meeting of American Educational Research Association, April 1972.

Describes research to develop job reading task tests (JRTT) for three military jobs having civilian counterparts: cook, automotive repairman, and supply clerk. Relationships of general reading ability to performance on JRTT are described for men in three groups: an unselected sample, a group selected for special aptitude in a JRTT area, and a group both selected and trained in the JRTT area. Results indicate that, while general reading and JRTT performance are positively correlated, the JRTT are sensitive to selection and training, and hence are measures of special job-reading abilities as well as of general reading abilities.

Categories D/F

Sticht, T. G., Caylor, J. S., & Kern, R. P. Project REALISTIC: Evaluation and modifying of READING, LISTENING, and arithmetic needs in military jobs having civilian counterparts. Paper presented at the meeting of the Western Psychological Association, Los Angeles, April 1970.

The papers in this collection present a description of, and the results of, research in Work Unit REALISTIC. In addition to the first paper which is an overview, the three papers are: "Psychometric Determination of Relationships Among Literacy Skills and Job Proficiency," "Reading Ability, Readability, and Readership: Identifying Job-Related Reading Tasks Performed by Cooks, Clerks, and Mechanics," and "Reducing Discrepancies Between Literacy Skill Levels of Personnel and Literacy Demands of Jobs."

Categories D/F

Sticht, T. G., Caylor, J. S., Kern, R. P., & Fox, L. C. Determination of literacy skill requirements in four military occupational specialties. Technical Report T1-23, November 1971, Human Resources Research Organization, research for the Department of the Army.

This report describes results of research on the extent of usage of job printed materials and job listening sources as a function of the reading difficulty level of the materials and the reading ability of Army job incumbents. Psychometric data were obtained on relationships of reading ability to performance on Job-Related Reading Task tests, and of reading, listening, arithmetic, and AFQT to job proficiency as indexed by Job Knowledge tests, Job Sample tests, and Supervisor Ratings in four Army jobs. Methods are discussed for reducing discrepancies between personnel literacy skill levels and the literacy demands of the job by residential literacy training or redesign of job literacy materials. Research results are discussed with regard to implications for selection, training, and research.

Categories D/F

Sticht, T. G., Caylor, J. S., Kern, R. P., & Fox, L. C. Determination of adult functional literacy skill levels. Reading Research Quarterly, Vol. VII, Spring 1972, 424-465.

This paper describes data gathered on functional literacy levels for four selected Army jobs: Cooks, Vehicle Repairmen, Supply Clerks, and Armor Crewmen. The data showed that reading difficulty levels in the Repairmen and Supply fields exceeded the reading ability of high aptitude men by four to six grade levels, that use of reading materials increased as skill in reading increased, that men in high-demand reading level fields tended to listen for information, and that information on tests, job performance, supervisor's ratings showed positive, significant correlations between literacy variables and the first two indices of job proficiency. Listening and job knowledge were less highly related than reading and job knowledge.

Categories D/F

Talbert, G. E., et al. Analysis of MVA/VOLAR actions impact on soldiers' attitudes toward the Army and on retention. FY '72 Final Report, September 15, 1972, System Development Corporation, Contract DAHCl9-72-C-0002, Office of the Special Assistant for the Modern Volunteer Army, Office of the Chief of Staff, Department of the Army.

The overall objective of the VOLAR Evaluation Project is to analyze the effectiveness of the MVA/VOLAR actions and to develop associated information for use both in refining the on-going program and in determining which actions are most appropriate for continuing application on an Army-wide basis. In support of this objective, System Development Corporation (SDC) conducted an analysis of the impact of MVA/VOLAR actions on soldiers' attitudes toward the Army and on retention. The study determined attitudes of soldiers toward various aspects of Army life, and toward the MVA concept and program. It also identified which MVA/VOLAR actions are having the most positive effects on attitudes and retention. Primary data sources were the MVA Evaluation Questionnaire administered to 48,000 officers and enlisted men, in-depth interviews, PamRRe VOLAR-71 follow-up studies, and the results of evaluations conducted by VOLAR-72 installations to determine which actions were most effective at their installation. Major conclusions of the FY'72 Final Report are: 1) the MVA/VOLAR concept is meeting with a quite favorable response; 2) the MVA/VOLAR Program is producing positive results, particularly among the under-two years service enlisted groups; 3) MVA/VOLAR actions having the greatest effect on attitude and retention are in the areas of job assignment, health care, civilian hire, pay benefits, and growth and education; 4) continuing innovation, experimentation, and evaluation is strongly indicated; 5) flexibility is required in implementing and structuring MVA/VOLAR actions to accommodate differences among installations.

Categories C/E/F

Taylor, E. N., Vineberg, R., Goffard, S. J., & DeGracie, J. 3. Need functioning at four stages in military service. Paper presented at the meeting of the American Psychological Association, Honolulu, September 1972.

Changes and constancies in the importance of 57 situations and conditions in four stages of Army life are presented and interpreted following Maslow's analysis of the functioning of human needs. Ratings of importance were transformed to z-scores and plotted. Three patterns were observed. It is suggested that: (a) items remain stable because other prepotent needs are less well satisfied; (b) items decrease in importance because they are being met to some degree or they were overestimated initially; (c) items

increase in importance because they have been satisfied over a long time and are initially underestimated.

Category E

Taylor, J. E., Michaels, E. R., & Brennan, M. F. The concepts of performance-oriented instruction used in developing the Experimental Volunteer Army Training Program. Technical Report 73-7, March 1973, Human Resources Research Organization, research for the Department of the Army.

This report describes the planning and implementing of the Experimental Volunteer Army Training Program (EVATP) at Fort Ord early in 1971. This was the Army's first effort to effect major training innovations in the conversion toward an all-volunteer Army. By the fall of 1971, this program was being used as a model for implementing the EVATP at other Army Training Centers. In developing the EVATP system, six established learning principles were applied to Basic Combat Training and Advanced Individual Training to modify the conventional training system. Course objectives and performance tests used were developed jointly by Fort Ord and HUMRRO. In a comparison with a conventionally trained group, independently conducted by the Infantry School at Fort Benning, EVATP graduates performed significantly better on five out of seven BCT subjects, and seven out of nine AIT subjects. In general, these gains were shown by men at all levels of aptitude.

Category D/F

Thornton, G. C., III, Hamilton, J., & Newley, S. M. Differences in attitudes toward leadership between "draft-induced" and "true" volunteers. Technical Report, December 1973, Battelle Memorial Institute, Human Affairs Research Centers, Contract N00014-73-C-0259, Office of Naval Research, Organizational Effectiveness Research Programs.

Attitudes toward interpersonal influence in the Navy of enlisted men classified as "draft-induced volunteers" and "true volunteers" were explored by administering questionnaires to 197 Navy recruits at the Armed Forces Examining and Entrance Stations (AFEES) at Los Angeles and Denver and 365 trainees during the final weeks of Navy basic training at San Diego. Recruits and trainees were classified on the basis of Selective Service Lottery number and response to a question of whether the draft influenced their joining the Navy. Specific differences in perception of leadership climate, preferences for styles of interpersonal influence and attitudes toward

leadership were found. The "true volunteer" groups expressed preference for close and formal supervision, stated that they expected to like their supervisors, and displayed less aversion to order giving and coercive leadership from superiors. The "draft-induced" groups expressed relatively greater preference for informal leadership and general supervision and perceived that supervisors on civilian jobs are more informal, permissive, and democratic. Differences between the groups increased as a result of basic training experience.

In spite of these differences, draft-induced and true volunteers expressed many similar perceptions of and attitudes toward military leadership. Zero-draft may not produce the large difference in quality and type of recruit that has been suggested by previous studies and speculation. These differences in attitudes which do seem to exist among persons of different draft pressure may make the training and supervision of enlisted men easier in the future. On the other hand, if the military wishes to attract a larger number of young men into the service, it may have to adopt leadership approaches more like those in civilian jobs in order to change the unfavorable image of the military revealed by the high draft-pressure groups in this study.

Category C

Trident Scholar Project. An analysis of the attitudes of Black urban youth toward military service. United States Naval Academy, 1972.

Because of the unique life experiences of urban Blacks in our society, it was hypothesized that they would hold significantly more negative attitudes toward military service. These unfavorable feelings would be the result of an essentially different exposure to the concept of military service and military life, and of identification of the military as an integral part of the society which discriminates against Blacks. The discovery of strong, race-oriented sentiments of this nature would invalidate to some degree predictions of greatly increased Black participation in the all-volunteer Armed Forces. The results of a questionnaire survey conducted with Black and White high school students indicated no widespread existence of racially-oriented military feelings hostile to the military. Race was found to not significantly affect willingness to consider enlistment, and Blacks were slightly more favorable than Whites in regard to the occupational aspects of the military. The exposure which Blacks receive to information about military life was shown to be basically similar to that received by White youths. As expected, some racial differences appeared in questions about the Vietnam war, military service in general, and the racial aspects of military service, but

a wholesale rejection of the military by Blacks was not evidenced. In general, the findings of this study tend to support projections of somewhat higher percentages of Blacks in the non-draft military.

Categories A/C

United States Air Force. An analysis of problems associated with the establishment of an all-volunteer (non-draft) force for the United States -- **SABER VOLUNTEER.** Headquarters, USAF: Office of Special Studies, Assistant Chief of Staff, Studies and Analysis, 1971. *

"Saber Volunteer" is a study of the problems associated with the enlisted ranks, problems related to initial accessions. It embraces three broad goals: 1) to examine in detail the body of CY 1970 lottery data; 2) to investigate demographic information referring to males, 17-22 years of age; and 3) to compare wage structures for young men within the Department of Defense and the civilian labor force. The first goal relates to the characteristics of recent volunteers and draftees, from which one may infer a future "demand" for additional volunteers when there is no longer a selective service system to provide inductees and "draft-induced volunteers". The second goal relates to manpower, from which the "supply" of recruits must come. The third goal addresses the link between demand and supply, i.e., pay and pay equivalents.

The three study goals are presented in seven volumes of data. Volumes I, II and III deal with the first goal; Volume IV, with the second goal, and Volumes V, VI, and VII with the third. Specifically, Volume I examines both quantity and quality aspects of the 1970 lottery data for all of the military services. Volume II examines, in detail, the quantity and quality aspects of the lottery data for the Air Force. Volume III presents the Service Preference Model developed by Air Force/Studies Analysis, which estimates by service the number of "true and reluctant" volunteers and the preference of volunteers for one military service over another. Volume IV contains demographic data for males of the United States. Volume V compares deciles of wage rates (weekly earnings) for enlisted male personnel of the Air Force with civilian males employed full-time in the four broad skill areas of office workers, professional and technical, maintenance and power plants, and custodial and material movements. Volume VI presents population survey data for civilian males employed full-time and year around and compares earnings survey data for civilian and military males for ten major occupational skill areas. Volume VII examines mental category and annual salary data for males surveyed one year and five years after high school graduation. (Excerpted)

Categories E/F

* Although published in 1971 this has been included because it is considered to be a seminal report.

United States Department of Defense. The all-volunteer force and end of the draft: A special report of Secretary of the Defense Elliot L. Richardson. Washington, D.C., March 1973.

This Special Report updates the August 1972 Report of the former Secretary of Defense and describes the remarkable progress made by the Military Services in eliminating the draft without weakening our military forces or impairing our ability to deter threats to the peace. It also describes remaining problems and their solutions. (Excerpted)

Category F

United States Department of Defense, Bureau of Naval Personnel. Bibliography and abstract of technical reports, July 1971 to June 1972. Washington, D.C.: Naval Personnel Research and Development Laboratory, September 1972.

This bibliography contains abstracts of reports published from July 1971 to June 1972 (Fiscal Year 1972) by the Naval Personnel Research and Development Laboratory, Washington, D.C.

Four types of technical reports are normally published:

- (1) Technical Bulletins (WTB) describe technical details of interest to research personnel.
- (2) Research Reports (WRR) are for extensive dissemination of findings to operational personnel.
- (3) Research Memoranda (WRM) describe work or findings of limited scope which are published because of immediate value to specific users.
- (4) Survey Reports (WSR) describe results of periodic Navy-wide sample surveys and special personnel surveys.

An Author Index, a Report Number Index, and a Task Number Index are also provided. (Excerpted)

Categories C/E

United States Department of Defense. Bibliography of manpower research. Washington, D.C.: Central All-Volunteer Task Force, Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs, April 1972.

This bibliography has been prepared by the Central All-Volunteer Task Force in response to Task Order #2, "Manpower Research Bibliography". The Task Force was directed to "prepare an organized listing and description of military manpower personnel research reports and studies". The bibliography includes reports and studies completed since 1 January 1968 or currently ongoing.

The policy decision to achieve an all-volunteer force has focused attention on manpower and personnel problems. Service manpower managers, analysts and research staffs need an efficient way of finding past studies relevant to current issues and a means of avoiding unnecessary duplication in research. The bibliography usefully serves these purposes. (Excerpted)

Categories E/F

United States Department of Defense. Inventory, description & evaluation of the DOD Manpower Information System. Washington, D.C.: Central All-Volunteer Task Force, Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs, July 1972.

This study was performed by the Central All-Volunteer Task Force in response to Task Order #1, "DOD Manpower Information System". The Task Force was directed to survey the DOD automated personnel record systems to determine the capability to meet the manpower information needs of planners and decision makers concerned with achieving the goal of an All-Volunteer Force.

The study included six major data files containing current and historical information. Methodologies and data used to make forecasts or projections of manpower requirements, supply, losses or retention were not surveyed.

The study concludes that:

- 1) Requirements to rapidly retrieve information from the automated files, produce data in new format configurations, and to perform simultaneous all Service data analysis intensify within the All-Volunteer Force environment.
- 2) Automated data files maintained by the Services contain the essential data elements needed to plan for and maintain an All-Volunteer Force. (Excerpted)

Categories E/F

Vineberg, R., & Taylor, E. N. Summary and review of studies of the VOLAR experiment, 1971: Installation reports for Forts Benning, Bragg, Carson, and Ord, and HumRRO permanent party studies. Technical Report 72-18, May 1972, Human Resources Research Organization, research for the Department of the Army.

One purpose of Project VOLAR, a field experiment conducted during FY 1971 as part of the Modern Volunteer Army (MVA) program, was to evaluate the effects of VOLAR innovations on attitudes toward the Army and the Army career intentions of officers and enlisted men. This report provides an evaluative summary and consolidation of findings in several studies that focused upon permanent party officer and enlisted personnel. It encompasses (a) evaluations conducted by each VOLAR installation - Forts Benning, Bragg, Carson, and Ord - and described in their post reports, and (b) the HumRRO studies of permanent party personnel at Forts Benning, Carson, Jackson, Knox, and Bragg and at three installations in USAREUR, and of an Army-wide sample. Recommendations for future action are made, based on findings concerning conditions that appear to be important to men in making the Army a more satisfactory plan in which to work and live.

Categories C/E/F

Vineberg, R., & Taylor, E. N. Study of men in lower mental categories: Job performance and the identification of potentially successful and potentially unsuccessful men. Technical report 72-22, August 1972, Human Resources Research Organization, research for the Department of the Army.

To provide information on performance and characteristics of effective and ineffective marginal personnel in the Army, a study has been made of approximately 1500 men with experience ranging up to 20 years in four different Army MOSs. The study included a group of men with Armed Forces Qualification Test scores in the marginal range and a comparison group of men in the same jobs, but in the upper AFQT levels. This report, the third in a series, describes the bulk of the major study findings including comparisons of the performance of men in different mental categories with different amounts of job experience, comparisons of the performance of special subgroups (Negroes and Caucasians, inductees and enlistees, and men with formal and on-the-job training), an analysis and definition of acceptable performance, and a procedure for using Job Knowledge tests to screen ineffective performers.

Categories A/B/F

Vineberg, R., & Taylor, R. N. Performance in four Army jobs by men at different aptitude (AFQT) levels: 4. Relationships between performance criteria. Technical Report 72-28, August 1972, Human Resources Research Organization, research for the Department of the Army.

A study was made of approximately 1200 men with experience ranging to 20 years in five different Army MOSs to provide information about the performance and characteristics of effective and ineffective marginal personnel in the Army. The study included a group of men with Armed Forces Qualification Test scores (AFQT) in the marginal range and a comparison group of men in the same jobs, but in the upper range of AFQT scores. Performance was measured by intensive job sample tests, job knowledge tests, and supervisor ratings. Biographical questionnaires, a battery of published and experimental tests, and Army records provided information about background, personal characteristics, and military experiences. This report, the fourth in a series presenting the extensive data and analyses, examines the determinants of job behavior and describes the relationships among the three performance criteria used in the study: job sample tests, job knowledge tests, and supervisor ratings.

Category B

Vitola, B., & Alley, W. Characteristics of 18-year old enlistees who enter the Air Force before becoming draft eligible. Report No. AFHRL-TR-72-5, Personnel Research Division, Lackland Air Force Base, Texas, February 1972.

While it is recognized that the major portion of all first-term enlistees are strongly motivated to enter the service as a function of their draft vulnerability, a large percentage of young men enlist in the United States Air Force before they become subject to the draft. In this study, 18-year-old enlistees, born in 1951, who entered the Air Force after July 1, 1970 (the day on which they received their draft lottery number for 1971), were categorized into three groups defined in terms of their probable vulnerability for the 1971 draft (i.e., high, moderate, and low vulnerability). In general, the data suggest that enlistment of the 18-year-olds in 1970 was related to their status in the 1971 draft lottery. Further, comparisons on education, race, and aptitude test performance revealed patterns similar to those found in a study of 19-through-26-year-old airmen categorized by draft vulnerability. Implications of the findings for an all-volunteer force include an expected decrease in the educational and aptitude levels of enlistees, a greater difficulty in filling high-aptitude enlistment quotas, and an increase in the proportion of Negro enlistees.

Categories B/C/E/F

Vitola, B. M., & Brokaw, L. D. Comparison of 1970 and 1971 Air Force enlistees by draft -- vulnerability category. Report No. AFHRL-TR-72-49, Personnel Research Division, Lackland Air Force Base, Texas, March 1973.

On the basis of draft vulnerability, the 1970 and 1971 accessions were categorized into four groups defined in terms of age and draft pressure. These groups designated as high, moderate, low draft-pressure and draft non-eligible, were compared on various dimensions. Compared to the 1970 accessions, the 1971 accessions demonstrated less aptitude and were less well-educated. There was an appreciable rise in the number of accessions having 11 years or less of education; especially in the low draft-pressure and draft non-eligible groups. The data suggest that, under present incentive enlistment programs, zero-draft manpower resources at the higher aptitude levels may be more limited.

Categories B/C/F

Vitola, B. M., Mullins, C. J., & Brokaw, L. D. Comparative data on a sample of all-volunteer enlistees with 1970 through 1972 Air Force accessions. Technical Report No. 73-26, Air Force Human Resources Laboratory, Lackland Air Force Base, Texas, July 1973. (JSAS Catalog of Selected Documents in Psychology, 1973, 3, 150)

A data base was established to which characteristics of the all-volunteer force could be compared. If the hypothesis is tenable that the sample of 1973 enlistees used in this study represents the qualitative characteristics of the all-volunteer force, current aptitude levels suggest sufficient quality for the majority of Air Force jobs. Analysis of data resulted in the following conclusions: (a) There has been a gradual loss of high-aptitude people over a 3-yr. period. If this trend continues, there will be a probable need to offer further incentives to enlist individuals who can perform in the more critical aptitude areas. (b) There will be no dramatic increase in the proportion of blacks in the all-volunteer force. Air Force has enlisted, and continued to enlist, a proportion of blacks equal to, or greater than, the proportion of blacks in the population. (c) Under present reenlistment policy considerations, Air Force will remain an excellent source from which industry may draw skilled personnel in over 200 job types.

Categories B/F

Vitola, B. M., Mullins, C. J., & Croll, P. R. Validity of Armed Services Vocational Aptitude Battery, Form 1, to predict technical school success. Technical Report No. 73-7, Air Force Human Resources Laboratory, Lackland Air Force Base, Texas, July 1973. (JNAB Catalog of Selected Documents in Psychology, 1973, 3, 150.

Validities of the four aptitude indexes of the Armed Services Vocational Aptitude Battery (ASVAB), Form 1, and the Airman Qualifying Examination-66 (AQE), were determined for final grades in 46 airman training courses. Comparisons were made between AQE and ASVAB in terms of their ability to predict technical school success. The data demonstrate that ASVAB is an effective instrument for use in the military high school testing program and may be used satisfactorily, as is AQE, to assign enlistees to technical training. Three of the four selector aptitude indexes of the ASVAB (general, administrative, and electronics) had higher validities for their appropriate courses than any of the other ASVAB aptitude indexes. This sort of specific validity was not obtained for the selector index of the mechanical cluster. However, 15 of the 16 validities obtained for the selector index in the mechanical area were at a significant (.01), useful, and acceptable level.

Categories B/D

Wermuth, A. L. Potential impacts of cultural change on the Navy in the 1970's. Final Report, August 1, 1972, Westinghouse Electric Corporation, Center for Advanced Studies and Analyses, Contract N00014-71-C-0011, Office of Naval Research, Psychological Sciences Division, Organizational Effectiveness Research Programs.

Volume 1, Part I. Findings and implications. Part II. Section 1. Introduction. Section 2, Summary of data and impacts.

Volume 2, Part III. Section 1. Philosophical. Section 2. International

Volume 3, Part III. Section 3. Technological. Section 4, Bio-medical.

Volume 4, Part III. Section 5. Social and cultural. Section 6, Organizational.

Volume 5, Part III. Section 7. National orientations. Section 8. Domestic institutions.

Volume 6, Part III. Section 9. The continuing military context. Section 10. Vietnam and other impacts. Section 11. Old and new directions.

Volume 7, Part IV. Bibliography.

The report surveys significant changes taking place in modern society, or predicted to take place in future society, under eleven major categories: Philosophical, international, technological, bio-medical, culture and social, organizational, national orientations, domestic institutions, the continuing military context, Vietnam and other impacts, and old and new directions. Sixty subcategories are used to organize the data cited from almost 1800 sources. In selecting data, criteria of importance and probability were used, and particularly the criterion of relevance to the values of the Navy and to Navy and Marine Corps systems of (non-tactical) organization and of administration of personnel. Over 400 potential impacts are explicitly identified, and many others are implicit in the data and the discussions; the nature of the impacts ranges comprehensively from abstract and philosophical to concrete, specific, and technical.

Categories A/B/C/E/F

West, A. S., Williams, R. E., Lantz, A. E., & Bleistein, S. Reducing physical standards for Navy recruits. Final Report, January 1973, Denver Research Institute, University of Denver, Contract N00014-A-0394-008, NR 186-125, Office of Naval Research.

With the advent of an all-volunteer force, concern has been expressed to the effect that future accessions into the Navy might be insufficient to fill the Navy's skilled manpower needs. This report presents the results of the first six months of research of a study to examine the feasibility of enlarging the size of the population from which volunteers are drawn by removing certain physically disqualifying restrictions to enlistment, and to investigate the implications of their removal.

The research was organized to answer four basic questions concerning: 1) the determination of concept feasibility, 2) the determination of which physical standards might be reduced and the implications of their change, 3) the methodology of the development of an evaluation mechanism for monitoring the program. The report describes the data accessed to address questions 1) and 2), and recommends the reduction of certain physical standards as a safe, effective way to augment an AVF. Several specific preliminary recommendations are listed in the report. The methodology for addressing questions 3) and 4) during the next phase of the study is described.

Categories E/F

Wilbourn, J. M. The Air Reserve as an all-volunteer force. Final Report No. AFHRL-TR-73-13, Personnel Research Division, Lackland Air Force Base, Texas, September 1973.

The Air Reserve force, consisting of the Air Force Reserve (USAFR) and the Air National Guard (ANG), is facing a critical period of adjustment with the advent of the all-volunteer force. If the Air Force is unable to attract sufficient numbers of personnel into the Regular Air Force to satisfy mission requirements, or if additional personnel are required in case of a national emergency, the role of the Reserve force becomes one of primary importance. In order to assess the effect of an all-volunteer concept on the Reserve force, an attitude survey was administered to a random sample of USAFR and ANG non-prior service 1970 enlistees to determine their attitudes and opinions about the military in general and the Air Force in particular. Biographical, socio-economic, aptitudinal and attitudinal data were analyzed by draft vulnerability category and expressed attitude toward volunteer military service. Analyses indicated a general lowering of aptitude and educational level in the reduced quantity of enlistees who will volunteer for Reserve duty. However, intensified recruitment of minority groups, which now constitute less than five percent of the Reserve force, might supplement any projected decrease in numbers of enlisted accessions. Various negative aspects such as military discipline, salary, and interference with civilian job were indicated as contributing factors to non-reenlistment in the Reserve force. A survey of inducements to reenlist as preferred by the sample indicated increased pay, veteran's benefits on retirement, and reenlistment bonuses may be effective in increasing Reserve retention rates. Certain non-monetary benefits such as completion of education at the government's expense, or guaranteed promotions may be quite effective in inducing prospective Reserve enlistees to volunteer for the Regular Air Force in lieu of their Reserve tour.

Categories C/E/F

Zierdt, W. H., III. Management overhead in the military. Paper presented at the Workshop on Research on Military Manpower -- The All-Volunteer Military, September 21-23, 1972, jointly sponsored by the Inter-University Seminar and the Air Force Office of Scientific Research.

This paper presents an examination of the general and flag officer grades of the United States armed services during the years 1900-1970. These are examined historically and in light of the organizational theory of Blau and Schoenherr put forth in their book of 1971, The Structure of Organizations. Data on the numbers of general and flag officers and the

force levels of the armed services of the United States were gathered from governmental reports, the annual registers of officers of each of the armed services and the statistical abstract of the United States. These data were used to compute various statistics including Pearson's Zero Order Coefficient of Correlation. These data and these statistics are shown in the accompanying tables. The findings of this paper conclude that the role of the various general and flag officer grades have been changing over time. Principal time spans are determined by the primary reorganization of the defense establishment in 1920 and 1947. The findings further support several of the propositions set forth in the theory of Blau and Schoenherr.

Categories E/F

APPENDIX F

TECHNICAL PAPER:
"INFLUENCE THROUGH PERSONAL AND
NONPERSONAL CHANNELS OF COMMUNICATION"

Published as a separate and in *The Journal of Psychology*, 1974, 88, 135-140.

INFLUENCE THROUGH PERSONAL AND NONPERSONAL CHANNELS OF COMMUNICATION*¹

University of Maryland; and Westinghouse Health Systems, Columbia, Maryland

CHARLES D. WARD,² BARBARA L. SEBODA, AND VERNON B. MORRIS, JR.

SUMMARY

A city-wide campaign involving various channels of communication was conducted to obtain high school seniors for a survey. Of the 102 seniors who telephoned to make appointments, 56 later attended their assigned questionnaire session. The rate of attendance differed for the communication channels. Newspaper advertisements attracted the most telephone calls but had the lowest attendance rate; notices on bulletin boards in city recreation centers produced the fewest telephone calls but had the highest attendance rate. Other channels, including personal contact, were intermediate in effectiveness. Additional findings were that nonpersonal channels differed in influence, and that exposure through multiple channels resulted in more influence than exposure through only one. The implications of the findings, especially for conceptualizations of channel influence, were noted.

A. PROBLEM

An important distinction has been made in studies of the mass media between the mere transmission of information and the actual exercise of influence (3, 4). All media, including person-to-person contact, appear capable of transmitting information. Personal contact, however, generally has been found to be uniquely effective as a source of influence. The reason presumably is the active and direct role that the personal source can play relative to the intended target of the communication (8, p. 323).

The distinction between information and influence, although useful in explaining the superior influence of personal contacts, ignores the possibility

* Received in the Editorial Office on July 15, 1974, and published immediately at Provincetown, Massachusetts. Copyright by The Journal Press.

¹ This research was supported by AFOSR Contract F44620-72-C-0093 awarded to Westinghouse Health Systems, Vernon B. Morris, Jr., Principal Investigator. The aid of Robert L. Crawford is gratefully acknowledged. Appreciation also is expressed to the Baltimore Bureau of Recreation for cooperation with the study.

² Requests for reprints should be sent to Charles D. Ward at the address shown at the end of this article.

that nonpersonal channels also can vary among themselves in influence. Moreover, the possibility that there are different kinds of influence, such as ability to obtain an expression of future compliance as well as obtaining the later compliance itself, also bears examination. The present study, carried out in a field setting, reports data relevant to these considerations.

Much of the past field research on communication channels has been dependent on the respondents' retrospective verbal reports of having been influenced. Such measures not only are obtrusive (7) but also seem particularly vulnerable to underreporting of such "undesirable" behavior as having been influenced. In contrast, an objective behavioral measure of influence—attendance at a later testing session—was employed in the present study. Another unusual feature of the present research was its focus on a novel population—high school seniors in a large eastern city.

B. METHOD

In early March of 1974 an advertisement appeared in the Sunday morning classified section of a major newspaper in Baltimore, Maryland. The ad read as follows: "HIGH SCHOOL SENIORS, BALTO. CITY—Earn \$5 for 1 hr. work in eve. Men and women who are seniors are needed to provide information about occupational decision making. Call (phone number) between 9 AM & 4:30 PM to see when we will meet in a location near you. . . ." This advertisement, one of seven eventually placed in three different newspapers, was part of a concerted attempt during a 19-day period to solicit volunteers to serve in a study of occupational decision making among high school seniors.

A variety of other methods also was employed during the same period. One-page announcements were sent to all city recreation centers for posting on bulletin boards. Selected high school counselors were urged to inform their students of the sessions; flyers were also sent for posting on high school bulletin boards. (At one high school the announcement was even read over the public address system.) Many callers who responded were asked to tell a friend about the sessions. A similar request was made of the respondents who attended a data-collection session on the twelfth day of the campaign.

The immediate outcome of the recruitment activity was that 102 high school seniors telephoned to obtain further information. An attempt was made to obtain certain standardized information from each caller during the brief telephone interview. The information included the caller's high school and verification of senior status; personal information (name, address, telephone number, sex, race, and post-high school plans); the com-

munication channel through which the caller had heard about the research, as well as the date; and to whom, if anyone, the caller had spoken subsequently about the research, and when. At the conclusion of the conversation the caller was assigned a time and place for a later session in which a 15-page questionnaire was to be completed.³ All callers agreed to attend. The operational definition of "influence" adopted for the present study was the actual attendance of the caller at the scheduled session.

Four sessions were conducted in city recreation centers during the last nine days of the 19-day campaign. The centers were in different areas of the city. In addition, three respondents completed the questionnaire in other locations (two at a local high school and one in a public library).

C. RESULTS

The number of commitments to attend the formal data-collection sessions that each channel obtained is shown in Table 1. The largest number ($N = 37$) was obtained by newspapers, the least ($N = 10$) by recreation center

TABLE 1
CALLERS WHO DID AND DID NOT ATTEND: CLASSIFIED BY COMMUNICATION CHANNEL

Channel	Attendees		Nonattendees		Total	
	N	%	N	%	N	%
Newspaper	14	38	23	62	37	100
Recreation center bulletin board	9	90	1	10	10	100
High school nonpersonal	8	44	10	56	18	100
Personal	7	58	5	42	12	100
More than one	17	77	5	23	22	100
Total	55	56	44	44	99	100

Note: The "high school nonpersonal" channel includes respondents contacted at high school by public address system or by bulletin board. The two categories were combined because of the shared location and because of the small number of persons in the latter category. Telephone information concerning channel of contact was not obtained for three additional respondents; one was an attendee and two were nonattendees.

bulletin boards. The other channels, including personal contact, were intermediate. Also shown is the number of persons scheduled through each channel who, as it later turned out, actually did or did not attend the session. A chi square analysis applied to the latter data was significant ($p < .01$, $\chi^2 = 14.65$, $df = 4$), indicating that the channels produced differential rates of attendance. Interestingly, it can be seen in Table 1 that the highest

³ The questionnaires were concerned with some of the determinants, attitudinal and otherwise, of occupational planning among high school seniors. Data from these questionnaires and from others completed elsewhere will be of the subject of a separate report later.

percentage of attendance was produced by the recreation center bulletin boards (90%), and the least by newspapers (38%), which is just the opposite for number of telephone calls produced. The importance of distinguishing between different kinds of influence—in this case, agreement to attend and the later attendance itself—is pointed out clearly by these data.

The unusually high rate of attendance produced by the notices on recreation center bulletin boards probably is due to the fact that nearly all later testing also was done in recreation centers. It should be noted, however, that the majority of callers in this category (7 of the 10) were assigned to different recreation centers from those in which the notices had been observed. Familiarity with the *general* testing setting, rather than with a specific neighborhood center, thus apparently is the underlying determinant. This factor appears to outweigh even personal contact in importance.

The first three channels listed in Table 1 (newspaper, recreation center bulletin board, high school nonpersonal) were examined separately in a second chi square analysis in order to test for differential influence solely among the nonpersonal channels. The chi square was significant ($p < .05$, $\chi^2 = 8.69$, $df = 2$). The most and least influential channels, respectively, again were recreation center bulletin boards and newspapers.

A final test was made on the hypothesis that persons exposed to many sources, personal or nonpersonal, are more influenced than those exposed to only one. A chi square analysis, which compared the combination of the first four channels listed in Table 1 with the fifth ("more than one") category, was employed for this purpose. As expected, the analysis was significant ($p < .05$, $\chi^2 = 4.33$, $df = 1$). Exposure to multiple sources resulted in significantly greater attendance (77%) than did exposure to only one source (49%).

Other possible differences between attenders and nonattenders also were examined. Attenders, compared to nonattenders, tended more frequently to be white ($p < .10$) and to say that they had spoken to someone else about the research after first learning of it themselves ($p < .10$). No such differences were found with regard to the caller's sex or plans to attend college.

D. Discussion

The present results reaffirm the value of Katz and Lazarsfeld's (4) distinction between influence and information. At the same time, however, the results point up certain difficulties with the concept of "influence" as subsequently used in discussions of the media's effects. First, it is obvious that even nonpersonal channels are capable of influencing an audience, and to

differing degrees. Second, in some situations it may be appropriate to distinguish between different kinds of influence, such as obtaining agreement to perform an action *versus* obtaining the actual action itself.

Rosenthal and Rosnow (6, p. 64), in their review of research on volunteering, commented that "it is just those conditions that increase the likelihood of a subject's volunteering that increase the likelihood that he will not show up when he is supposed to." The present results suggest the possibility that a somewhat similar generalization may be appropriate for certain channels of communication. For example, newspapers may have capabilities which make them particularly effective channels for disseminating information, and perhaps even for obtaining initial expressions of intention, but they do not appear very effective for producing a behavioral follow-through from the reader.

In their analysis of the persuasion process Hovland, Janis, and Kelley (2) distinguished three steps: gaining the audience's attention, its comprehension of the message, and its acceptance of the message's conclusions. Various channels of communication may be differentially effective at each of these phases (*cf.* 5). It is reasonable to assume that in the present study all subjects had successfully attended to and comprehended the basic recruitment message prior to their telephone call for an appointment. The final stage, acceptance, thus may be the most important source of the present differences. Future research on this stage appears called for, with particular attention to such possible underlying variables as differential prestige and credibility of the communication channels.

A final point should be made. Like most other field studies of the mass media, the present study does not allow one to conclude definitively that the differential effectiveness of the channels is due to intrinsic features of the channels themselves. An equally plausible conclusion could be that the observed results are due to differential selection of audiences by the different channels. These two processes, as Hovland (1, p. 1080) notes, are quite different, although both can and probably do often operate in real life situations.

REFERENCES

1. HOVLAND, C. I. Effects of the mass media of communication. In G. Lindzey (Ed.), *Handbook of Social Psychology (Vol. II)*. Reading, Mass.: Addison-Wesley, 1954.
2. HOVLAND, C. I., JANIS, I. L., & KELLEY, H. H. *Communication and Persuasion*. New Haven, Conn.: Yale Univ. Press, 1953.
3. KATZ, E. The two-step flow of communication: An up-to-date report on an hypothesis. *Public Opin. Quart.*, 1957, 21, 61-78.

4. KATZ, E., & LAZARSFELD, P. F. *Personal Influence*. Glencoe, Ill.: Free Press, 1955.
5. LIN, N. Information flow, influence flow and the decision-making process. *Journalism Quart.*, 1971, 48, 33-40, 61.
6. ROSENTHAL, R., & ROSNOW, R. L. The volunteer subject. In R. Rosenthal & R. L. Rosnow (Eds.), *Artifact in Behavioral Research*. New York: Academic Press, 1969. Pp. 59-118.
7. WEBB, E. J., CAMPBELL, D. T., SCHWARTZ, R. D., & SECHREST, L. *Unobtrusive Measures: Nonreactive Research in the Social Sciences*. Chicago: Rand McNally, 1966.
8. WEISS, W. Mass communications. *Ann. Rev. Psychol.*, 1971, 22, 309-336.

Department of Psychology
University of Maryland
College Park, Maryland 20742