

Research Problem Review 77-1



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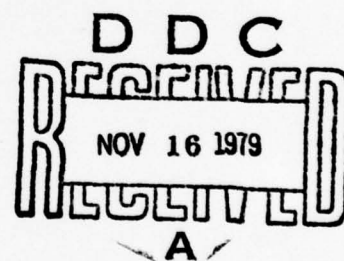
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MEASURES OF MILITARY ATTITUDES

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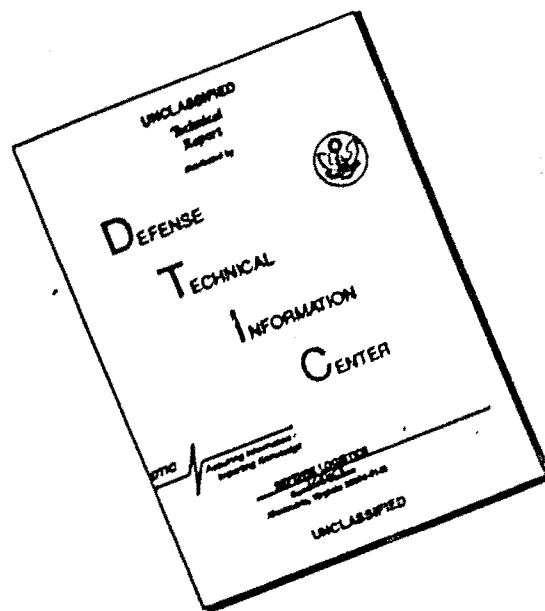
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April 1977

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in the Contemporary Army

(14)

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MEASURES OF MILITARY ATTITUDES

(10)

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INDIVIDUAL TRAINING AND SKILL EVALUATION TECHNICAL AREA

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April 1977

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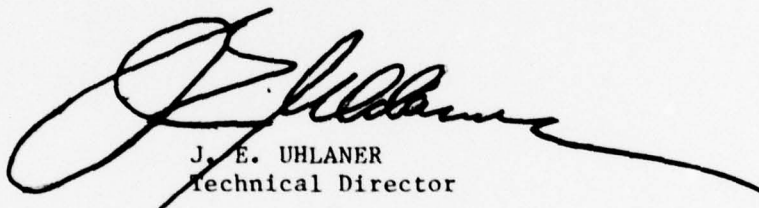
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FOREWORD

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) has long been a leader in developing reliable and valid instruments that can be used by both scientists and military staff in personnel testing. ARI is now developing diagnostic measures that can be used by commanders and Organizational Effectiveness Staff Officers to assess the attitudes and perceptions of Army enlisted personnel toward specific items on a wide array of organizational issues, in response to a request by the Chief of the Leadership and Motivation Division, Human Resources Development Directorate, Office of the Deputy Chief of Staff for Personnel (DAPE-HRL).

A preliminary set of such desired diagnostic measures was developed jointly by personnel of ARI and Bendix Applied Sciences Division, under Contract DAHC 19-73-C-0036, in the course of a project on military discipline reported in ARI Research Problem Reviews 76-4 and 76-5. The present report describes each of those preliminary measures in detail and gives response data collected (from 1,564 soldiers) during the project.

The present research effort was begun under Army Project 2Q763744A769, Army Contemporary Issues Development, FY 1976 Work Program. The research is concerned with refining, developing, and validating preliminary scales for operational use.


J. E. UHLANER
Technical Director

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MEASURES OF MILITARY ATTITUDES

BRIEF

Requirement:

To develop a series of attitude scales that could be used to measure the perceptions and attitudes of Army enlisted personnel on a broad range of organizational issues.

Approach:

A group of self-report paper-and-pencil attitude measures was developed, initially based on the perceptions of active-duty personnel. Perceptions were obtained through in-depth interviews with a broad sample of officers and enlisted men in the United States and Europe. On the basis of these interviews, a questionnaire was developed and subsequently administered to 1,564 non-commissioned officers and enlisted personnel at installations throughout the United States and Europe. Measures making up the questionnaire were developed using a series of multivariate scale construction procedures; internal consistency reliability was calculated for each measure. The present report describes each scale or index in detail.

Products:

The 13 attitude scales, consisting of 18 scales and subscales, can be grouped into three broad categories: military environment, personality, and civilian background. The scales measure soldiers' perceptions of issues such as unit performance, leadership, esprit de corps, unit conduct, racial discrimination, and satisfaction with work. Separate descriptions of each scale include purpose, derivation, construction and scoring, a tabulated distribution of scores, the internal-consistency reliability, validity where known, and a list of the individual items and percentage responses making up that scale.

Utilization:

The scales described in this report possess considerable reliability and could be used, or modified as required, to help diagnose specific problem areas, for example in Organizational Effectiveness (OE) programs. However, not all of these measures have been demonstrated as sufficiently reliable or valid for operational use in their present form. Further development and testing is required utilizing a series of administrations to a wide, geographically broad sample to gather response data, using the data given in this report as a baseline.

Tested, validated scales would be usable by commanders and OE Staff Officers to pinpoint problem areas on specific installations and to evaluate the effects of OE intervention in reducing such problems.

MEASURES OF MILITARY ATTITUDES

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MEASURES OF MILITARY ATTITUDES

A requirement exists to develop a series of attitude scales and indices for social and behavioral scientists and military staff officers to measure attitudes and perceptions of Army enlisted personnel on contemporary issues. A series of self-report paper-and-pencil attitude measures was prepared based on responses of active duty Army personnel.

GENERAL METHOD

Initial perceptions were obtained through in-depth interviews with a wide range sample of active duty officers and enlisted men in commands throughout the continental United States (CONUS) and in Europe. On the basis of these interviews, a questionnaire was developed and administered to a sample of 1,564 noncommissioned officers and enlisted personnel at installations throughout CONUS and in Europe. The measures reported were developed using a series of multivariate scale construction procedures, specifically the Guttman-Lingoes non-metric scaling procedures, including smallest space analysis.

The present report provides a description of the series of attitudinal scales and indices developed. These measures are grouped into three broad categories: military environment, personality, and civilian background. All the measures were tested using self-administered questionnaires. The scales were constructed using the Likert scale construction method based on the summative scaling model; where available, evidence of both content and concurrent validity is cited for each scale. Reliability was assessed by dichotomizing the survey sample into the "development" sample on which initial analyses were performed, and the "replication" sample on which reliability of the results from the development sample was tested. This step was necessary since many of the items were chosen to maximize reliability in the development sample.

When the final scales had been decided upon, reliability coefficients (α)* were calculated for each scale using both development and replication samples. Coefficient α is the basic formula for determining the reliability of a psychometric scale or test, based on its internal consistency. It represents the expected correlation of the scale with a perfectly reliable alternative form containing the same number of items (Nunnally, 1967, p. 197). A coefficient of .50 is considered modest but acceptable for exploratory research of this kind (Nunnally, 1967, p. 226). Scales having values above .85 are considered highly acceptable from the standpoint of reliability.

* For a description of the α coefficient, see Bohrnstedt, 1969, p. 547.

THE SAMPLE

Responses to the scales were secured from a sample of 1,564 U.S. Army enlisted men and noncommissioned officers surveyed during 1973-74. Survey respondents were selected from among Army commands in CONUS, Alaska and West Germany. Within each command, respondents were selected from military units apparently representative of the U.S. Army. Such representation was in terms of several organizational and environmental criteria, including mission, geographic location, levels and types of training exhibited by unit personnel, quality of on-post services and facilities, levels of military delinquency, presence of military dependents, reported levels of on-post and off-post racial polarization and discrimination, presence of military confinement facilities and physical climate. Data in Table 1 provides information on the social background characteristics of the sample. As previously stated, the sample was dichotomized in order to assess scale reliability.

SCALES AND INDICES

A total of 13 attitude scales consisting of 18 scales and subscales was developed. These measures can be used, as presented or modified, by personnel attempting to measure attitudes of Army personnel. Each measure, described in turn, is presented together with items comprising the measure, its theoretical development, and relevant statistics. A list of the scales and subscales follows:

Unit Discipline Scales I, II, and III

Leadership Scales I and II

Military Work Role Scale

Esprit de Corps Scale

Racial Discrimination Scales--Unit and General

Acceptance of Authority Scale

Recreational Availability Index and Recreational Interest Index

Status Concern Scale

Social Responsibility Scale

Civilian Job Relations Scale

Civilian School Relations Scale

Socioeconomic Status Index

Family Relations Scale

Table 1
SOCIAL BACKGROUND CHARACTERISTICS OF THE SAMPLE
(N = 1,564)

<u>Variable</u>	<u>%</u>	<u>Variable</u>	<u>%</u>
Age:		Marital Status:	
18 and under	12	Single	56
19-21	47	Married	40
22-25	19	Separated, divorced, widowed	4
26-30	10		
31-35	6		
36 & over	6		
Race:		Type Unit Assigned:	
White	60	Combat	47
Black	25	Support	20
Spanish-American	8	Training	11
Other	6	Correctional Facility	18
		Other	4
Education:		Entry Status:	
Non high school grad	18	Volunteer	78
High school grad	53	Draftee	13
Some college	26	Reserve/National Guard	4
College graduate	2	Missing data	5
Advanced degree	1		
		Present Rank:	
		E1	22
		E2-E3	31
		E4-E5	30
		E6 and above	17

ANALYSIS AND CONTENT OF INDIVIDUAL SCALES

UNIT DISCIPLINE SCALES

A pool of 25 items was constructed to develop a measure of military unit discipline that might serve as a diagnostic organizational development tool for assessing and managing military discipline. The items were designed to measure the respondent's perceptions of some aspect of unit behavior previously judged by other Army personnel as indicative of good or poor unit discipline. The original item pool contained statements designed to assess the extent to which the respondent perceived members of his unit as maintaining specific aspects of military discipline. The aspects included military courtesy and appearance (Department of Defense, OASD, Manpower and Reserve Affairs "Racial Discrimination: An Analysis of Serviceman opinions", Wash., D.C., April 1970, pp. 6-7; Borus, Stanton, and Firman, 1972; Stoloff et al., 1972, p. 11).

Dimensional Structures of Unit Discipline. Preliminary analysis of the original item pool in the developmental sample indicated that a single factor could not account adequately for the pattern of correlation. Furthermore, informal comparisons of the inter-item correlation matrices for breakdowns of the respondents by unit type, race, rank, prisoner status, and educational level indicated that the dimensional structure of discipline might vary from one group to another. Hence, a series of nonmetric factor analyses using the Guttman-Lingoes program SSA-III was carried out for the item set for each group separately using the data in the developmental sample. Nine items were eliminated from the pool because of low communality and/or failure to load consistently on the same factor for all groups; in particular, the two items dealing with the effect of racial discrimination on the unit were removed from the Discipline item pool and included in the Unit Racial Discrimination scales.

The results of the nonmetric factor analyses indicated that three dimensions were necessary to explain the inter-item correlation for combat and support units, while two factors were sufficient for the training units. Items assigned to each scale were reproduced below. The scales have been designated the Military Unit Performance Scale (Discipline I); the Military Unit Conduct Scale (Discipline II); and the Military Unit Appearance Scale (Discipline III). The Military Unit Performance Scale is made up of items related to how well the men in a unit carry out their duties. Items take up whether the men cooperate, work as a team, have high combat readiness, process paperwork efficiently do what needs doing, and help each other. A high score on this scale implies good unit performance. The Military Unit Appearance Scale is composed of items having to do with neatness of uniforms, cleanliness of living and working areas, and generally neat personal appearance. A high score on this scale implies good unit appearance. Items in the last scale, Military Unit Conduct, have to do mostly with behavior toward leaders, disorderly conduct, quality of work, and extent to which the men are slow to work or fail to work without direct supervision. A high score on this scale implies good unit conduct.

Despite the fact that the three Discipline scales appear to measure different dimensions of discipline, they are not independent measures. Pearson product moment correlation coefficients show all three scales to be highly interrelated. Following are the three bi-variate correlation coefficients:

	<u>r</u>
Discipline I with Discipline II	.566
Discipline I with Discipline III	.536
Discipline II with Discipline III	.465

N = 1327

p < .001

Scale Construction. The three scales all were composed of Likert-type questions with five response possibilities: very little extent, little extent, some extent, great extent, very great extent. Discipline I consisted of responses to six questions; Discipline II, three questions; and Discipline III, seven questions. All questions in the three scales are positive-worded. The scales were computed by dividing the sum of the untransformed non-missing scores by the number of non-missing scores. Respondents with more than two missing values for the questions that composed Discipline I received the missing data code for this scale. Respondents with more than one missing value on the questions that composed Discipline II and Discipline III were given the missing data code on these scales.

Following are the response distributions (in percentages) for the Discipline I, Discipline II, and Discipline III scales:

<u>Range of Scores</u>	Discipline I (Unit Performance)		Discipline II (Unit Conduct)		Discipline III (Unit Appearance)	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (poor)	46	2.9	43	2.7	28	1.8
1.50 to 1.99	79	5.1	26	1.7	69	4.4
2.00 to 2.49	178	11.4	139	8.9	165	10.5
2.50 to 2.99	312	19.9	113	7.2	237	15.2
3.00 to 3.49	387	24.7	455	29.1	424	27.1
3.50 to 3.99	254	16.2	231	14.8	260	16.6
4.00 to 4.49	190	12.1	351	22.4	228	14.6
4.50 to 5.00 (good)	108	6.9	199	12.7	145	9.3
Missing data	10	0.6	7	0.4	8	0.5

Reliability. The reliability of the Discipline scales was assessed by coefficient alpha. The coefficient alphas for the developmental and the replication samples for the three Discipline scales were as follows:

	<u>Discipline I</u>	<u>Discipline II</u>	<u>Discipline III</u>
Developmental	.814	.726	.815
Replication	.817	.704	.802

These coefficient alphas indicate moderate to strong internal consistency for Discipline I and Discipline II and high internal consistency for Discipline III.

A caveat must be entered with respect to the Unit Conduct Scale. All items in the scale are negative-worded in that response "To a very great extent" for these items carries implications of poor unit conduct. On the other hand, for all the items in the other two scales, that response implies good unit performance or appearance. This situation raises the possibility that the Unit Conduct factor is an artifact attributable to response bias and/or failure of the respondents to read or interpret the items correctly. Even though it is likely that the Unit Conduct Scale is contaminated to some extent by such artifacts, the scale was retained since it was not possible to rule out the possibility that the Unit Conduct Scale measures a valid factor distinct from the other two Unit Discipline Scales.

Items and Responses for Discipline I Scale
(Military Unit Performance)

	<u>%</u>	<u>N</u>
1. To what extent do members of your unit process paperwork in an efficient manner?		
a. To a very little extent	17.4	272
b. To a little extent	17.6	276
c. To some extent	32.2	503
d. To a great extent	22.2	347
e. To a very great extent	8.6	135
f. Missing data	2.0	31
2. To what extent do members of your unit cooperate with each other?		
a. To a very little extent	10.9	170
b. To a little extent	15.0	235
c. To some extent	36.7	574
d. To a great extent	23.5	368
e. To a very great extent	11.6	182
f. Missing data	2.2	35

	<u>%</u>	<u>N</u>
3. To what extent do members of our unit work together as a team?		
a. To a very little extent	10.7	167
b. To a little extent	14.3	223
c. To some extent	32.9	514
d. To a great extent	24.6	384
e. To a very great extent	15.5	242
f. Missing data	2.2	34
4. To what extent do members of your unit maintain a high level of combat readiness?		
a. To a very little extent	14.2	222
b. To a little extent	12.2	191
c. To some extent	29.7	465
d. To a great extent	24.1	377
e. To a very great extent	18.1	283
f. Missing data	1.7	26
5. To what extent do members of your unit do whatever needs to be done?		
a. To a very little extent	10.6	166
b. To a little extent	14.1	220
c. To some extent	33.2	519
d. To a great extent	28.1	440
e. To a very great extent	13.0	204
f. Missing data	1.0	15
6. To what extent do members of your unit help each other out?		
a. To a very little extent	8.5	133
b. To a little extent	12.7	199
c. To some extent	36.0	563
d. To a great extent	26.1	408
e. To a very great extent	13.8	216
f. Missing data	2.9	45

Items and Responses for Discipline II Scale
(Military Unit Appearance)

	<u>%</u>	<u>N</u>
1. To what extent do members of your unit maintain and properly wear their uniforms?		
a. To a very little extent	7.9	123
b. To a little extent	7.6	119
c. To some extent	31.5	493
d. To a great extent	34.9	546
e. To a very great extent	17.5	274
f. Missing data	0.6	9
2. To what extent do members of your unit keep living and working areas in clean and orderly condition?		
a. To a very little extent	8.5	133
b. To a little extent	10.7	167
c. To some extent	24.6	384
d. To a great extent	33.1	518
e. To a very great extent	22.3	348
f. Missing data	0.9	14
3. To what extent do members of your unit maintain a neat personal appearance?		
a. To a very little extent	5.3	83
b. To a little extent	9.0	140
c. To some extent	36.9	577
d. To a great extent	33.1	517
e. To a very great extent	14.9	233
f. Missing data	0.9	14

Items and Responses for Discipline III Scale
(Military Unit Conduct)

	<u>%</u>	<u>N</u>
1. To what extent do members of your unit "get over" on their supervisors?		
a. To a very little extent	17.3	270
b. To a little extent	17.8	279
c. To some extent	30.2	473
d. To a great extent	17.3	270
e. To a very great extent	15.3	239
f. Missing data	2.1	33

	<u>%</u>	<u>N</u>
2. To what extent do members of your unit fail to show up on time?		
a. To a very little extent	24.8	388
b. To a little extent	25.0	391
c. To some extent	29.4	460
d. To a great extent	12.0	187
e. To a very great extent	6.8	107
f. Missing data	2.0	31
3. To what extent do members of your unit need direct supervision to get the job done right?		
a. To a very little extent	24.0	375
b. To a little extent	25.6	401
c. To some extent	25.3	396
d. To a great extent	14.3	224
e. To a very great extent	9.6	150
f. Missing data	1.2	18
4. To what extent do members of your unit display disorderly conduct off-post?		
a. To a very little extent	29.6	420
b. To a little extent	24.6	385
c. To some extent	28.1	440
d. To a great extent	10.7	167
e. To a very great extent	8.1	127
f. Missing data	1.6	25
5. To what extent do members of your unit sit around on duty hours doing nothing?		
a. To a very little extent	20.5	320
b. To a little extent	20.1	315
c. To some extent	25.4	397
d. To a great extent	14.7	230
e. To a very great extent	17.6	275
f. Missing data	1.7	27

	<u>%</u>	<u>N</u>
6. To what extent do members of your unit do poor quality work?		
a. To a very little extent	28.1	439
b. To a little extent	26.5	414
c. To some extent	26.4	413
d. To a great extent	10.3	161
e. To a very great extent	6.8	107
f. Missing data	1.9	30
7. To what extent do members of our unit do just enough work to get by?		
a. To a very little extent	12.9	202
b. To a little extent	19.4	304
c. To some extent	31.9	499
d. To a great extent	18.4	287
e. To a very great extent	15.7	245
f. Missing data	1.7	27

LEADERSHIP SCALES

Based on an essentially behavioral approach to the concepts of leadership, the majority of items included in the original item pool was designed to measure aspects of perceived supervisory behavior. Of the 23 items in the original item pool, 15 were developed especially for this inquiry, eight were adapted from items in the Leadership Behavior Description Questionnaire developed by Stogdill and others,* and one was taken from leadership measures developed by Bowers and Seashore.**

Dimensional Structure of Leadership. Initial analysis of the Leadership item pool using the Guttman-Lingoes correlation conjoint measurement program CM-III indicated that more than one dimension was necessary to account for the data. Nonmetric factor analyses of the item set were carried out for several kinds of subject groupings, including groupings by unit type, rank, race, educational level, and prisoner status.

* Authorization to use the items was received from Professor Ralph M. Stogdill, Ohio State University.

** Authorization to use the item was received from Dr. David G. Bowers, Institute of Social Research, University of Michigan.

Smallest space analyses of the entire item pool revealed two basic dimensions underlying the respondent's perceptions of supervisory leadership. The first factor included items characterizing the supervisor as having traits commonly associated with good leadership ability. The Leadership I scale includes those items that loaded heavily on the first factor. The Leadership II scale is composed of items loading on the second factor, those associated with poor leadership.

Scale Description. Leadership I is composed of 14 positive-worded Likert-type questions while Leadership II is composed of seven negative-worded Likert-type questions. The leadership questions posed five response alternatives: to a very great extent, to a little extent, to some extent, to a great extent, and to a very great extent, coded one to five. The positive-negative distinction means that a response of "to a very great extent" for a Leadership I question indicates good leadership, while the same response for a Leadership II question indicates poor leadership.

Scale scores for each respondent were obtained by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. For Leadership I, the scale score was coded as missing data if more than six of the questions that made up the scale had missing data. For Leadership II, the scale score was coded as missing data if more than two of the questions that made up the scale had missing data.

Following are the distributions of scores for the Leadership I and Leadership II scales:

<u>Range of Scores</u>	<u>Leadership I Scale</u>		<u>Leadership II Scale</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (poor leadership)	41	2.6	14	0.9
1.50 to 1.99	142	9.1	32	2.0
2.00 to 2.49	226	14.5	121	7.7
2.50 to 2.99	294	18.8	206	13.2
3.00 to 3.49	292	18.7	423	27.0
3.50 to 3.99	259	16.6	285	18.2
4.00 to 4.49	188	12.0	310	19.8
4.50 to 5.00 (good leadership)	114	7.3	164	10.5
Missing Data	8	0.5	9	0.6

Validity. The validity of the two scales was tested by comparing the scores of elite units (e.g., volunteers with special training such as Special Forces), non-elite units, and prisoner units. For both scales, prisoner units received lower mean scores than non-elite units, and non-elite units, in turn, received lower mean scores than elite units. The directionality of these relationships supports the hypothesis that the scales are valid. However, the mean difference between elite and non-elite units on the Leadership I scale, while statistically significant, was rather small. The difference between the mean scores for elite and

non-elite units for the Leadership II scale was not statistically significant. That these differences are small does not necessarily mean that the scales are invalid. However, in the case of Leadership II, the scale might well be viewed with some suspicion. (The ultimate test for the validity of a scale, of course, is its ability to predict behavior.)

Reliability. The reliability of both scales was tested using coefficient alphas. These coefficients were found to be unusually high for the Leadership I scale (.923 for the developmental sample and .922 for the replication sample), indicating that the scale showed very high internal consistency. For Leadership II, the coefficient alphas were lower (.698 for the developmental sample and .712 for the replication sample), indicating moderately strong internal consistency.

There was some evidence that the data from training units were less reliable or dimensionally more complex than for other units, but in all cases it was clear that two dimensions labeled Leadership I and Leadership II, which were reasonably stable across subject categories, would explain most of the variation. Leadership II appears to be the less reliable dimension. For some categories of subjects, some of the items included in Leadership II had higher loadings on other dimensions. However, the partitioning of the items, as given in the appended list of questions, seemed to give the best overall fit.

The Leadership II dimension may be an artifact of response bias because some subjects may tend to respond with a check mark in the same column regardless of the direction of the item. Other times, a subject may have misread the item, or may have biases leading to inappropriate responses to negative items. That the scale is nothing but response bias, however, is yet to be demonstrated.

Items and Responses to Leadership I Scale

	<u>%</u>	<u>N</u>
1. To what extent is your supervisor concerned about the personal problems of his subordinates?		
a. To a very little extent	19.2	301
b. To a little extent	14.3	224
c. To some extent	32.7	511
d. To a great extent	21.1	330
e. To a very great extent	12.1	190
f. Missing data	0.5	8

	<u>%</u>	<u>N</u>
2. To what extent is your supervisor technically competent to perform his duties?		
a. To a very little extent	5.8	91
b. To a little extent	9.9	155
c. To some extent	27.4	428
d. To a great extent	33.2	519
e. To a very great extent	23.0	360
f. Missing data	0.7	11
3. To what extent does your supervisor keep his subordinates informed?		
a. To a very little extent	10.4	163
b. To a little extent	14.6	229
c. To some extent	30.8	481
d. To a great extent	27.2	426
e. To a very great extent	14.6	229
f. Missing data	2.3	36
4. To what extent does your supervisor plan ahead?		
a. To a very little extent	11.6	182
b. To a little extent	15.0	234
c. To some extent	31.3	490
d. To a great extent	26.2	409
e. To a very great extent	12.9	201
f. Missing data	3.1	48
5. To what extent does your supervisor keep himself informed about the work that is being done by his subordinates?		
a. To a very little extent	10.3	161
b. To a little extent	13.4	210
c. To some extent	27.9	437
d. To a great extent	27.1	424
e. To a very great extent	20.3	318
f. Missing data	0.9	14

	<u>%</u>	<u>N</u>
6. To what extent does your supervisor communicate effectively with his subordinates?		
a. To a very little extent	15.3	240
b. To a little extent	24.4	382
c. To some extent	27.4	428
d. To a great extent	16.4	256
e. To a very great extent	15.0	234
f. Missing data	1.5	24
7. To what extent does your supervisor anticipate and solve problems before they get out of hand?		
a. To a very little extent	19.6	307
b. To a little extent	17.5	274
c. To some extent	26.3	411
d. To a great extent	20.8	325
e. To a very great extent	14.3	224
f. Missing data	1.5	23
8. To what extent is your supervisor willing to make changes in ways of doing things?		
a. To a very little extent	24.9	390
b. To a little extent	17.3	270
c. To some extent	26.9	421
d. To a great extent	16.0	251
e. To a very great extent	13.4	209
f. Missing data	1.5	23
9. To what extent does your supervisor encourage subordinates to work together as a team?		
a. To a very little extent	10.5	165
b. To a little extent	11.1	173
c. To some extent	22.4	350
d. To a great extent	23.1	361
e. To a very great extent	31.4	491
f. Missing data	1.5	24
10. To what extent does your supervisor keep himself informed about the progress his subordinates are making in their work?		
a. To a very little extent	11.2	175
b. To a little extent	14.4	225
c. To some extent	29.0	454
d. To a great extent	26.3	411
e. To a very great extent	17.6	276
f. Missing data	1.5	23

	<u>%</u>	<u>N</u>
11. To what extent does your supervisor work right along with his men?		
a. To a very little extent	30.6	478
b. To a little extent	12.7	199
c. To some extent	22.1	346
d. To a great extent	18.2	285
e. To a very great extent	15.6	244
f. Missing data	0.8	12
12. To what extent does your supervisor offer new ideas for solving job-related problems?		
a. To a very little extent	19.8	310
b. To a little extent	20.8	325
c. To some extent	31.8	497
d. To a great extent	16.3	255
e. To a very great extent	10.3	161
f. Missing data	1.0	16
13. To what extent does your supervisor know and treat his subordinates as individuals?		
a. To a very little extent	18.4	288
b. To a little extent	15.3	239
c. To some extent	24.8	388
d. To a great extent	21.5	336
e. To a very great extent	17.8	279
f. Missing data	2.2	34
14. To what extent does your supervisor make decisions quickly and stick to them?		
a. To a very little extent	13.6	213
b. To a little extent	14.5	227
c. To some extent	27.2	425
d. To a great extent	25.0	391
e. To a very great extent	18.0	282
f. Missing data	1.7	26

Items and Responses to Leadership II Scale

	<u>%</u>	<u>N</u>
1. To what extent does your supervisor lack sufficient experience to perform his duties?		
a. To a very little extent	34.5	540
b. To a little extent	23.5	367
c. To some extent	23.9	374
d. To a great extent	10.7	167
e. To a very great extent	5.9	92
f. Missing data	1.5	24
2. To what extent does your supervisor fail to provide for the everyday needs of his subordinates?		
a. To a very little extent	29.6	463
b. To a little extent	26.0	407
c. To some extent	26.2	409
d. To a great extent	11.2	175
e. To a very great extent	5.8	91
f. Missing data	1.2	19
3. To what extent does your supervisor fail to keep his subordinates busy with challenging tasks?		
a. To a very little extent	30.2	472
b. To a little extent	21.3	333
c. To some extent	22.6	354
d. To a great extent	13.4	210
e. To a very great extent	10.4	163
f. Missing data	2.0	32
4. To what extent is your supervisor unwilling to accept responsibility for mistakes made by his subordinates?		
a. To a very little extent	31.5	492
b. To a little extent	20.3	337
c. To some extent	24.7	386
d. To a great extent	11.7	183
e. To a very great extent	10.5	165
f. Missing data	1.3	21

Items and Responses to Leadership II Scale

	<u>%</u>	<u>N</u>
5. To what extent does your supervisor depend too much on threats - rather than rewards - to get things done?		
a. To a very little extent	30.2	472
b. To a little extent	15.8	274
c. To some extent	18.5	290
d. To a great extent	14.3	223
e. To a very great extent	20.3	318
f. Missing data	0.9	14
6. To what extent is your supervisor not aware of his subordinates' capabilities?		
a. To a very little extent	26.2	410
b. To a little extent	19.9	312
c. To some extent	23.4	366
d. To a great extent	16.8	262
e. To a very great extent	11.6	182
f. Missing data	2.0	32
7. To what extent does your supervisor fail to explain why a particular action is important?		
a. To a very little extent	27.9	437
b. To a little extent	22.4	351
c. To some extent	23.7	370
d. To a great extent	13.5	211
e. To a very great extent	10.0	156
f. Missing data	2.5	39

MILITARY WORK ROLE SCALE

This scale is intended to measure the respondent's orientation toward work in the Army. It contains questions about his feelings toward (1) unit policies, (2) working conditions, (3) co-workers; (4) the relevance and the quality of training received, (5) the unit mission, (6) the importance of daily jobs assigned, (7) the types and relevance of MOS assignments (Military Occupational Specialties), (8) sense of accomplishment from daily activities, (9) expressed interest in the work assigned, (10) satisfaction with an Army career, and (11) intention of pursuing an Army career. A pool of 15 Likert-type items was developed. Two items were eliminated during preliminary item analyses due to lack of communality with the other items as evidenced by low inter-item correlation values.

Dimensionality of Military Work Role. Upon inspecting inter-item correlation matrices for the item pool, the unidimensionality of the item set was determined sufficiently evident to make factor analysis unnecessary.

Scale Construction. The scale was constructed by combining the responses to 13 Likert-type items, 12 of which contained five response alternatives which formed an ordinal scale in terms of frequency, importance, satisfactions, and the like. The remaining question was composed of four response alternatives.

The total scale score for each respondent was computed by dividing the sum of the untransformed non-missing data items scores by the number of non-missing data items scores. If a case had more than six missing data scores, the scale score was not computed and the case was coded as missing data.

The following distribution of scores for the Military Work Role Scale was obtained:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (low satisfaction with work role)	140	9.0
1.50 to 1.99	168	10.7
2.00 to 2.49	220	14.1
2.50 to 2.99	258	16.5
3.00 to 3.49	296	18.9
3.50 to 3.99	202	12.9
4.00 to 4.49	199	12.7
4.50 to 5.99 (high satisfaction with work role)	74	4.7
Missing data	7	0.4

Reliability. Reliability as estimated by coefficient alpha was .908 for the developmental sample and .900 for the replication sample. These coefficients indicate that the internal consistency of the scale is exceptionally high.

Items and Responses to Military Work Role Scale

	<u>%</u>	<u>N</u>
1. To what extent do you enjoy performing the actual day-to-day activities that make up your job?		
a. To a very little extent	27.6	432
b. To a little extent	9.4	147
c. To some extent	26.9	420
d. To a great extent	19.6	307
e. To a very great extent	15.6	244
f. Missing data	0.9	14

	<u>%</u>	<u>N</u>
2. To what extent are there things about working here (people, policies, conditions) that encourage you to work hard?		
a. To a very little extent	33.0	516
b. To a little extent	15.0	234
c. To some extent	23.8	373
d. To a great extent	17.4	272
e. To a very great extent	9.5	148
f. Missing data	1.3	21
3. To what extent do you gain a sense of accomplishment from the day-to-day activities that make up your job?		
a. To a very little extent	30.4	476
b. To a little extent	12.1	189
c. To some extent	24.4	382
d. To a great extent	19.6	306
e. To a very great extent	12.4	194
f. Missing data	1.1	17
4. To what extent do you feel the training you have received has improved your ability to perform your job?		
a. To a very little extent	22.3	349
b. To a little extent	11.1	174
c. To some extent	20.7	324
d. To a great extent	20.7	324
e. To a very great extent	24.6	385
f. Missing data	0.5	8
5. To what extent do you feel that the people you work with are a team that works together?		
a. To a very little extent	20.5	320
b. To a little extent	13.5	211
c. To some extent	25.4	398
d. To a great extent	20.9	327
e. To a very great extent	18.4	288
f. Missing data	1.3	20

	<u>%</u>	<u>N</u>
6. To what extent does your MOS (Military Occupational Specialty) match your interests, knowledge, and skills?		
a. To a very little extent	31.8	497
b. To a little extent	9.5	148
c. To some extent	19.4	304
d. To a great extent	18.0	282
e. To a very great extent	20.1	314
f. Missing data	1.2	19
7. In your opinion, how important is the mission assigned to this command?		
a. Not important at all	13.9	218
b. Somewhat important	13.8	216
c. Fairly important	14.8	231
d. Moderately important	16.4	257
e. Very important	40.0	625
f. Missing data	1.1	17
8. How important is the job you are doing in the Army?		
a. Not important at all	15.0	234
b. Somewhat important	13.2	206
c. Fairly important	12.7	199
d. Moderately important	17.8	278
e. Very important	40.5	634
f. Missing data	0.8	13
9. How interested are you in the job you are doing in the Army?		
a. Very uninterested	22.1	346
b. Somewhat uninterested	9.2	144
c. Neither interested or uninterested	11.6	181
d. Fairly interested	23.9	374
e. Very interested	32.4	507
f. Missing data	0.8	12
10. How often are you assigned meaningless tasks?		
a. Daily	36.0	563
b. Once or twice a week	22.0	344
c. Once or twice a month	7.9	123
d. Seldom	24.4	381
e. Never	9.0	140
f. Missing data	0.8	13

	<u>%</u>	<u>N</u>
11. All in all, how satisfied are you with your job?		
a. Very dissatisfied	25.0	391
b. Somewhat dissatisfied	13.4	209
c. Neither satisfied or dissatisfied	13.4	209
d. Fairly satisfied	27.6	432
e. Very satisfied	19.9	312
f. Missing data	0.7	11
12. Which of the following statements best describes your feelings about a career in the Army?		
a. I have not considered how satisfying a military career would be.	23.3	365
b. It is one of the least satisfying careers		
c. I can think of, everything considered.	35.3	552
d. It is one of several careers which I could find almost equally satisfying.	26.9	420
e. It is the only career that could really satisfy me.	12.1	190
f. Missing data	2.4	37
13. Do you think you will pursue a career in the Army?		
a. No, definitely not	34.6	541
b. No, probably not	14.1	220
c. I am still undecided	21.2	332
d. Yes, probably	11.5	180
e. Yes, definitely	17.2	269
f. Missing data	1.4	22

ESPRIT DE CORPS SCALE

There are a variety of definitions of esprit de corps, but the basic idea underlying the concept is a sense of commitment to others in one's military unit. This commitment may be shown in several ways, including the ways in which the soldier perceives others in his unit. The Esprit de Corps Scale was designed to measure the soldier's attitude toward others in his unit in terms of their professional competence, cooperativeness, trustworthiness, and general likeability. The original item pool consisted of seven Likert-type items, three of which were previously used in a measure of "group esprit and solidarity" and reported to lie on the same dimension (Spector, Clark, and Glickman, 1960, p. 309). The remaining items were developed for this inquiry. Two of the original pool items were deleted because of their low inter-correlation scores.

Dimensional Structure of Esprit de Corps. The item pool for esprit de corps was judged to be too small (five items) to justify a factor analysis. Comparisons of the inter-item correlation matrices for the subjects in the developmental sample stratified by unit type, race, rank, educational level, and prisoner status turned up no significant variations, other than the effects on reliability as a function of educational level and prisoner status. As a result of these findings, the Esprit de Corps Scale built from these items was constructed to be a unidimensional scale applicable to all types of units and all other subject groupings.

Scale Construction. The scale was constructed by combining the responses to five Likert-type questions, each of which contained six response possibilities: strongly, moderately, or mildly agree; and mildly, moderately, or strongly disagree. High esprit is indicated by positive scores for three of the questions and by negative scores for two of the questions.

The scale score was computed by dividing the sum of the numeric response codes (from 1 to 6) for an individual by the number of questions answered by that individual. A respondent with missing data for two or more of the five questions received the missing data code for the scale. The following distribution of scores was obtained:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (poor esprit de corps)	20	1.3
1.50 to 1.99	23	1.5
2.00 to 2.49	70	4.5
2.50 to 2.99	73	4.7
3.00 to 3.49	232	14.8
3.50 to 3.99	175	11.2
4.00 to 4.49	315	20.1
4.50 to 4.99	190	12.1
5.00 to 5.49	236	15.1
5.50 to 5.99 (good esprit de corps)	204	13.0
Missing data	26	1.7

Validity. Validity was tested by comparing the scores of elite units (e.g., volunteers with special combat training such as Special Forces), non-elite units, and prisoner units. Esprit de corps was higher for elite units than for non-elite units and higher for both than for prisoner units. The differences between the scores were interpreted as supporting the hypothesis that the scale is valid.

Reliability. Reliability was measured by coefficient alpha. For the developmental and replication samples, the coefficient alphas were .766 and .731, respectively. Given the modest number of questions (five) included in the scale, the coefficient alphas indicate moderate to strong internal consistency. It should be noted again that the first three questions are positive-coded while the last two questions are negative-coded.

Items and Responses to Esprit de Corps Scale

	%	N
1. Men in my unit know how to get the job done right.		
a. Strongly agree	23.9	374
b. Moderately agree	24.4	381
c. Agree mildly	27.6	431
d. Disagree mildly	9.4	147
e. Moderately disagree	6.2	97
f. Strongly disagree	6.7	105
g. Missing data	1.9	29
2. If a man needs help in my unit, he can count on others to provide it.		
a. Strongly agree	17.6	276
b. Moderately agree	16.6	260
c. Agree mildly	27.2	426
d. Disagree mildly	13.6	212
e. Moderately disagree	7.5	117
f. Strongly disagree	15.5	242
g. Missing data	2.0	31
3. Members of my unit are a good bunch to work with.		
a. Strongly agree	24.8	388
b. Moderately agree	22.6	354
c. Agree mildly	27.7	434
d. Disagree mildly	9.1	143
e. Moderately disagree	5.2	81
f. Strongly disagree	8.1	127
g. Missing data	2.4	37
4. I don't care very much for the guys I work with.		
a. Strongly agree	6.9	108
b. Moderately agree	6.3	99
c. Agree mildly	13.0	204
d. Disagree mildly	15.4	241
e. Moderately disagree	20.5	320
f. Strongly disagree	34.8	545
g. Missing data	3.0	47
5. I don't trust the others in my unit.		
a. Strongly agree	10.5	164
b. Moderately agree	6.9	108
c. Agree mildly	17.6	275
d. Disagree mildly	16.7	261
e. Moderately disagree	16.3	255
f. Strongly disagree	26.3	411
g. Missing data	5.8	90

RACIAL DISCRIMINATION SCALES

The racial discrimination items in the questionnaire were designed to measure the respondent's perception of the levels of racial discrimination - within the respondent's military and off-post civilian environments, as well as in society in general. Items to measure the respondent's perception of discrimination were selected from scale items originally used to measure perceived racial discrimination among Marine and Navy personnel (Stoloff et al., 1972, Appendix C). Four items designed to measure perceptions of off-post racial discrimination and discrimination against soldiers in general were also developed for inclusion in the questionnaire.

Correlation matrices for the items dealing with racial discrimination were inspected for different subject groupings split by type of unit, rank, prisoner status, educational level, and race. When categorized by race, subjects who were neither black nor white were placed in an "other" category. Gross differences were observed between the correlation matrix for blacks and that for whites. The correlation matrix for "others" tended to resemble that of the blacks. Nonmetric factor analyses were carried out for each racial group; the results of these analyses were inspected in an attempt to determine a set of one or more scales applicable to all races. Five of the original 16 items were eliminated using this process. The remaining 11 items were partitioned into a Unit Racial Discrimination Scale and a General Racial Discrimination Scale. The items in the Unit Racial Discrimination Scale deal with discrimination specifically within the respondent's unit. On the other hand, the General Racial Discrimination Scale items deal with discrimination in the Army or society as a whole, and in the local off-post civilian environment. A high score on either discrimination scale implies a high degree of perceived discrimination.

It was obvious from the factor loadings that not all the respondents would agree with partitioning of items. However, it seemed the best compromise available under the circumstances. Given the somewhat confused situation, one should hesitate before assuming that apparently corresponding dimensions measure the same underlying construct for all races.

Scale Construction. The unit discrimination scale was constructed by combining four Likert-type questions. Two of the component questions were scored from one to six; the other two were scored from one to five. For all four questions, higher scores were assigned to responses that indicated higher levels of perceived racial discrimination and prejudice. The scale score for each respondent was calculated by first transforming the item scores to standard scores, then dividing by the sum of the non-missing data scores. Respondents with missing values for more than one of four component questions were assigned the missing data code for the unit discrimination scale. Following is the distribution of scale scores:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
-1.50 to -1.01 (low discrimination)	10	0.6
-1.00 to -0.49	412	26.3
-0.50 to -0.01	382	24.4
0 to 0.49	362	23.1
0.50 to 0.99	232	14.8
1.00 to 1.49	120	7.7
1.50 to 1.99 (high discrimination)	17	1.1
Missing data	29	1.9

The general discrimination scale was constructed by combining seven Likert-type questions. All seven items were scored from one to six: strongly, moderately, or mildly agree; and mildly, moderately, or strongly disagree. For all six questions, higher scores indicate higher levels of perceived racial discrimination in the Army and in the immediate off-post community. The scale was computed by dividing the sum of the numeric response codes (from 1 to 6) by the number of respondents who answered the component questions. If a respondent had missing data for more than two of the component items, the respondent received the missing data code for the general discrimination scale. Following is the distribution of scale scores for this scale:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (low discrimination)	123	7.9
1.50 to 1.99	110	7.0
2.00 to 2.49	186	11.9
2.50 to 2.99	183	11.7
3.00 to 3.49	262	16.8
3.50 to 3.99	194	12.4
4.00 to 4.49	201	12.9
4.50 to 4.99	99	6.3
5.00 to 5.49	89	5.7
5.50 to 6.00 (high discrimination)	74	4.7
Missing data	43	2.7

Reliability. The reliability of the scales was evaluated by coefficient alpha. For both scales, it was clear that while the alphas were sufficiently high to justify their use in the exploratory research in which they were developed, the scores were not high enough to provide convincing evidence of their suitability as a diagnostic instrument in the Army milieu. Coefficient alphas were compared within the three major racial groupings of respondents (Table 2). The unit discrimination scale was most reliable among blacks, with whites second, and others third. The general racial discrimination scale also showed variation in reliability among the three racial groupings, but with no consistent pattern.

Table 2

COEFFICIENT APLHAS FOR UNIT AND GENERAL RACIAL DISCRIMINATION SCALES
BY RACE FOR DEVELOPMENTAL AND REPLICATION SAMPLES

	<u>Unit Racial Discrimination Scale</u>		<u>General Racial Discrimination Scale</u>	
	Developmental Sample	Replication Sample	Developmental Sample	Replication Sample
Black	.650	.642	.730	.633
White	.574	.634	.684	.701
Other	.507	.542	.795	.585

Items and Responses to Unit Racial Discrimination Scale

	<u>%</u>	<u>N</u>
1. Whites in my unit have a good reason to distrust non-whites.		
a. Strongly agree	40.5	633
b. Moderately agree	11.0	172
c. Agree mildly	11.8	184
d. Disagree mildly	12.1	189
e. Moderately disagree	6.1	95
f. Strongly disagree	14.4	225
g. Missing data	4.2	66
2. To what extent do members of your unit let racial conflicts interfere with their work?		
a. To a very little extent	36.3	568
b. To a little extent	22.3	349
c. To some extent	19.9	311
d. To a great extent	9.4	147
e. To a very great extent	10.1	158
f. Missing data	2.0	31

	<u>%</u>	<u>N</u>
3. To what extent do members of your unit display racial prejudice?		
a. To a very little extent	32.7	512
b. To a little extent	21.3	333
c. To some extent	22.7	355
d. To a great extent	10.5	164
e. To a very great extent	11.3	177
f. Missing data	1.5	23
4. Non-whites in my unit have good reason to distrust whites.		
a. Strongly agree	10.7	167
b. Moderately agree	6.1	95
c. Agree mildly	9.5	149
d. Disagree mildly	14.3	224
e. Moderately disagree	13.5	211
f. Strongly disagree	40.0	639
g. Missing data	5.1	79

Items and Responses to General Racial Discrimination Scale

	<u>%</u>	<u>N</u>
1. The Army should make a greater effort to assist non-whites to qualify for enlistment and technical ratings.		
a. Strongly agree	23.0	359
b. Moderately agree	13.2	206
c. Agree mildly	19.4	304
d. Disagree mildly	13.7	215
e. Moderately disagree	6.7	105
f. Strongly disagree	18.5	290
g. Missing data	5.4	85
2. Members of minority groups have a harder time in the Army than others.		
a. Strongly agree	19.0	297
b. Moderately agree	9.4	147
c. Agree mildly	16.6	260
d. Disagree mildly	14.8	231
e. Moderately disagree	12.0	187
f. Strongly disagree	24.7	387
g. Missing data	3.5	55

	<u>X</u>	<u>N</u>
3. White soldiers are punished less severely than non-whites for the same offenses.		
a. Strongly agree	17.4	272
b. Moderately agree	5.4	85
c. Agree mildly	7.5	118
d. Disagree mildly	9.8	153
e. Moderately disagree	8.5	133
f. Strongly disagree	46.9	734
g. Missing data	4.4	69
4. The Army should recognize that it is not always fair to apply test standards to minority groups that have been developed for whites.		
a. Strongly agree	20.5	321
b. Moderately agree	13.2	207
c. Agree mildly	17.6	275
d. Disagree mildly	13.0	204
e. Moderately disagree	7.2	113
f. Strongly disagree	21.2	331
g. Missing data	7.2	113
5. Commanding officers should be more responsive to the needs of minority group members.		
a. Strongly agree	23.1	362
b. Moderately agree	10.0	156
c. Agree mildly	19.4	304
d. Disagree mildly	15.4	241
e. Moderately disagree	9.8	153
f. Strongly disagree	17.8	278
g. Missing data	4.5	70
6. There is so much discrimination against minority soldiers by local civilians, minority soldiers don't want to leave the post.		
a. Strongly agree	10.5	164
b. Moderately agree	8.9	139
c. Agree mildly	14.5	227
d. Disagree mildly	12.6	197
e. Moderately disagree	14.5	226
f. Strongly disagree	34.5	540
g. Missing data	4.5	71

	<u>%</u>	<u>N</u>
7. Local landlords discriminate against non-whites		
a. Strongly agree	12.9	201
b. Moderately agree	8.2	129
c. Agree mildly	16.0	251
d. Disagree mildly	13.9	218
e. Moderately disagree	12.2	191
f. Strongly disagree	21.4	334
g. Missing data	15.3	240

ACCEPTANCE OF AUTHORITY SCALE

This scale was designed to measure the extent to which the respondent holds a submissive, uncritical attitude toward idealized, moral authority in the Army, as well as in society in general. The scale consists of six Likert-type items selected and, where necessary, adapted from items contained in the original California F scale as well as in subsequent variations. All items in the final scale were based on items reported by Berkowitz and Wolkon in their effort to develop an authoritarianism dimensionality (Berkowitz and Wolkon, 1964; see also Robinson and Shaver, 1969, pp. 245-253). Three of the final questions (3,5,6) were especially attractive because they were found by Bales and Couch, in a factor analysis of basic value items, to fall on a single "acceptance of authority" dimension. (Bales and Couch, 1969; see also Robinson and Shaver, 1969, pp. 444-448).

Scale Construction. All questions were positive-scored except for question 2. Response scores ranged from one to six, the higher scores being assigned to responses indicating greater acceptance of authority. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than two missing data scores, the respondent's scale score was not computed and the case was coded as missing data. Following is the response distribution for the Acceptance of Authority Scale:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (low acceptance)	51	3.3
1.50 to 1.99	82	5.2
2.00 to 2.49	109	7.0
2.50 to 2.99	173	11.1
3.00 to 3.49	206	13.2
3.50 to 3.99	252	16.1
4.00 to 4.49	240	15.3
4.50 to 4.99	181	11.6
5.00 to 5.49	153	9.8
5.50 to 6.00 (high acceptance)	92	5.9
Missing data	25	1.6

Reliability. The scale yielded coefficient alphas of .764 in the developmental sample and .727 in the replication sample, suggesting a moderately high level of internal consistency.

Items and Responses to Acceptance of Authority Scale

	<u>%</u>	<u>N</u>
1. Because of the rebellious ideas of youth, there are more problems in the world.		
a. Strongly agree	16.6	259
b. Moderately agree	11.3	177
c. Agree mildly	15.9	248
d. Disagree mildly	11.8	184
e. Moderately disagree	11.1	174
f. Strongly disagree	31.0	485
g. Missing data	2.4	37
2. In the long run, it is better for our country if young people are allowed a great deal of personal freedom and aren't strictly disciplined.		
a. Strongly agree	23.9	374
b. Moderately agree	12.2	191
c. Agree mildly	17.7	277
d. Disagree mildly	13.6	213
e. Moderately disagree	11.1	174
f. Strongly disagree	18.8	294
g. Missing data	2.6	41
3. What youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.		
a. Strongly agree	22.6	354
b. Moderately agree	12.8	200
c. Agree mildly	18.4	288
d. Disagree mildly	13.6	213
e. Moderately disagree	9.8	154
f. Strongly disagree	20.2	316
g. Missing data	2.5	39
4. Strict Army discipline has a good influence on most young men.		
a. Strongly agree	19.9	312
b. Moderately agree	12.3	193
c. Agree mildly	18.2	284
d. Disagree mildly	13.9	217
e. Moderately disagree	8.6	135
f. Strongly disagree	25.3	396
g. Missing data	1.7	27

	<u>%</u>	<u>N</u>
5. Obedience and respect for authority are the most important virtues children should learn.		
a. Strongly agree	34.5	540
b. Moderately agree	19.8	310
c. Agree mildly	18.8	294
d. Disagree mildly	10.0	157
e. Moderately disagree	5.2	82
f. Strongly disagree	8.9	139
g. Missing data	2.7	42
6. Young people sometimes get rebellious ideas, but as they grow up, they ought to get over them and settle down.		
a. Strongly agree	22.1	345
b. Moderately agree	19.6	307
c. Agree mildly	23.3	364
d. Disagree mildly	12.8	200
e. Moderately disagree	7.9	124
f. Strongly disagree	10.7	168
g. Missing data	3.6	56

RECREATIONAL AVAILABILITY AND INTEREST INDICES

These measures were designed to indicate the levels of availability and interest in recreational facilities on or near the respondent's post. The indices are each composed of 12 questions about various types of recreational activity. Each question has two parts: the first part inquires about the availability of these facilities, the second part about the respondent's interest in using them.

Index Construction. The respondent was provided with five closed-response choices (to a very little extent, if any; to a little extent; to some extent; to a great extent; to a very great extent) coded from one to five. The respondent's total scores for the two indices were obtained by calculating the mean of the untransformed non-missing responses for each set of questions. If any case had more than ten missing data scores, the total scale score was not computed and the case was coded as missing data. Following are the response distributions for the two indices:

<u>Range of Scores</u>	<u>Availability</u>		<u>Interest</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (low)	25	1.6	7	0.4
1.50 to 1.99	63	4.0	45	2.9
2.00 to 2.49	212	13.6	120	7.7
2.50 to 2.99	367	23.5	246	15.7
3.00 to 3.49	405	25.9	420	26.9
3.50 to 3.99	259	16.6	383	24.5
4.00 to 4.49	151	9.7	227	14.5
4.50 to 5.00 (high)	66	4.2	107	6.8
Missing data	16	1.0	9	0.6

Reliability. The scale yielded coefficient alphas of .898 in the developmental sample and .890 in the replication sample.

Items and Responses to Recreational Availability Index

	<u>%</u>	<u>N</u>
1. To what extent are quality movies <u>available</u> to you?		
a. To a very little extent, if any	11.1	174
b. To a little extent	14.8	232
c. To some extent	31.4	491
d. To a great extent	24.4	382
e. To a very great extent	16.0	251
f. Missing data	2.2	34
2. To what extent are quality snack facilities <u>available</u> to you?		
a. To a very little extent, if any	11.1	173
b. To a little extent	15.3	239
c. To some extent	29.5	462
d. To a great extent	26.5	415
e. To a very great extent	16.1	252
f. Missing data	1.5	23
3. To what extent are quality outdoor athletic facilities <u>available</u> to you?		
a. To a very little extent, if any	14.6	229
b. To a little extent	16.0	250
c. To some extent	29.9	467
d. To a great extent	21.5	337
e. To a very great extent	15.7	245
f. Missing data	2.3	36

	<u>%</u>	<u>N</u>
4. To what extent are quality indoor athletic facilities <u>available</u> to you?		
a. To a very little extent, if any	9.7	151
b. To a little extent	13.0	203
c. To some extent	27.7	433
d. To a great extent	26.5	415
e. To a very great extent	21.3	333
f. Missing data	1.9	29
5. To what extent are quality hobby shops <u>available</u> to you?		
a. To a very little extent, if any	13.6	212
b. To a little extent	17.2	269
c. To some extent	32.7	511
d. To a great extent	21.4	334
e. To a very great extent	12.7	199
f. Missing data	2.5	39
6. To what extent are quality library facilities <u>available</u> to you?		
a. To a very little extent, if any	8.1	126
b. To a little extent	10.5	164
c. To some extent	29.2	457
d. To a great extent	28.6	447
e. To a very great extent	21.3	333
f. Missing data	2.4	37
7. To what extent are Army-sponsored educational programs <u>available</u> to you?		
a. To a very little extent, if any	10.0	156
b. To a little extent	11.0	172
c. To some extent	26.9	421
d. To a great extent	26.2	409
e. To a very great extent	23.7	371
f. Missing data	2.2	35
8. To what extent are quality sightseeing tours <u>available</u> to you?		
a. To a very little extent, if any	24.1	377
b. To a little extent	20.3	317
c. To some extent	25.6	401
d. To a great extent	15.2	238
e. To a very great extent	11.6	181
f. Missing data	3.2	50

	<u>%</u>	<u>N</u>
9. To what extent are quality service clubs <u>available</u> to you?		
a. To a very little extent, if any	10.9	171
b. To a little extent	11.8	185
c. To some extent	27.0	422
d. To a great extent	27.3	427
e. To a very great extent	21.1	330
f. Missing data	1.9	29
10. To what extent is quality television programming <u>available</u> to you?		
a. To a very little extent, if any	23.5	367
b. To a little extent	15.6	244
c. To some extent	23.9	374
d. To a great extent	18.9	296
e. To a very great extent	16.8	263
f. Missing data	1.3	20
11. To what extent are quality special entertainment events <u>available</u> to you?		
a. To a very little extent, if any	23.0	360
b. To a little extent	22.8	356
c. To some extent	29.8	466
d. To a great extent	13.4	210
e. To a very great extent	8.5	133
f. Missing data	2.5	39
12. To what extent are there nearby places <u>available</u> to you where you can meet persons of the opposite sex?		
a. To a very little extent, if any	23.2	363
b. To a little extent	18.9	296
c. To some extent	24.0	375
d. To a great extent	15.3	240
e. To a very great extent	15.9	249
f. Missing data	2.6	41

Items and Responses to Recreational Interest Index

	<u>%</u>	<u>N</u>
1. To what extent are you <u>interested</u> in attending movies?		
a. To a very little extent, if any	11.4	179
b. To a little extent	12.1	190
c. To some extent	33.6	525
d. To a great extent	19.0	297
e. To a very great extent	23.0	359
f. Missing data	0.9	14
2. To what extent are you <u>interested</u> in using snacking facilities?		
a. To a very little extent, if any	11.2	174
b. To a little extent	12.2	191
c. To some extent	31.6	494
d. To a great extent	25.7	402
e. To a very great extent	18.4	287
f. Missing data	1.0	16
3. To what extent are you <u>interested</u> in using outdoor athletic facilities?		
a. To a very little extent, if any	13.9	217
b. To a little extent	13.2	207
c. To some extent	24.9	389
d. To a great extent	22.6	354
e. To a very great extent	24.4	381
f. Missing data	1.0	16
4. To what extent are you <u>interested</u> in using indoor athletic facilities?		
a. To a very little extent, if any	11.1	174
b. To a little extent	10.9	170
c. To some extent	24.3	380
d. To a great extent	25.1	392
e. To a very great extent	27.7	434
f. Missing data	0.9	14
5. To what extent are you <u>interested</u> in using hobby shops?		
a. To a very little extent, if any	18.0	282
b. To a little extent	16.9	265
c. To some extent	29.3	458
d. To a great extent	17.1	268
e. To a very great extent	17.6	276
f. Missing data	1.0	15

	<u>X</u>	<u>N</u>
6. To what extent are you <u>interested</u> in using library facilities?		
a. To a very little extent, if any	12.9	201
b. To a little extent	16.0	251
c. To some extent	31.2	488
d. To a great extent	21.5	336
e. To a very great extent	17.7	277
f. Missing data	0.7	11
7. To what extent are you <u>interested</u> in using Army sponsored educational programs?		
a. To a very little extent, if any	9.6	150
b. To a little extent	8.8	137
c. To some extent	20.7	324
d. To a great extent	26.2	409
e. To a very great extent	34.0	531
f. Missing data	0.8	13
8. To what extent are you <u>interested</u> in going on sight-seeing tours?		
a. To a very little extent, if any	19.2	301
b. To a little extent	14.8	227
c. To some extent	23.7	371
d. To a great extent	17.1	267
e. To a very great extent	24.2	379
f. Missing data	0.9	14
9. To what extent are you <u>interested</u> in going to service clubs?		
a. To a very little extent, if any	21.8	341
b. To a little extent	16.2	254
c. To some extent	28.8	451
d. To a great extent	16.2	251
e. To a very great extent	16.1	250
f. Missing data	0.9	14
10. To what extent are you <u>interested</u> in watching television programs?		
a. To a very little extent, if any	8.5	133
b. To a little extent	7.5	117
c. To some extent	23.9	374
d. To a great extent	26.7	417
e. To a very great extent	32.7	511
f. Missing data	0.8	12

BEST AVAILABLE COPY

	<u>%</u>	<u>N</u>
11. To what extent are you <u>interested</u> in attending special entertainment events?		
a. To a very little extent, if any	10.4	163
b. To a little extent	8.7	136
c. To some extent	24.4	381
d. To a great extent	24.5	383
e. To a very great extent	30.9	484
f. Missing data	1.1	17
12. To what extent are you <u>interested</u> in going to places where you can meet persons of the opposite sex?		
a. To a very little extent, if any	10.2	159
b. To a little extent	5.0	78
c. To some extent	12.2	191
d. To a great extent	15.9	248
e. To a very great extent	55.4	867
f. Missing data	1.3	21

STATUS CONCERN SCALE

The Status Concern Scale attempts to measure the value the respondent places on the achievement of higher status and the maintenance of a conforming image within the Army, as well as in society in general. It was reported by the Army personnel interviewed for the project that a soldier's level of discipline varies with his concern with status and desire for promotion and achievement. The original item pool consisted of seven Likert-type items, six of which were adapted or taken from the Kaufman status concern scale (Kaufman, 1957; Robinson and Shaver, 1969, pp. 301-303). Two of the items were deleted due to low inter-item correlation.

Scale Construction. There are no reverse-scored items. Responses were scored from one to six with the larger scores indicating higher status concern. The overall scale score for each respondent was computed by dividing the sum of the non-missing data scores by the number of non-missing data items. If any case had more than two missing data items, the case was scored as missing data. Following is the distribution of scale scores:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (low concern)	45	2.9
1.50 to 1.99	35	2.2
2.00 to 2.49	142	9.1
2.50 to 2.99	106	6.8
3.00 to 3.49	296	18.9
3.50 to 3.99	260	16.6
4.00 to 4.49	339	21.7
4.50 to 4.99	144	9.2
5.00 to 5.49	124	7.9
5.50 to 6.00 (high concern)	46	2.9
Missing data	27	1.7

Reliability. The measure met the minimum criteria for being considered unidimensional. Coefficient alphas derived for the measure were .566 for the developmental sample and .598 for the replication sample.

Selected Items and Responses to Status Concern Scale

	<u>%</u>	<u>N</u>
1. One of the things you should consider in choosing your friends in the Army is whether they may help your chances for promotion.		
a. Strongly agree	9.0	140
b. Moderately agree	4.9	76
c. Agree mildly	12.7	199
d. Disagree mildly	13.2	206
e. Moderately disagree	9.7	151
f. Strongly disagree	49.4	772
g. Missing data	1.3	20
2. One should avoid doing things in public which appear wrong to others, even though one knows that these things are right.		
a. Strongly agree	14.5	226
b. Moderately agree	10.4	163
c. Agree mildly	15.5	243
d. Disagree mildly	14.1	221
e. Moderately disagree	10.5	165
f. Strongly disagree	32.7	512
g. Missing data	2.2	34

	<u>%</u>	<u>N</u>
3. It is worth considerable effort to assure one's self of a good name with the right kind of people.		
a. Strongly agree	27.9	437
b. Moderately agree	18.7	293
c. Agree mildly	24.2	378
d. Disagree mildly	9.2	144
e. Moderately disagree	5.0	78
f. Strongly disagree	11.4	178
g. Missing data	3.6	56
4. The raising of one's social position is one of the more important goals in life.		
a. Strongly agree	19.8	309
b. Moderately agree	17.1	267
c. Agree mildly	23.4	366
d. Disagree mildly	14.1	221
e. Moderately disagree	8.1	127
f. Strongly disagree	13.6	212
g. Missing data	4.0	62

SOCIAL RESPONSIBILITY SCALE

This scale attempts to measure the level of value the respondent places on elements of social responsibility - an orientation toward helping others and doing a good job, even when there is nothing to be gained from others for having done so. The four questions included in the original item pool were drawn from a social responsibility scale reported by Berkowitz and Lutterman (1968; see also Robinson and Shaver, 1969, pp. 383-385), and originally drawn from a social responsibility scale derived by Harris (1957). The items were given in Likert scale format with six response options ranging from "Strongly Agree" to "Strongly Disagree." One question was deleted from the scale because of its low intercorrelations with the other items. The higher scores indicate greater apparent social responsibility.

Scale Construction. Response scores ranged from one to six, the higher scores being assigned to the agreement responses. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than one missing data score, the respondent's scale score was not computed and the case was coded as missing data. Following is the response distribution for the Social Responsibility Scale:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (low social responsibility)	16	1.0
1.50 to 1.99	5	0.3
2.00 to 2.49	36	2.3
2.50 to 2.99	31	2.0
3.00 to 3.49	92	5.9
3.50 to 3.99	79	5.1
4.00 to 4.49	232	14.8
4.50 to 4.99	154	9.8
5.00 to 5.49	365	23.3
5.50 to 6.00 (high social responsibility)	542	34.7
Missing data	12	0.8

Reliability. The internal consistency of the scale is moderate but acceptable, given the small number of items in the scale. Coefficient alphas derived from the developmental and replication samples were .615 and .558, respectively.

Items and Responses to the Social Responsibility Scale

	<u>%</u>	<u>N</u>
1. Every person should give some of his time for the good of his town or country.		
a. Strongly agree	40.3	631
b. Moderately agree	18.5	290
c. Agree mildly	22.1	346
d. Disagree mildly	6.5	102
e. Moderately disagree	3.3	51
f. Strongly disagree	6.8	106
g. Missing data	2.4	38
2. It is the duty of each person to do his job the very best he can.		
a. Strongly agree	59.5	931
b. Moderately agree	14.8	231
c. Agree mildly	13.9	217
d. Disagree mildly	4.3	68
e. Moderately disagree	2.7	42
f. Strongly disagree	3.6	56
g. Missing data	1.2	19
3. I feel very bad when I have failed to finish a job I promised I would do.		
a. Strongly agree	45.3	708
b. Moderately agree	18.8	294
c. Agree mildly	15.9	249
d. Disagree mildly	7.2	113
e. Moderately disagree	3.9	61
f. Strongly disagree	7.1	111
g. Missing data	1.8	28

CIVILIAN JOB RELATIONS SCALE

This scale is designed to measure the extent to which the respondent has had positive experiences in the civilian work environment as evidenced by ease of adjustment to routine job requirements and enjoyment of good relations with one's fellow workers. The scale is composed of six items, five of which (Questions 2-6) were adapted from items that loaded on a "work success" factor in a factor analysis of civilian background characteristics of Army personnel confinement facility inmates (Littlepage and Fox, 1972, p. 57). The sixth item (Question 1) was constructed specifically for this scale. A seventh item, taken verbatim from the previously mentioned "work success" item list, was deleted from the final scale because of its low intercorrelations with the other items.

Scale Construction. The item responses were scored from one to four, the higher scores being assigned to responses indicating a favorable adjustment to work situations and positive relations in the work environment. Total scale scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If any case had more than two missing data scores, the total scale score was not computed and the case was coded as missing data. Following is the response distribution for the Job Relations Scale:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.50 to 1.99 (poor relations)	12	0.8
2.00 to 2.49	115	7.4
2.50 to 2.99	217	13.9
3.00 to 3.49	308	19.7
3.50 to 4.00 (good relations)	734	46.9
Missing data	144	9.2

Reliability. The scale yielded alpha coefficients of .842 for the development sample and .852 for the replication sample, suggesting a high level of internal consistency.

	<u>%</u>	<u>N</u>
1. Holding a steady job was difficult for me.		
a. Very untrue	8.4	132
b. Fairly untrue	12.8	200
c. Fairly true	15.5	242
d. Very true	52.0	814
e. Missing data	11.3	176
2. Jobs I held were boring.		
a. Very untrue	25.6	400
b. Fairly untrue	26.3	411
c. Fairly true	25.1	393
d. Very true	14.5	227
e. Missing data	8.5	133
3. I frequently lost jobs because I arrived late at work.		
a. Very untrue	5.9	92
b. Fairly untrue	5.7	89
c. Fairly true	10.0	157
d. Very true	67.4	1,054
e. Missing data	11.0	172
4. I would usually take a job and quit after a few days or weeks.		
a. Very untrue	65.3	1,021
b. Fairly untrue	11.8	184
c. Fairly true	7.5	118
d. Very true	5.1	79
e. Missing data	10.4	162
5. I had difficulty getting along with people I worked with.		
a. Very untrue	59.7	933
b. Fairly untrue	22.3	349
c. Fairly true	7.2	113
d. Very true	4.5	71
e. Missing data	6.3	98
6. I changed from job to job often.		
a. Very untrue	49.2	769
b. Fairly untrue	17.4	272
c. Fairly true	15.0	235
d. Very true	8.0	125
e. Missing data	10.4	163

CIVILIAN SCHOOL RELATIONS SCALE

This scale is designed to measure the perceived quality of relations the respondent had within the school environment while growing up. The scale consists of five questions drawn from a unidimensional "School Problems" measure used in a survey of Army Personnel Control Facility inmates by Littlepage and Fox (1972). The wording of question 4 was changed slightly from the Littlepage-Fox version.

Scale Construction. The question response scores ranged from one to four, the higher scores being assigned to the responses suggesting harmonious relations in the school environment. Scoring for the negative-worded questions was reversed, of course. A respondent's total scale score was computed by dividing the sum of untransformed non-missing data scores by the number of untransformed non-missing data scores. If a case yielded more than two missing scores, a total score was not computed, and the case was scored as missing data. Following is the response distribution for the School Relations Scale:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
1.00 to 1.49 (poor relations)	72	4.6
1.50 to 1.99	117	7.5
2.00 to 2.49	399	25.5
2.50 to 2.99	309	19.8
3.00 to 3.49	403	25.8
3.50 to 4.00 (good relations)	236	15.1
Missing data	28	1.8

Reliability. Alpha coefficients computed for the scale using the developmental and replication sample were .723 and .699, respectively, suggesting moderate internal consistency.

Items and Responses to the Civilian School Relations Scale

	<u>%</u>	<u>N</u>
1. I did not like school.		
a. Very untrue	25.9	405
b. Fairly untrue	21.7	340
c. Fairly true	28.1	440
d. Very true	20.5	321
e. Missing data	3.7	58
2. I had difficulty with school work.		
a. Very untrue	29.1	455
b. Fairly untrue	26.6	416
c. Fairly true	27.7	434
d. Very true	13.7	215
e. Missing data	2.8	44

	<u>%</u>	<u>N</u>
3. My parents (or guardians) were not happy with the grades I received in school.		
a. Very untrue	22.7	355
b. Fairly untrue	23.2	363
c. Fairly true	31.8	497
d. Very true	19.0	297
e. Missing data	3.3	52
4. I enjoyed school.		
a. Very untrue	16.9	265
b. Fairly untrue	17.0	266
c. Fairly true	33.1	517
d. Very true	29.5	462
e. Missing data	3.5	54
5. My teachers did not care for me.		
a. Very untrue	38.0	595
b. Fairly untrue	32.7	511
c. Fairly true	17.6	275
d. Very true	5.9	93
e. Missing data	5.8	90

SOCIOECONOMIC STATUS INDEX

This index is designed to measure the respondent's parental socioeconomic status while the respondent was growing up. It is based on parental educational achievement, books and possessions in the home, and size of the home. The measure is intended to be more than a composite measure of educational achievement and material wealth, however. These factors are assumed as "determinants of whether a home is a rich environment for learning, an environment in which education and achievement are likely to be encouraged, (and that) . . . some of these same factors reflect parental abilities and aptitudes (e.g., intelligence), and are thus likely to be related to the genetic (and cultural) endowment of children" (Bachman, 1970, p. 10). Thus, the index is intended to provide a summary measure of the quality of the home environment within which the respondent grew up.

The measure is derived from the socioeconomic level index developed for use in the Youth in Transition study of American high school students (Bachman, 1970, pp. 10-14). The measure contains the following elements:

1. Father's educational achievement level
2. Mother's educational achievement level
3. Possessions in the home
4. Number of books in the home
5. Number of rooms in the home

Whereas the Youth in Transition study SES measures contained indicators of paternal occupational status and ratio of rooms per person in the home (rather than simply the number of rooms), these elements were not included in the SES measure described here for two reasons. Father's occupational status was not included because of the large amount of missing data for this variable (more than 20%). The room-per-person ratio was not used because it was found that the number of rooms alone correlated higher with other variables in the SES measure.

Index Construction. Non-missing data scores for individual items were standardized, summed, and divided by their total number, to gain a mean SES score for each respondent. The higher the score, the higher the parental socioeconomic status. If any case yielded more than two missing data scores, the SES score was not computed and the case was coded as missing data on the SES variable. Following is the response distribution for the SES Index:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
-2.00 to -1.51 (low status)	23	1.5
-1.50 to -1.01	115	7.4
-1.00 to -0.51	220	14.1
-0.50 to -0.01	363	23.2
0.00 to 0.49	380	24.3
0.50 to 0.99	212	13.6
1.00 to 1.49	107	6.8
1.50 to 1.99	29	1.9
2.00 to 2.49 (high status)	2	0.1
Missing data	113	7.2

Reliability. The level of intercorrelations between the various items suggests reasonable reliability. The index demonstrates moderate levels of internal consistency in both the developmental (coefficient alpha = .756) and replication sample (coefficient alpha = .766). It was also found that respondent age is negatively and mildly related to the respondent SES scores ($r = -.301$). This suggests that differences in SES scores between age groups may be, in part, the spurious product of the effects of generational differences (e.g., a lack of television sets in most homes prior to 1952, and/or lower educational expectations and fewer opportunities in earlier years). However, the measure displays sufficient reliability to warrant its use in this exploratory research effort.

Items and Responses to Socioeconomic Index

	<u>%</u>	<u>N</u>
1. How much schooling have your father and mother had? (Check one for each parent.)		
<u>Father</u>		
a. Completed grade school or less	23.7	370
b. Some high school	23.4	366
c. Completed high school or GED	24.6	385
d. Some college	9.7	151
e. Completed college	7.7	121
f. Some graduate school	2.9	45
g. Missing data	8.1	126
<u>Mother</u>		
a. Completed grade school or less	16.8	262
b. Some high school	26.6	416
c. Completed high school or GED	33.3	521
d. Some college	9.1	142
e. Completed college	6.4	100
f. Some graduate school	2.3	36
g. Missing data	5.6	87
2. Which of the following was present in your parents' home when you were growing up? (Check as many as apply.)		
a. A radio	1.2	18
b. A telephone	0.4	7
c. A television	0.8	13
d. A bicycle	0.7	11
e. A phonograph	1.0	16
f. A bible	2.4	38
g. A dictionary	1.9	29
h. An encyclopedia set	2.6	40
i. 30 or more other books	3.2	50
j. A family car	4.6	72
k. A camera	3.2	50
l. A typewriter	4.9	76
m. A dog or cat	5.8	90
n. A fish in a tank	7.5	118
o. A newspaper delivered daily	7.9	123
p. A magazine subscription	9.9	155
q. A pair of binoculars	11.4	179
r. More than 19 phonograph records	11.3	176
s. A map or globe of the world	11.9	186
t. Missing data	7.5	117

	<u>%</u>	<u>N</u>
3. How many books were in your parents house while you were growing up?		
a. None or very few (0-10 books)	9.3	146
b. A few books (11-25)	21.2	332
c. One bookcase full (26-100)	34.2	535
d. Two bookcases full (101-250)	14.6	229
e. Three or four bookcases full (251-500)	9.6	150
f. A room full - a library (501 or more)	3.6	56
g. Missing data	7.4	116
4. How many rooms (including bathrooms) were in your parents home while you were growing up?		
a. 4 rooms or less	12.8	200
b. 5 rooms	12.7	199
c. 6 rooms	17.6	276
d. 7 rooms	15.9	248
e. 8 rooms	13.5	211
f. 9 rooms	9.6	150
g. 10 rooms or more	10.0	157
h. I did not live in a home with my parents	0.4	7
i. Missing data	7.4	116

FAMILY RELATIONS SCALE

This scale is designed to measure the respondent's subjective perceptions of the quality of family relations that prevailed at home while the respondent was growing up. The scale incorporates several facets of family relations, including family cohesiveness (closeness), parental punitiveness, and level of family responsibilities assigned to the respondent.

The scale is composed of 24 Likert-type items having a variety of closed-response categories. Nine of these are negative-worded items (Questions 7 to 15) designed to measure levels of perceived parental punitiveness. These items were taken from the parental punitiveness measure reported by Bachman (1970, p. 21) and used as a part of a family relations measure in the Youth in Transition study of sophomore high school boys in the United States. One item was deleted because of its low intercorrelation with other parental punitiveness items. Questions 1 to 6 were taken from the Youth in Transition study Bachman, 1970, pp. 19-20) and incorporated with Questions 16 to 21 as measures of family cohesiveness. Questions 16-21 were used previously to measure perceptions of family cohesiveness among U.S. Army Personnel Control Facility inmates (Littlepage and Fox, 1972). Questions 22, 23 and 24 were obtained from the same source (Littlepage and Fox, 1972) and used to measure a lack of responsibilities at home.

Preliminary analyses suggest the scale may yield multiple dimensions, but the direction and levels of the intercorrelation coefficients exhibited by the items indicate sufficient unidimensionality to warrant using the items in a single measure of family relations. It should be noted that the parental punitiveness and family cohesiveness items taken from the Youth in Transition study were used as a single measure in that report.

Scale Construction. The items were scored so that responses indicating greater family cohesiveness, lack of parental punitiveness, and greater family responsibilities were given the higher scores. All responses were then transformed to standard (Z) scores. Total scale scores for each respondent were computed by dividing the sum of the transformed non-missing data scores by the number of transformed non-missing data scores. If any case had more than ten missing data scores, the total scale score was not computed and the case was coded as missing data. Following is the response distribution for the Family Relations Scale:

<u>Range of Scores</u>	<u>N</u>	<u>%</u>
-2.50 to -2.01 (poor relations)	4	0.3
-2.00 to -1.51	16	1.0
-1.50 to -1.01	74	4.7
-1.00 to -0.51	187	12.0
-0.50 to 0.01	414	26.5
0 to 0.49	558	35.7
0.50 to 0.99	290	18.5
1.00 to 1.50 (good relations)	6	0.4
Missing data	15	1.0

Reliability. The scale yielded coefficient alphas of .898 for the developmental sample and .890 for the replication sample.

Items and Responses to Family Relations Scale

	<u>%</u>	<u>N</u>
1. When you were growing up, how did you feel about how much affection you got from your father (or male guardian)?		
a. Wanted and got enough affection	48.2	754
b. Wanted slightly more than I received	13.7	214
c. Wanted more than I received	20.0	313
d. Missing data	18.1	283
2. When you were growing up, how did you feel about how much affection you got from your mother (or female guardian)?		
a. Wanted and got enough affection	71.9	1,124
b. Wanted slightly more than I received	10.2	160
c. Wanted more than I received	10.2	159
d. Missing data	7.7	121

	<u>%</u>	<u>N</u>
3. When you were growing up, how close did you feel to your father (or male guardian)?		
a. Extremely close	30.4	475
b. Quite close	20.5	320
c. Fairly close	21.5	336
d. Not very close	24.4	381
e. Missing data	3.3	52
4. How close did you feel to your mother (or female guardian) at that time?		
a. Extremely close	49.7	778
b. Quite close	25.6	400
c. Fairly close	16.4	256
d. Not very close	7.0	110
e. Missing data	1.3	20
5. When you were growing up, how much did you want to be the kind of person your father (or male guardian) is when you became an adult?		
a. Very much	28.8	450
b. Somewhat	21.9	342
c. A little	15.4	241
d. Not very much	11.8	185
e. Not at all	19.4	303
f. Missing data	2.7	43
6. How much did you want to be like the kind of person your mother (or female guardian) is?		
a. Very much	20.0	313
b. Somewhat	25.8	403
c. A little	19.2	300
d. Not very much	12.0	188
e. Not at all	20.8	326
f. Missing data	2.2	34
7. How often did your parents (or guardians) act as if they didn't care about you anymore while you were growing up?		
a. Always	2.0	31
b. Often	3.9	61
c. Sometimes	12.3	193
d. Seldom	18.1	283
e. Never	61.5	962
f. Missing data	2.2	34

	<u>%</u>	<u>N</u>
8. How often did your parents (or guardians) disagree with each other about how to raise you while you were growing up?		
a. Always	3.8	59
b. Often	8.5	133
c. Sometimes	19.2	300
d. Seldom	26.0	407
e. Never	39.7	621
f. Missing data	2.8	44
9. How often did your parents (or guardians) actually slap you while you were growing up?		
a. Always	5.4	85
b. Often	15.1	236
c. Sometimes	34.8	544
d. Seldom	20.4	319
e. Never	21.6	338
f. Missing data	2.7	42
10. How often did your parents (or guardians) take away your privileges (TV, dates car, movies, etc.) while you were growing up?		
a. Always	4.9	76
b. Often	12.9	202
c. Sometimes	36.6	572
d. Seldom	24.3	380
e. Never	18.9	295
f. Missing data	2.5	39
11. How often did your parents (or guardians) blame you or criticize you when you didn't deserve it while you were growing up?		
a. Always	3.7	58
b. Often	8.1	126
c. Sometimes	21.6	338
d. Seldom	33.1	517
e. Never	31.8	497
f. Missing data	1.8	28

	<u>%</u>	<u>N</u>
12. How often did your parents (or guardians) threaten to slap you while you were growing up?		
a. Always	6.6	104
b. Often	14.2	222
c. Sometimes	29.5	461
d. Seldom	23.5	367
e. Never	24.2	378
f. Missing data	2.0	32
13. How often did your parents (or guardians) yell, shout, or scream at you while you were growing up?		
a. Always	10.5	164
b. Often	18.3	286
c. Sometimes	35.4	553
d. Seldom	23.1	362
e. Never	10.7	167
f. Missing data	2.0	32
14. How often did your parents (or guardians) disagree on punishment while you were growing up?		
a. Always	3.4	53
b. Often	7.6	119
c. Sometimes	24.0	376
d. Seldom	27.6	431
e. Never	34.6	541
f. Missing data	2.8	44
15. How often did your parents (or guardians) nag at you while you were growing up?		
a. Always	9.0	141
b. Often	14.3	224
c. Sometimes	26.5	415
d. Seldom	23.0	360
e. Never	23.7	371
f. Missing data	3.4	53
16. My family was happy together.		
a. Very untrue	8.2	129
b. Fairly untrue	7.5	118
c. Fairly true	25.6	401
d. Very true	53.9	843
e. Missing data	4.7	73

	<u>%</u>	<u>N</u>
17. My family did things together.		
a. Very untrue	9.5	149
b. Fairly untrue	12.8	200
c. Fairly true	33.1	518
d. Very true	40.9	639
e. Missing data	3.7	58
18. My parents were concerned about my welfare.		
a. Very untrue	4.9	76
b. Fairly untrue	5.6	88
c. Fairly true	17.3	270
d. Very true	68.3	1,068
e. Missing data	4.0	62
19. I felt I could talk to my father (or male guardian).		
a. Very untrue	16.5	258
b. Fairly untrue	12.2	191
c. Fairly true	26.3	411
d. Very true	37.5	586
e. Missing data	7.5	118
20. I felt I could talk to my mother (or female guardian).		
a. Very untrue	8.1	126
b. Fairly untrue	8.0	125
c. Fairly true	25.6	401
d. Very true	54.7	856
e. Missing data	3.6	56
21. My parents (or legal guardians) were happy together.		
a. Very untrue	11.2	175
b. Fairly untrue	9.1	143
c. Fairly true	22.3	348
d. Very true	50.0	782
e. Missing data	7.4	116
22. My parents depended on me.		
a. Very untrue	30.9	483
b. Fairly untrue	16.8	263
c. Fairly true	25.2	394
d. Very true	18.9	295
e. Missing data	8.2	129

	<u>%</u>	<u>N</u>
23. I had to take care of my brothers and sisters.		
a. Very untrue	42.4	663
b. Fairly untrue	16.8	263
c. Fairly true	19.6	307
d. Very true	11.8	185
e. Missing data	9.3	146
24. I often had to help my family.		
a. Very untrue	26.9	420
b. Fairly untrue	18.4	288
c. Fairly true	26.7	417
d. Very true	22.5	352
e. Missing data	5.6	87

SUMMARY

↘
 The present publication describes a series of attitude scales and indices tapping such issues as perceptions that enlisted personnel have of their leaders and their unit's performance, their esprit de corps, and their satisfaction with Army jobs. The scales and indices were constructed and carried to their present level of development under an earlier research project. The scales and indices will be refined and validated under a requirement for reliable and valid instruments, which can be used by both scientists and staff officers, to assess attitudes and predispositions of Army personnel on a broad range of organizational issues.
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APPENDIX A

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