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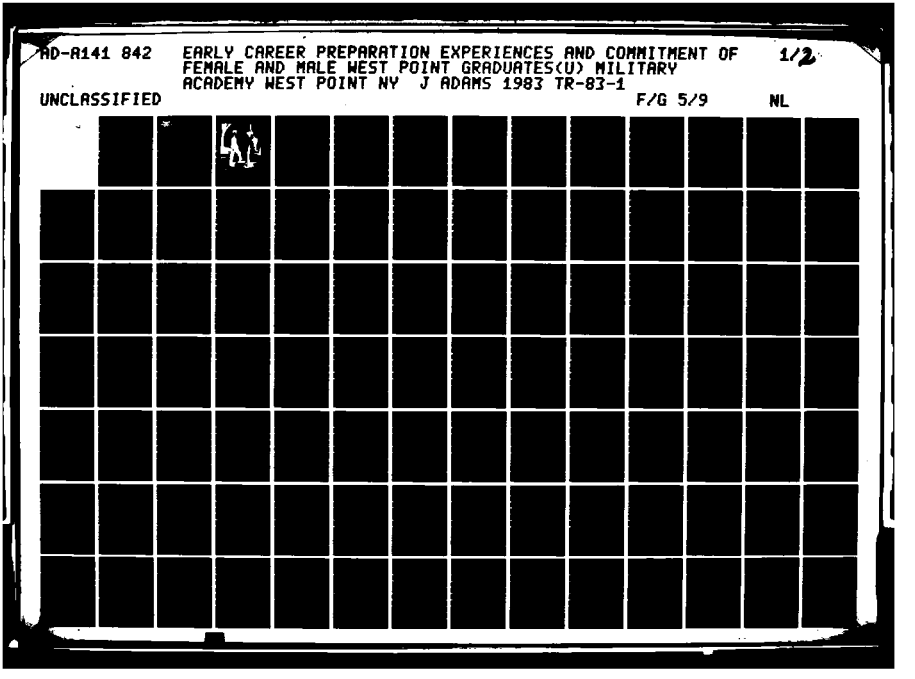

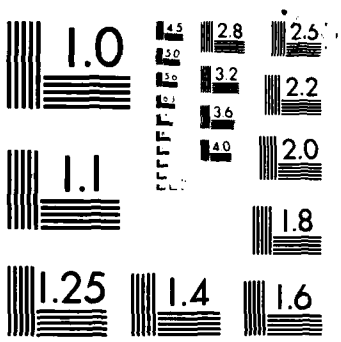

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Early Career Preparation, Experiences, and Commitment of Female and Male West Point Graduates

1983

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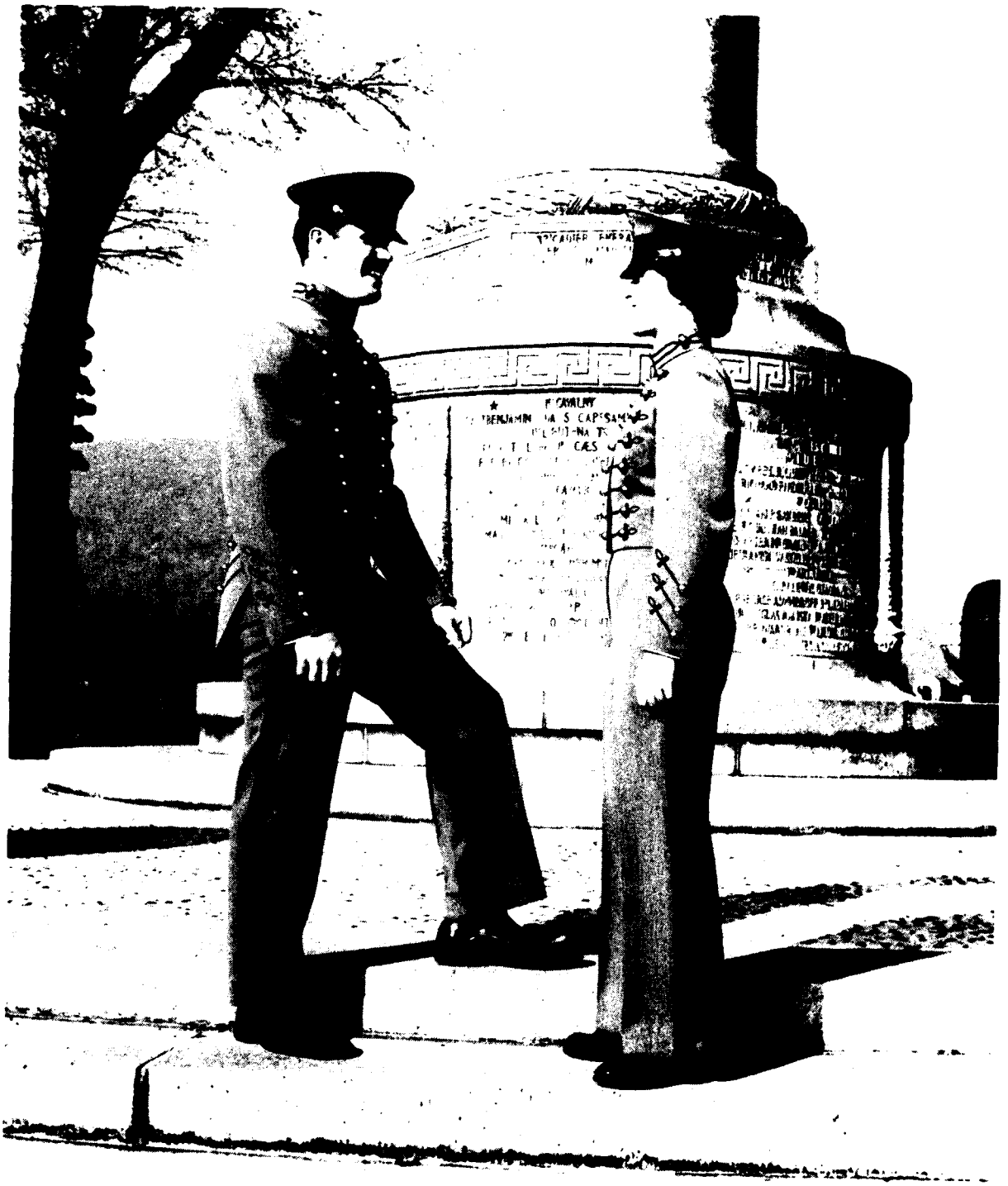

Early Career Preparation, Experiences, and

Commitment of Female and Male

West Point Graduates

DESCRIPTIVE ANALYSIS OF THE POSTGRADUATION QUESTIONNAIRE FOR THE CLASS OF 1980

Technical Report 83-1

JEROME ADAMS

The research reported here was supported by grant 13 ARI 81-37 from the Army Research Institute for Social and Behavioral Sciences (Jerome Adams Principal Investigator).

We thank the staff of the Office of Institutional Research U. S. Military Academy for their assistance in coding the data from optical scan answer sheets. Also, we acknowledge the assistance of Francine Hall for some questionnaire input and Jan Yoder for some data analysis.

TECHNICAL REPORT 1

DESCRIPTIVE ANALYSIS OF THE POSTGRADUATION QUESTIONNAIRE FOR THE CLASS OF 1980

Abstract

This report is the first in a series analyzing the information collected from 150 graduates of the U. S. Military Academy in the Class of 1980. This survey involved their post-graduate lives in the regular Army. The purposes of this first report are: (1) to give the details of response coding for this survey, (2) to format the data for later analyses, and (3) to provide general descriptive statistics. The psychometric properties of the various sections of this questionnaire are outlined, and directions for future substantive analyses are suggested.

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NOTE: Any conclusions in this report are not to be construed as official U. S. Military Academy or Department of the Army positions unless so designated by authorized documents.

TECHNICAL REPORT 1

DESCRIPTIVE ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE

FOR THE CLASS OF 1980

The purposes of the present technical report are three-fold:

1) to verify response coding;

2) to format the data for later analyses;

3) to furnish a general pattern of responses.

The last goal will serve as a basis from which to familiarize researchers and Academy policymakers with the initial findings. The actual questionnaire may be referred to in Appendix A. Before we discuss these purposes, let us briefly examine the questionnaire and the method of data collection.

Method

The Questionnaire

A superficial review of the questionnaire in Appendix A shows that it is divided into nine sections which assess:

1) leader and unit effectiveness,

2) types of influence strategies used by leaders (scale),

3) characteristics of the respondents' present duty assignment, (scale),

4) job satisfaction (scale),

5) satisfaction with social and personal life (scale),

6) strategies for career planning,

7) degree of career involvement,

8) overall commitment and adjustment, including commitment of spouse (where applicable),

9) demographic information.

Each of the four scales comprises a series of interrelated items and hence will be factor analyzed at a later time in order to understand their underlying test structure. No preliminary findings will be discussed for these four scales in the present report.

Data Collection

All participants in the study were graduates in the Class of 1980, the first coeducational class at West Point. The sampling plan oversampled women in that all female graduates were contacted. A stratified sampling technique was used to select men so that the men would be representative of West Point graduates on two variables: military branch speciality and geographic location. In this way, the sample of men reflected the same proportions on branch speciality (e.g., infantry, engineering, military police, etc.) and location (e.g., continental United States, Europe, Hawaii, etc.) as the entire population of graduates. For example, if 60% of male graduates went overseas, the sample was selected so that 60% of the male respondents were from overseas assignments. The sample size was determined by the number of graduating women. Three men were selected for each female respondent. All female graduates of the Class of 1980 were selected.

Data Analyses

Verification of Coding

The verification of the coding for the survey concentrated first on the raw data themselves, then on the actual coding or labelling of these data. Regarding the former, perusal of the raw data revealed some reversed answer sheets for several subjects and some unusual formating patterns. A check of these cases verified reversals and they were corrected. Three cases were eliminated because their responses could not be verified thereby reducing the original set of 157 cases to 154.

The original coding of the data followed a simple pattern--the first (top) choice for each item was coded zero; the second, one; and so on. Missing scores were read as blanks. Each item was individually examined and recoded to conform to the basic rules of Likert scaling--responses ranged from 1 to the uppermost score with the latter representing the positive end of the scale. Blanks were recoded to the missing value of 9, and "don't know" and "not applicable" were given the missing value code of 8. Following these general rules, the first item of the questionnaire (effectiveness in present duties) were recoded so that response A = 3; B = 2; C = 1; D = 8; Blanks = 9. To verify these recodings, the frequency distributions of both the raw scores and transformed scores were cross-checked.

Half the items in the scale of job satisfaction were reserve coded (questions 58, 59, 61, 63, 65, 66, 69, 71, 73). In this way, a high score on any item indicates high job satisfaction. Finally, item 124 checked the class year of all respondents. Since this is a survey of only the Class of 1980, four officers marking another year were removed from further analyses. The final set of usable data comprises 150 cases.

Preparation for Further Analyses

Prior research using the items assessing leader and unit effectiveness found that a composite of each of these measures was best formed by converting each item to its z-score ($\bar{X} = 0$; sd = 1), then summing the items (Adams, Rice, Instone, & Prince, 1980). This was done with the reduced set of 150 viable cases and with the item means generated without the missing data.

The internal consistency (coefficient alpha) was calculated for all multi-item measures. The reliabilities and factor analyses of the four scales (leader influence, duty, job satisfaction, and social/personal satisfaction) will be described in another report. Data reduction of these scales will be

necessary for further analyses. The reliabilities of the remaining three measures (unit performance = .53; career planning = .81; career involvement = .87) are useful in creating composites of these measures for later analyses.

Since the internal consistency of the six items assessing unit performance is weak, these items will be treated singularly. In contrast, the high internal consistently of the six items of career involvement justifies the summation of these items to produce an unit-weighted composite.

Although the reliability of the eight-item measure of strategies of career planning is high, it seems to measure two different sources for career planning: self-made plans and advice from superior officers. Guided by this apparent face validity, further descriptive statistics were calculated separating these two sources (odd-numbered items measure self-made plans; even-numbered items assess advice). This division of career planning into ten scales seems relatively valid and reliable (self-made = .69; advice = .85).

Preliminary Findings

Respondents' characteristics. Let us first review the basic background information concerning respondents. Thirty-five women (56%) and 113 men responded to the survey (two cases did not fill in their sex). All graduated in the Class of 1980, and the majority were married (men: 50% married; 42% single / women: 66% married; 27% single). Most are childless (men: 67%; women: 78%). Most of the men (72%) are stationed at Forces Command, with the next largest group (19%) at the U.S. Army Europe. The reverse is true for the women as 50% are in Europe and 35% are at Forces Command. The duty assignment of the men clusters in Combat Arms (64%), with 26% in Combat Support and only 10% in Combat Service Support. In contrast, women cluster in Combat Support (50%), with the remainder almost equally divided between Combat Service

Support (26%) and Combat Arms (24%).

Career planning. Most officers (52%) restrict their career planning to the first five years. A significant proportion (37%) plan up to 13 years in advance, while a few (11%) are long-range planners, considering the next twenty years and beyond. Of course, their obligation to the Army for five years and/or retirement in twenty years makes these logical decision points. Regarding five-year planning, most (53%) intended to remain in the Army beyond their five-year obligation, while only 29% of the women report these intentions (see Table 1). Within these, 15% of the men and 6% of the women plan to stay until retirement. Forty percent of the women probably or definitely will leave the Army upon completing their obligation, while only 19% of the men feel this way. Directly comparing the two sexes, women ($\bar{X}$ = 2.74) intend to stay in the Army significantly less than men ($\bar{X}$ = 3.48 $t(145) = 3.63$, p. 01)

Overall, all officers relied on self-initiated planning ($\bar{X}$=3.34) to a greater degree than on advice and help from superior officers ($\bar{X}$ = 2.54, $t(1,45) = 15.42$, $p < .001$). Almost all officers (97%) try to assess their own strengths, weaknesses and interests (see table 2). Most gather information about career opportunities (86 %), set personal goals (91%), and plan strategies for achieving them (80%). In sharp contrast, many graduates report that they get very little to no help from superior officers concerning these four career planning strategies: assessment (32%), information gathering (43%), goal setting (54%), and planning strategy (52%)

This contrast is more striking for female officers. In fact, women (X = 2.28) report getting even less help from superior officers than do men (X = 2.63, $t(1,45) = 2.48$, $p = .02$). In particular, women feel that they get less help with self-assessment (X = 2.49) and information gathering (X =2.26) than

do men ($X = 2.90$, $t(1,46) = 2.68$, $p = .01$; $X = 2.61$, $t(1,45) = 1.91$, $p = .06$, respectively). The descriptive statistics for these two items are even more telling. Fifty-two percent of the women report getting little or no help assessing their own strengths, weaknesses, and interest as compared with only 26% of the men. A parallel pattern is found for information gathering as 60% of the women and 38% of the men report little to no advisement from superior officers.

Overall, career planning generally is self-initiated by new officers. This is especially true for the female graduates. In general military career planning, these junior officers are in their initial duty assignment; thus, it is not likely that the new officers have sought help or advice from superiors. As members of this Class of 1980 approach reassignment eligibility, we would expect to see more involvement from superior officers.

Career involvement. Using the composite of career involvement, overall involvement is moderately high ($\bar{X} = 3.6$ on a five point scale), and there are no significant differences between women ($\bar{X} = 3.5$) and men ($\bar{X} = 3.7$), $t(1,41) = 1.33$, ns). Most officers agreed strongly with each item, ranging from 55% who would begin a self-description by stating their career to 83% who have a sense of pride from their career (see Table 3). Although there are no significant differences in the inferential statistics comparing women and men, the descriptive statistics show a full 40% of the women and 25% of the men would not state their career as the first entry in a self-description. Also, 32% of the women and 20% of the men would not rank their career at or near the top of what they do. Career involvement seems to be important to these officers, however, within the context of broader self-identity and life style, career is only one of many significant factors. Further analyses, particularly with those items of the scale on social and personal life, may identify some

of the factors which seem to contribute to a general assessment of quality of life.

Overall commitment and adjustment. Graduates' adjustment to the role of an Army officer ($\bar{X}$ = 4.43) and to the Army life-style ($\bar{X}$ = 4.1) are both high (five-point scales). There are no gender differences on the latter. However, women ($\bar{X}$ = 4.17) are less satisfied with their adjustment to the role of an Army officer than are men ($\bar{X}$ = 4.52, t(145) = 2.81, p = .006).

The 56% (63) of the men and the 71% (25) of the women who [illegible] married or engaged were asked to rate: the commitment they feel their s[illegible] or fiance exhibits (1) toward Army life and (2) toward the respondent's career; and (3) the degree to which the careers of these partners are compatible. Husbands ($\bar{X}$ = 4.0) are perceived as showing more commitment to Army lives than are wives ($\bar{X}$ = 3.37, t(90) = 2.30, p = .024). Most women officers (80%) feel that their husbands are committed to an Army life-style while 63% of the men feel this way abut their wive's commitment (see Table 4). However, this may be confounded by the probability that the husbands of female officers also tend to be military personnel. Many of the wifes of most male officers are not in the military. Hence, the men would be more committed to Army life by virtue of their own career commitments, not just those of their spouse.

This possible bias of spouses' career commitment is lacking in the other two items concerning spouses--support for the graduate's career and dual-career compatibility. It is interesting to note that there are no gender differences for either support (men: $\bar{X}$ = 4.03; women: $\bar{X}$ = 3.64, t(89) = 1.67, ns) or compatibility (men: $\bar{X}$ = 3.42, women: $\bar{X}$ = 3.84, t(80) = 1.4, ns). Most women (72%) and men (80%) feel that their spouse supports their career; most women (64%) and men (56%) in dual-career partnerships find that their careers are compatible. Also according to the data in table 4, 57 men

(90%) and 25 women (100%) are married or engaged and are involved in dual-career relationships. It is interesting to note the high percentage of officers who identify themselves as dual-career couples.

The final item in this section deals with the plans of married and engaged officers to combine or separate career and family plans (see Table 5). The pattern of responses of women and men differed for this item (Chi Square (4) = 10.95, p = .05). The most popular of the six single choices for both men (56%) and women (46%) is to combine a military career with having children. However, fully one-half of the women (compared with 36% of the men) plan to have children after leaving the military (half of these women plan to combine children with a civilian career). Given the finding that women plan to leave the military at a greater rate then do men, it would be informative to discover if these intentions simply made it more realistic for women to plan children in a civilian setting or if plans to have children compel women to leave the military. The latter possibility implies that women regard childbearing as less compatible with a military career than in a civilian career. This is of particular interest given the finding that the overwhelming majority (92% of the men; 96% of the women) plan to have children at some time in their lives.

Conclusions

In concluding this report, there are two general areas for comment: statistical and substantive. The statistical concerns outlined here will guide further analyses of the 1980 post-graduation questionnaire as well as contribute to the analyses of the 1981 version of this survey by enumerating the psychometric properties of the questionnaire items. Additional inferential analyses are suggested in the section on substantive concerns.

Statistical Concerns

The following statistical guidelines will be followed in future analyses of each of the nine sections of the questionnaire:

1) Leader effectiveness will be measured by a composite (unit-weighted summation) of the z-scores for the first three items; unit effectiveness will be designated by the sum of the z-scores for the next two items; the six items of unit performance will analyzed separately.

2) The internal consistency of the next four scales (the nine items measuring strategies of leaders' influence; the 34 items describing the characteristics of the officers' present duty assignments; the 19-item index of job satisfaction; the 25-item assessment of satisfaction with social and personal life) will be calculated. Additionally, each scale will be factor analyzed and a composite for each factor will be computed. The primary purpose of these analyses will be data reduction.

3) The items on career planning will be divided into two composites: (1) self-made plans (odd-numbered items) and (2) advice and help from superior officers (even-numbered items).

4) Career involvement may be represented by the single, unit-weighted sum of the six items.

5) The items which compose the section on overall commitment and adjustment (intentions for military career, adjustment to role of officer, adjustment to Army life-style, the three items on spouses' commitment and career compatibility, and combining career with family) will be used as individual items.

6) The demographic information (marital status, children, sex, class year, major command location, and present assignment) will be used as separate items.

Substantive Concerns

The substantive issues raised by the preceeding analyses fall into three interrelated categories: (1) those that may be pursued within the present data set, (2) those that suggest methods for future data collections on both this and other classes, and (3) those that suggest substantive ideas for follow-up data collections with the Class of 1980. Let us pursue each of these in order.

Further analyses. Three paths of future analysis are suggested. First, both male and female officers indicated that they pursued self-made strategies for career planning, but failed to receive help from superior officers. Graduates may or may not have sought this type of advice from superior officers. Within the present data set, it is possible to shed some light on the relationship between graduates and their superior officers as well as the perceived skill of the latter, unit effectiveness, and graduates' own leadership effectiveness. Understanding the relationships among new and seasoned officers may offer some insights into strategies for enhancing job satisfaction, effectiveness, and retention rates. Also, some light may be shed on why this effect is more pronounced for the female graduates.

A second area of analysis concerns three gender differences which may be interrelated: intent to continue a military career, satisfaction with the role of officer, and the compatibility of career and family pursuits. Fewer women intend to remain in the Army beyond their obligation, women are less satisfied with their role as officers, and half the women intend to have their children with or without civilian career. Furthermore, significant numbers of

both women and men regard their career as only one among several important components of their lives. All these findings suggest some relation to issues concerning quality of life (what it is and what it envelops). Further analyses along these lines may suggest strategies for enhancing the quality of life within the military for both men and women.

All analyses to this point have been macroscopic--examining trends for all respondents or by gender. These analyses do not tap individual variations in responses. For example, although the general trend is for dual-career couples to regard their career paths as compatible, some officers did not feel this way. Is this related to intent to remain? A correlation of these two variables will shed some light on this question. A future technical report will be concerned with these types of correlational and regression analyses.

Methodological improvements. Future surveys of later classes may be improved by noting what findings occur and what further information might be gathered to explain these results. The following are methodological suggestions for future post-graduation questionnaires. The findings that wives are less committed to the Army life-style than husbands is possibly confounded by the probability that husbands also are military personnel (the sheer numbers of military men and women strengthens this hypothesis). By exploring interview data collected later on most of these same officers will help to clarify this.

The fifth choice, "Plan to have children after leaving the Army", of the item (No. 121) which combines family and career plans is suggests an option "no career but children" that probably is more open to women than men. When a respondent checks this item it means that no civilian career is planned. Thus, 25% of the married or engaged female officers plan to leave their careers behind at the end of the Army obligation. This preliminary response

would indicate a significant withdrawal from the work force of educated, previously motivated women. However, this conclusion is clouded by the item itself.

Substantive ideas. This last section suggests some substantiate ideas for future work. The preliminary findings on strategies for career planning are intriguing. Did new officers seek the help of superior officers? Why or why not? Do new officers prefer career counselors of the same sex? Answers to these questions may help policymakers interested in career counseling. Improvement in this area, in turn, may enhance commitment.

Which brings us to our final topic--intent to remain. The present survey may offer further insights into intent and matters of quality of life. The large number of dual-career couples may make career compatibility an issue as obligation time approaches. Other concerns may arise at this time--commitment to parenthood, pressures from a non-military spouse, job satisfaction, satisfaction with Army life-style, opportunities for advancement, and so on. The present findings will be examined in follow-up surveys of the Class of 1980. Differences between committed and terminating groups may provide insights for policymakers into what the costs and benefits are perceived to be for staying beyond the initial obligation.

Table 1

Percentage of Men and Women

Reporting Each Career Intention

	Career Intentions				
Gender	Definitely Leave Army	Probably Leave Army	Undecided	Stay	Stay Until Retirement
Men	2	17	28	38	15
Women	20	20	31	23	6

Note. Row percentages sum to 100, and the Chi Square is significant ($x(4) = 18.42$, $p = .001$).

Table 2

Percentage of Male and Female Officers

Using Each Strategy of Career Planning

Item	Type of Planning	
	Self-Made Plans	Plans with Superior
	Men / Women / Total[a]	
Assessment	97 / 97 / 97	74 / 48 / 68
Information-gathering	85 / 91 / 86	62 / 40 / 57
Setting Goals	92 / 89 / 91	48 / 40 / 46
Planning Strategy	85 / 66 / 80	52 / 37 / 48

Note. The percentages are the sum of those officers who report using each stratagey some or a great deal. The remainder report little or no help.

[a] The first percentage in each column is for men/ the second is for women/ the third is the total.

Table 3

Percentage and Mean of Women and Men

Agreeing with Each Statement of Career Involvement

Item	Response: Agreement	Neutral	Disagreement	Means
	Men / Women / Total[a]			
Identity	67/72/68	18/ 9/16	14/20/16	3.7/3.7/3.7
Well-being	65/63/65	21/11/19	13/26/16	3.7/3.5/3.6
Pride	84/80/83	12/ 9/11	5/12/ 6	4.2/4.0/4.1
Importance	63/54/61	18/20/19	19/25/20	3.6/3.3/3.5
Self-description	58/46/55	17/14/16	25/40/29	3.4/3.1/3.4
Ranking	59/63/60	21/ 6/17	20/32/23	3.6/3.4/3.5
Composite	68/57/65	21/34/25	11/ 9/11	3.7/3.5/3.7

Note. Agreement reflects both responses, agree and agree strongly; disagreement is the sum of both disagree and disagree strongly. The overall degree of involvement is reflected in the means none of which are significantly different for women and men. The row percentages sum to approximately 100, given rounding error.

[a]The first figure in each column is for men/ the second is for women/ the third is the total.

Table 4

Percentage and Mean

Commitment and Career Compatibility of Spouses

Item	Response			
	Positive	Neutral	Negative	Means
	Men / Women / Total[a]			
Commitment to Life-style	63/80/67	12/ 8/11	25/12/22	3.4/4.0/3.6[b]
Commitment to Career	80/72/78	12/20/14	8/ 8/ 8	4.[illegible]/3.6/3.9
Dual-Career Compatibility	56/64/59	18/24/20	26/12/22	3.4/3.8/3.5

Note. Positive combines the responses committed/compatible and extremely committed/compatible; negative combines uncommitted/incompatible and extremely uncommitted/incompatible. The overall degree of commitment/compatibility is reflected in the means. The row percentages sum to approximately 100, given rounding error.

[a]The first figure in each column is for men/ the second is for women/ the third is the total.

[b]The mean difference between women and men is significant.

Table 5

Percentage of Married and Engaged Officers

Combining Career and Family

Career/Family Plans	Men/Women/Total[a]	
1. Military Career/No Children	2/ 0/ 1	
2. Military Career/Children	56/46/53	
Total Military Career		58/46/54
3. Civilian Career/No Children	2/ 4/ 2	
4. Civilian Career/Children	32/25/30	
5. Children After Army	3/25/10	
Total Civilian Career		34/29/32
Total Civilian Life/Children[b]		36/50/40
6. No Family/Career Plans	5/ 0/ 4	
Total Wanting Children		92/96/93

Note. Percentages are calculated by gender; for example, the first entry (2) means that 2% of all men plan a military career with no children. The numbered items are the original questionnaire items. The first column percentages for these numbered items sum to 100.

[a] The first figure is for men/ the second is for women/ the third is the total.

[b] This is the total who plan to return to civilian life, with or without a career, and have children.

APPENDIX A

SECOND YEAR

Post Graduation Interview Protocol

Class of 1980

Fall-1982

Instructions to Interviewer

Please follow the structure provided below. Ask questions in order. Provide time (30-40 minutes) at the end of the interview for an open-ended, free-flowing discussion.

Leadership

I. In an earlier questionnaire, you may have answered questions about your perceptions of your leadership and your unit's effectiveness.

a) Do you feel your leadership abilities have changed in the last year? If so, in what ways have you developed (as a leader) in your second year compared to your first year after graduation?

b) In the last year, what new issues or challenges have you experienced or faced with respect to leading your unit?

c) Has your leadership philosophy or style changed at all during the last year?

1. If so, in what ways?

2. Can you identify any of the factors that brought about the change?

II. Has your assignment changed in the last year?

a) In what ways has the nature of your position changed; i.e. qualities of the position.

b) Has the quantity of work required changed? In what ways?

c) In what ways, if any, are you viewed or treated any differently now than you were a year ago?

III. Satisfaction

a) What are the major sources of life satisfaction?

b) What are the major sources of job satisfaction?

c) What are the major sources of dissatisfaction, if any, with your life?

d) What are the major sources of dissatisfaction with your job?

IV. Career Planning

a) What kinds of career planning activities do you engage in, if any?

1. Probe:
- self-assessment
- information search
- goal setting
- planning
- problem solving

b) What career planning, if any, have you received from superior officers?

V. Involvement, Commitment, Adjustment

a) Do you feel more or less involved in your career now than a year ago?

b) What factors have contributed to the

- increase? - decrease?

c) Has your adjustment to your role as an officer changed in the last year? In what ways? Please explain.

VI. Career vs. Personal Life Demands

a) How many of you are married?

b) How long married? (get average)

c) Any engaged?

d) How many working spouses?

e) How many have children?

f) How have demands of your career impacted on the home (personal) life?

Probe: (1) conflicts with spouses's career or education

(2) time conflicts or lack of time

(3) conflicts with your parent role

(4) involvement or time for relationship with spouse

g) Has your spouse's commitment to your career changed in the last year?

If so, please explain the changes and the reasons for them, as you perceive the situation.

h) Has your own attitude toward your career in the Army changed in the last year?

1. In what ways has the interaction between career in the Army changed home/family demands affected your attitudes?

2. Has this affected your career planning in any way?

- short term? - long term?

3. Has it affected your commitment to the Army as a career and a way of life?

i) Which army policies or practices have facilitated or helped you to balance your role as an officer with your personal roles (spouse, parent, home, etc.)?

j) Which army policies or practices have hindered or complicated (frustrated, hurt, etc.) your efforts to balance your role as an officer with your personal roles (spouse, parent, home, etc.)?

k) Assume two people are married and both have careers as army officers. Within the framework of army policies, practices, and life style forms:

1. What would be most helpful to keeping both of them career committed? (*i.e. long-term army commitment*)

2. What would be most helpful to maintaining marital satisfaction?

3. What would be most helpful to enable them to have or raise a family?

4. What would hinder or discourage career commitment for both spouses?

5. What do you think would interfere most with maintaining marital satisfaction?

6. What would make it most difficult for them to have a family?

VII. Preparation: Long-Term View

Now that you have had a chance to function as an officer for two years, have your views on your West Point education and training changed at all?

a) Please explain the changes in the way you view West Point in retrospect?

b) What do you feel, today, were the strengths of the training and education you received?

c) What do you feel were the weaknesses?

d) How do you assess your own preparation compared to officers coming from other commissioning sources?

VIII. Emerging Issues

a) Are there any issues we have covered that you would like to expand upon? Or add to?

b) Are there any additional issues related to your career experiences, satisfaction, or commitment that you would life to raise or discuss before we adjourn?

PSYCHOMETRIC ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE

FOR THE CLASS OF 1980

Technical Report 83-2

JEROME ADAMS

The research reported here was supported by grant 13 ARI 81-37 from the Army Research Institute for Social and Behavioral Sciences (Jerome Adams Principal Investigator).

We thank the staff of the Office of Institutional Research U. S. Military Academy for their assistance in coding the data from optical scan answer sheets. Also, we acknowledge the assistance of Francine Hall for some questionnaire input and Jan Yoder for some data analysis.

Technical Report 2

PSYCHOMETRIC ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE

FOR THE CLASS OF 1980

Abstract

This report is the second in a series analyzing the information collected from 148 graduates of the U.S. Military Academy in the Class of 1980. This survey involved their post-graduate lives in the regular Army. The purposes of this first report are (1) to present the psychometric analyses of the scales of this survey and (2) to do preliminary analyses relating these scales to each other and the other measures of this survey. The original 132 items of the questionnaire are reduced to a set of 41 factors and items which prepare these data for further, more sophisticated work.

NOTE: Any conclusions in this report are not to be construed as official U. S. Military Academy or Department of the Army positions unless so designated by other authorized documents.

Technical Report 2

PSYCHOMETRIC ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE

FOR THE CLASS OF 1980

The purposes of the present technical report are twofold:

1) to present the psychometric analyses of the scales that are included in the postgraduation questionnaire given to the Class of 1980 in 1982;

2) to do preliminary analyses relating these scales to each other and to the other measures included in this survey.

This report will serve both to supplement "Technical Report 1: Descriptive Analyses of the Postgraduation Questionnaire for the Class of 1980" and to pave the way for future data analyses, such as regression, for the pusposes of hypothesis testing. Correlations among these scales and among the scales and the remaining components of the postgraduate questionnaire will suggest areas for such future testing.

Method

The Scales

For a complete copy of the postgraduation questionnaire, please refer to Appendix A of the first technical report referred to above. The work reported in this former report showed that four scales required psychometric examination. These are:

1) a 9-item measure of leader's influence strategies.

2) a 34-item rating of the characteristics of the officer's present duty assignment.

3) an 18-item index of job satisfaction, and

4) a 25-item scale of satisfaction with personal and social life.

Note that the first item of the job satisfaction scale, which concerns job conditions, is simply a sample item not used in later analyses by the original authors of the scale (see Brayfield and Rothe, 1951).

Respondents

All participants graduated from West Point in the Class of 1980, the first co-educational class. The questionnaire was completed by 35 women and 113 men during the summer of 1982 which was two years after their graduation and commissioning as officers in the regular Army (i.e., total sample size equals 148). The sample was selected by oversampling women and by stratifying on two variables: speciality and geographic location. For a full description of the respondents, refer again to the former technical report.

DATA ANALYSES

Psychometrics

The purpose of this section is to provide basic psychometric information about each scale. Specifically, each test will be factor analyzed[1], and the reliability of each scale will be checked. The overriding goal of doing factor analyses with these scales is to understand their underlying structure and to reduce the data to a manageable and still representative set of data. This information will be presented with an eye toward future analyses which will depend on reliable and valid composites of each of these measures.

Leader's Influence Strategies

This nine-item scale assesses the type of leadership influence strategy the officer feels that he or she uses in his or her present duty assignment to deal with subordinates. Influence is defined in the instructions as the "ability to get another person to think, feel, or act in a manner they would not have done otherwise." Using a six-point Likert scale from never (1) to always (6), respondents rated the frequency with which they used strategies,

such as reasoning, threats, and rewards, to influence the actions of subordinates.

A factor analysis of these nine items yielded three factors (with eigenvalues greater than one) which account for 56% of the total variance (see Table 1). The underlying structure of the first two factors is readily apparent. The three items that compose the first factor all describe how the leader uses his or her own personal influence. As can be seen in Table 2, these items are significantly correlated. Hence, the first true factor, which is an unit-weighted composite of items 7, 8, 9, measures the degree to which an officer uses personal influence strategies. The inter-item reliability[2] (coefficient alpha) for this factor is .66.

Factor II is essentially an artifact since item 3 is, in essence, a reversal of item 1 ($r = -.42$). However, the combination of both item seems to be more useful than either item alone (eigenvalue = 1.52). For this reason, the second factor, an unit-weighted composite of items 1 and 3, reflects the degree to which the leader gives reasons for his or her directives. (Note that the loading for item 1 is negative so that is needs to be reverse coded to form the factor).

Factor III was not so easily interpreted. It included the frequency with which the leader called upon skill, hints, threats, and flattery to influence subordinates. At best, these seem to fall into a category of "other" influence strategies. But, before we take this simple solution, let us see if this is a real factor.

Nunnally (1967, p. 356) suggests that the inter-item correlations for a factor need to be significant if the factor is indeed real.[3] A highly conservative rule of thumb to determine this significance involves: (1)

calculating the mean correlation among all the variables thought to compose the factor and (2) comparing this mean with the standard error of a correlation coefficient. The latter standard error is calculated by taking the reciprocal of the square root of the sample size (1 150 = .08). To be significant at the .01 level, the mean correlation for this sample must be .24 (3 standard deviations x .08, the standard error).

For Factor III of the leader influence scale, the mean correlation of variables 2, 4, 5, and 6 is .175 which is not significant (see Table 2). Additionally, coefficient alpha for these items is only .41. Based on both this statistical evidence and the inability to interpret the rotated factor, these items shall be used separately rather than combined into a composite.

Summary of leader's influence. This scale will be represented by two factors (personal influence and reasoning) and by four items (2, 4, 5, 6). Personal influence is a simple unit-weighted composite of items 7, 8, and 9. Reasoning is a composite of item 3 and a reverse-coded item 1. Furthermore, this breakdown is more reliable than the nine-item scale (alpha = .51) would be.

Present Duty Assignment

Respondents were asked to consider the assignments of other junior officers and rate their own current duty assignment on each of 34 characteristics. Ratings are made on five-point scales with five indicating that the characteristic in question is well-above average. For example, officers rated the amount of responsibility in their work, the degree to which they respect their superior, the amount of task structure they have, and if they have the opportunity to exercise initiative.

The original factor analysis of this scale produced a six-item solution

which accounted for 66% of the total variance. However, a quick review of the factors immediately showed that only one variable loaded heavily on each of two last factors. Indeed, a scree test of the eigenvalues showed a steep drop after the fourth factor (from 1.64 for FACTOR IV to 1.30 and 1.12 for FACTORS V and VI, respectively).

A four-factor solution for the ratings of present duty assignment is presented in Table 3. All the items that compose the first factor deal with the relationship between the respondent and his or her superior officer. Item 12, which deals with the amount of authoritarian control exercised by the superior, loaded negatively on the factor. Since this is the only negatively worded item in this scale, it will be reverse coded in all future analyses. As can be seen in Table 4, the items that compose this first factor are highly and significantly correlated. Furthermore, the inter-item reliability of the sub-scale is very high (alpha = .95).

The three items which make up the second factor assess the amount of guidance, task structure and direction provided by the supervisors. All of these reflect the amount of structure the respondent feels is part of his or her job. This factor then measures the degree to which the tasks of the present duty assignment are structured, and its items also are high and significant (see Table 5). The internal consistency of these three items is quite high (alpha = .90).

The third factor is labelled "work atmosphere" because it represents the work climate which includes morale, acceptance, confidence, and group assistance. This factor covers relationships that are broader than the one with the superior which is the focus of the first factor. The third factor encompasses other officers, the troops, and the unit as a whole. As can be

seen in Table 6, the items of this factor are again highly and significantly correlated, and the reliability is sound (alpha = .77).

Finally, the fourth factor includes three items (work responsibility, challenge, and work load) all of which describe characteristics of the tasks of the present duty assignment. The items are all significantly correlated, and the inter-item reliability for this short sub-scale is substantial (alpha = .78). Item 21, the amount of interference from others, did not load heavily on any factor (commonality = .25 which is the lowest of all items).

Summary of present duty assignment. There is some evidence that the 34-item scale could be used as a single-score evaluation of the officer's present duty assignment (the overall alpha = .94). However, since many items assess the relationship between the respondent and his or her superior, an overall composite would be biased unnecessarily by the quality of this one relationship. It seems more common sensible to think of the present duty assignment along several dimensions. Hence, the decision is stay with four factors, although supported by statistical evidence, also is enhanced by the researchers' desire to understand the respondents' present duty assignments in all its richness.

The first factor, relations with superior, is an unit-weighted composite of items 3-10, 12-15, 17-19, 23, and 30 with item 12 reverse coded. Task structure is represented by the sum of scores for items 24, 27, and 34. Items 11, 16, 20, 22, 26, 28, 29, and 31-33 combine to measure work atmosphere and items 1, 2, and 25 form an unit-weighted composite of task characteristics. Item 21 will be dropped from future analyses.

Index of Job Satisfaction

The measure of job satisfaction was taken from the work of Brayfield and Rothe (1951). The first item on the scale (improving conditions) is a sample

item not analyzed by the previous authors. Hence, this item will be dropped from further considerations.

Respondents rated on five-point scales the degree to which they agreed with each of the remaining 18 items. Half the items were reverse coded (4, 5, 7, 9, 11, 12, 15, 17, 19) so that a high score reflected positive feelings of job satisfaction. A factor analysis produced a three-factor solution for this scale with accounted for 63% of the total variance (see Table 7). Only the second factor was readily interpreted as this factor appears to be slightly better (eigenvalue = 1.36) representation of three items all of which concern interest (or its converse, boredom) in one's job. The other noteworthy feature of this analysis is that item 11 did not load heavily on any factor and it had a very low commonality (.084).

A look at Table 8 further confirmed the suspicion that this index of job satisfaction was not well represented by this three-factor solution. All items, with the expected exception of item 11, correlated. These correlations, in combination with the undefined factors and with the original authors' contention that this index measures one construct, job satisfaction, lead me to consider a factor analysis forcing a one-factor solution. The results of this one-factor solution are presented in Table 9. All items, again with one exception (item 11), load heavily on this one factor, Furthermore, the inter-item reliability of the 18-item scale is high (alpha = .94); dropping item 11 further enhances the internal consistency of the scale (alpha = .95).

Summary for job satisfaction. A simple sum of 17 items (excluding item 1 which is a sample and item 11 which does not seem consistent with the rest of the scale) will be used to represent this scale.

Satisfaction with Social and Personal Life

Participants responded to this scale by rating each of 25 aspects of their

lives according to how satisfied they are with each. Ratings were done on a five-point scale with high scores indicating extreme satisfaction. A factor analysis will be helpful in ferreting out the clusters of items representing the major categories of the officers' personal and social lives.

The initial factor analysis produced an eight-factor solution which accounted for 69% of the total variance. Having selected eight factors, the altered eigenvalues for the last four factors dipped below one. Also, for the purposes of future analyses, eight factors simply are too unwieldy.

A four-factor solution accounts for 50% of the total variance and a scree test of the eigenvalues further argues for this solution (see Table 10 for the eigenvalues; the eigenvalue for the fifth factor equals 1.36). The high factor loadings on all but one item (item 15; see Table 10) and the high and significant inter-item correlations (see Tables 11-13) confirm the legitimacy of a four-factor solution.

Let us return to Table 10 and examine each factor in turn. The nine items that load on the first factor all describe aspects of the social life of the officer. These include overall personal satisfaction, free-time pursuits, relations with the opposite sex, and personal life goals. As can be seen in Table 11, these items are highly significantly correlated.

The seven items that compose the second factor reflect the respondent's satisfaction with military policies governing such things as quarters, assignments, and pregnancy. Again, the item correlations are significant at the .01 level (see Table 12). Interestingly, item 15, which deals with policies relating to fraternization, did not load heavily on this factor nor on any other factor. However, it did load somewhat on every factor (always in the range of .22). Fraternization may be a unique policy as it seems to cut across all aspects of officers' social and personal lives.

The third factor comprises items that seemingly reflect the respondent's military development which encompasses his or her relations with superiors and peers, life as an officer, and career progress. This seems distinct from other work relations as represented by the fourth factor. These relationships, with non-commissioned officers, the troops, and the other sex and which give career support from family and friends, are different from those in the third factor which seem more directly related to career development and success. In other words, satisfaction with one's superior is directly linked to one's evaluations and career development (FACTOR III); satisfaction with troops and family support are more indirect and instead create an overall work atmosphere of satisfactory work relations (FACTOR IV). This seems to be the distinction between these two factors. The inter-item correlations for both factors are significant (see Table 13). In terms of inter-item reliability, the over 25-item scale (alpha = .88) can be equally well represented by the first factor of only nine items (alpha = .88). However, the remaining factors enhance the richness of the scale, and all are suitably consistent (II: alpha = .67; III: alpha = .72; IV: alpha = .60).

Summary of social satisfaction. This scale can be satisfactorily represented by four factors, which are the sum of the unit-weighted items, and, if desired, by item 15 on fraternization. Since the latter reflects a topic of interest to researchers, it will not be difficult to use it singularly. The four factors are: satisfaction with social life (items 5, 6, 8-12, 18, 25), satisfaction with military policies (items 7, 14, 16, 17, 18, 20, 22), satisfaction with military development (items 1, 2, 23, 24), and satisfaction with work relations (items 3, 4, 13, 21).

Overall Summary

The four scales will be represented by the following factors and items (an

abbreviated name for each is listed in parentheses; labels with numbers corrrespond to the same-numbered, single item of the scale)

A) Leader's Influence Strategies

1. influence based on personal directives (LIPERS)
2. influence based or reasoning (LIREAS)
3. influence based on skill (LDRINF2)
4. influence based on hints (LDRINF4)
5. influence based on threats (LDRINF5)
6. influence based on threats (LDRINF6)

B) Characteristics of Present Duty Assignment

1. relationship with immediate superior (DYRELS)
2. task structure (DYTKST)
3. work atmosphere (DYWKATM)
4. task characteristics (DYTKCH)
5. interference from others (DUTY21)

C) Index of Job Satisfaction

1. overall job satisfaction (JOBSAT)

D) Social and Personal Life: Early Career Satisfactions

1. satisfaction with social life (SSSOCIAL)
2. satisfaction with military politics (SSPOLICY)
3. satisfaction with own military development (SSMDEV)
4. satisfaction with work relations (SSWKREL)
5. satisfaction with fraternization policy (SOCSAT 15)

Construct Validity

Each of the above factors represents a reasonable interpretation of a factor analysis of a multi-item scale. Furthermore, each factor withstood a

significance test of its inter-item correlations, and all are substantially internally reliable. As future data sets become available, the test-retest reliability of each factor will lend additional evidence of their stability over time. The final issue that we need to consider is their validity; most importantly, their construct validity. Do each of these factors measure what they purport to measure? If so, then factors should be related to other variables in the data set in a pattern consistent with our interpretations.

Duty. The first factor of this scale, the officer's relationship with his or her superior (DYRELS), indeed is related to how much help the officer gets with his or her own career planning from this superior officer (SUPPLAN; $r = .36$, $p<.01$; see Table 14). This is what we would expect if both these variables measure what we think they do. Hence, there is some evidence that this first factor is a validly labelled measure of the construct.

Following this logic for the remaining factors, the more structured are the respondent's tasks (DYTKST), the better is his or her relationship with the superior (DYRELS; $r = .39$, $p<.01$) and the more satisfied is the officer with his or her military career development (SSMDEV; $r = .25$, $p<.01$). Officers who enjoy the characteristics of their tasks (DYTKCH) also adjusted well to the role of officer (ROLE; $r = 23$, $p<.01$). Finally positive work atmosphere (DYWKATM) is directly related to both leader (LDREFF; $r = .37$, $p<.01$) and unit effectiveness (UNEFF; $r = .18$, $p<.05$).

Job satisfaction. An overall rating of job satisfaction should be related to a myriad of variables (see Table 14). For example, high job satisfaction (JOBSAT) is correlated with intent to remain in the Army (INTENT; $r = 36$, $p<.01$), high career involvement (INVOLVE; $r = .46$, $p<.01$), and willingness to engage in long-range career planning (AHEAD; $r = .25$, $p<.01$). These are the

kinds of variables we would expect to be related to job satisfaction.

Satisfaction with social life. The first factor, social satisfaction (SSSOCIAL), is positively correlated with adjustment to the Army life-style (STYLE; $r = .42$, $p<.01$, see Table 14). Officers who report being content with military policies (SSPOLICY) also adjust well to the role of an Army officer (ROLE; $r = .33$, $p<.01$). Respondents who are pleased with their military development (SSMDEV) intend to stay in the Army (INTENT; $r = .33$, $p<.01$). Finally, officers who favorably regard their work relations (SSWKREL) have spouses committed to the Army (SPOUSE 1; $r = .34$, $p<.01$) and supportive of the officers' careers (SPOUSE 2; $r = .22$, $p<.05$). Furthermore, these officers positively value the skills of their subordinates (UNPERF2; $r = .23$, $p<.01$).

Leaders' influence. The data set contains no variables which would allow ready comparisons of these two factors (LIPERS and LIREAS). Interestingly, the strategy of influence used by the leader is not related to either the leaders' or the unit's effectiveness. It may be that the leader's own perceptions of influence are less useful than other measures such as followers' ratings. On the other hand, these measures may be suspect and caution is advised regarding their use in the future.

Descriptive Findings

Gender

Since the major focus of this project is on the first female graduates, let us begin our exploration of Table 14 with this central variable (which is coded 0 = M; 1 = F). There are several interesting biserial correlations worthy of further exploration. Using gender as a guide, we then will explore each of the variables correlated with gender

Men rate significantly higher than women on each of the following:

1) self-perceived leadership effectiveness (LDREFF; r = -.21, p<.01),

2) relationship with the immediate superior (DYRELS; r = -.18, p<.05),

3) work atmosphere (DYWKATM; r = -.24, p<.01),

4) military development (SSMDEV; r = -.19, p<.05).

5) superior's help with career planning (SUPPLAN; r = -.20, p<.01)

6) intent to remain (INTENT; r = -.29, p<.01),

7) adjustment to the role of Army officer (ROLE; r = .23, p<.01)

8) spouse's support of career (SPOUSE 2; r = -.17, p<.01)

The last four have been identified and discussed in Technical Report 1; the data here simply confirm each relationship. Since the first four items are central to the current report, let us briefly explore each of these.[4]

Leadership effectiveness

Officers who regard themselves to be effective leaders (LDREFF) feel that the skill (UNPERF1; r = .26) and hard work (UNPERF3; r = .22) of the leader affect unit performance. In other words, leaders who think they are effective regard themselves as central to the functioning of their unit. Additionally, effective leaders report high job satisfaction (JOBSAT; r = .25), positive work atmosphere (DYWKATM; r = .37), and progress in their own military development (SSMDEV; r = .24). These officers plan their own futures (SELFPLAN: r = .28) as well as receive career-planning advice from their superviser (SUPPLAN; r = .25).

Finally, effective leaders are involved with their jobs (INVOLVE; r = .26), intent to stay (INTENT: r = .25), and are adjusted to both the role of officer (ROLE; r = .47) and the life-style of the Army (STYLE; r = .26). An overall profile of these effective leaders then shows them to be male, self-confident as to their own importance in their unit, happy with their jobs, and making progress toward career development.

Relationship with Superior

A positive relationship with one's superior (DYRELS) is associated with high unit effectiveness (UNEFF; r = .23) and both the skill (UNPERF1; r = .28) and hard work (UNPERF3; r = .27) of the leader. Structured tasks (DYTKST; r= .39), positive task characteristics (DYTKCH; r = .46), a healthy work atmosphere (DYWKATM; r = .56), and high job satisfaction (JOBSAT; r = .50) all are related to the favorability of the officer's relationship with his or her supervisor.

Furthermore, officers who get along with their superior are more optimistic about their own military career development (SSMDEV; r = .51), receive advice on career planning from their superior (SUPPLAN; r = .36), and report greater involvement with their job (INVOLVE; r = .27). In all, the relationship an officer nurtures with his or her superior has important ramifications for current job satisfaction and effectiveness as well as future growthand commitment

Work Atmosphere

Like the previous variables, work atmosphere (DYWKATM) is related to leadership effectiveness (LDREFF; r = .37) and leader's skill (UNPERF1; r = .23) and hard work (UNPERF3; r = .25). In addition, a favorable work atmosphere is positively correlated with the officer's relationship with his or her superior (DYRELS; r = .56), task structure (DYTKST; r = .31), task characteristics (DYTKCH; r = .44), and job satisfaction (JOBSAT; r = .54). Respondents who are satisfied with both military policies (SSPOLICY; r = .28) and their own career development (SSMDEV; r = .57) also rate their work atmosphere more positively.

Finally, a favorable atmosphere is associated with career-planning with one's superior (SUPPLAN; r = .43), long-range planning (AHEAD; r = .22), job

involvement (INVOLVE; r = .32), intent to re-enlist (INTENT; r = .26), and adjustment to the role of Army officer (ROLE; r = .42). A pattern is evolving. Again, a variable (work atmosphere) is related to being male, satisfied, effective, and future-oriented in career-planning.

Military Development

Expectedly, an officer's satisfaction with his or her military career development (SSMDEV) is associated with leadership effectiveness (LDREFF; r = .24), skill (UNPERF1; r = .21), and hard work (UNPERF3; r = .21). Career development also is related to all factors representing the characteristics of the respondent's present duty assignment: relationship with superior (DYRELS; r = .51), task structure (DYTKST; r = .25), task characteristics DYTKCH; r = .33), and work atmosphere (DYWKATM; r = .57). Satisfaction with one's job (JOBSAT; r = .67) is highly correlated with military development.

Military development involves more than a career; it also encompasses one's social life (SSSOCIAL; r = .34) and the Army's life-style (STYLE; r = .29). As a measure of career development, it is related to aspects of that military career: military policies (SSPOLICY; r = .46), the fraternization policy (SOCSAT15; r = .28), and advisement from one's superior (SUPPLAN; r = .35). Finally, a pattern of correlations is found for mlong-range planning (AHEAD; r = .29), job involvement (INVOLVE; r = .43), intent to re-enlist (INTENT; r = .33), and adjustment to the role of officer (ROLE: r = .50). Future planning is affected by present successes and satisfactions.

Conclusions

The key variables seem to be gender, current job satisfaction, and future planning; all of which are inter-related. The relationships shown here are exploratory and reflect an attempt to find consistencies in a massive array of data. Directed by the overriding goals of the current research project, these

three variables emerged as foci of future, more sophisticated analyses. The next step will be to formulate testable, specific hypotheses involving each of these factors.

DIRECTIONS FOR FUTURE RESEARCH

The 126-item post-graduation questionnaire completed by the class of 1980 in the summer of 1982 can be reduced to the 41 variables listed in Appendix A. This data set can be efficiently and effectively analyzed to test hypotheses. Exploratory analyses suggest that hypotheses concentrating on gender differences, predictors of job satisfaction, and variables related to career planning and future re-enlistment would be most informative. Additional data collections might be most useful if they concentrate on these three broad areas.

References

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Nunnally, J.C. Psychometric theory. New York: McGraw-Hill, 1967

Cronbach, L.J., & Azuma, H. Internal-consistency reliability formulas applied to randomly samples single-factor tests: An empirical comparison. Educational Psychology Measurement, 1962, 22, 645-666.

Footnotes

[1]All factor analyses were principle factoring with iteration so that the diagonal elements were communality estimates, and the rotational method used was varimax. The method for selecting factors in all initial analyses was to rotate only those factors with eigenvalues greater than one (a factor is only useful to the extent that it explains more variance than a single variable). Based on these initial analyses, later rotations may have found solutions with a smaller number of factors and these will be noted in the text.

[2]All reliabilities reported in the present report are coefficient alphas which measure the homogeneity or inter-item consistency of the scale (see Cronbach & Azuma, 1962).

[3]This test of significance was conducted for all factors. Except where the outcome is obvious, these results are reported in a note on the appropriate table of factors and factor loadings.

[4]In the interest of dealing with the most important relationships, only correlations significant beyond the .01 level will be considered here.

Table 1

Factors and Factor Loadings for Ratings of
Leadership Influence Strategies

FACTOR I - PERSONAL INFLUENCE			FACTOR II - REASONING			FACTOR III - OTHER		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
7	Personal Punish	.617	1	No Reasons	-.611	2	Skill	.416
8	Personal Rewards	.681	3	Give Reasons	.760	4	Hints	-.354
9	Help Leader	.585				5	Punish	.612
						6	Flattery	.301
Eigenvalue = 2.21			Eigenvalue = 1.52			Eigenvalue = 1.34		

Table 2

Inter-Item Correlations for Ratings of Leader Influence

Items	FACTOR I		
	7	8	9
7	1.0		
8	.46	1.0	
9	.35	.39	1.0

Items	FACTOR II	
	1	3
1	1.0	
3	-.42	1.0

Items	FACTOR III[a]			
	2	4	5	6
2	1.0			
4	-.14	1.0		
5	.23	-.16	1.0	
6	.15	.04	.33	1.0

[a]The mean of the inter-item correlation is .175, which is not significant at the .01 level (standard error for a sample size of 150 is .08; see Nunnally, 1967, p. 356).

Table 3
Factors and Factor Loadings for Ratings of Characteristics of Present Duty Assignment

FACTOR I - RELATIONS W/ SUPERIOR			FACTOR II - TASK STRUCTURE			FACTOR III - WORK ATMOSPHERE			FACTOR IV - TASK CHARACTERISTICS		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
3	express ideas to superior	.768	24	direction from superior	.839	11	group morale	.397	1	work responsibility	.775
4	superior accepts ideas	.821	27	guidance from superior	.737	16	military tasks	.415	2	challenge	.723
5	contributes to decisions	.595	34	task structure	.747	20	initiative exercised	.504	25	workload	.612
6	admin. effect of superior	.658				22	get to know people	.445			
7	leadership effect of superior	.793				26	personal morale	.329			
8	discuss work with superior	.643				28	confidence in work	.550			
9	friendship with superior	.764				29	acceptance by officers	.503			
10	respect for superior	.828				31	acceptance by troops	.463			
12	control by superior	-.573[a]				32	adequacy of training	.437			
13	interest by superior	.789				33	assistance from others	.406			
14	criticism from superior	.630									
15	equal treatment by superior	.755									
17	non-work talks w/ superior	.717									
18	opportunity for initiative	.443									
19	superior wants initiative	.718									
23	superior notes accomplishment	.683									
30	leadership from superior	.722									
Eigenvalue = 12.44			Eigenvalue = 3.24			Eigenvalue = 2.65			Eigenvalue = 1.64		

Note. - Item 21 was dropped from the analysis because of its low communality
[a]Item 12 will be reverse coded in future analysis

Table 4

Inter-Item Correlations for Factor I of DUTY:

Relations with Superior

Items	3	4	5	6	7	8	9	10	12	13	14	15	17	18	19	23	30
3	1.0																
4	.75	1.0															
5	.56	.64	1.0														
6	.51	.54	.46	1.0													
7	.59	.59	.46	.80	1.0												
8	.62	.61	.50	.62	.61	1.0											
9	.61	.67	.53	.56	.67	.63	1.0										
10	.62	.67	.52	.69	.85	.60	.72	1.0									
12	.42	.51	.35	.21	.35	.24	.40	.44	1.0								
13	.66	.68	.55	.53	.66	.66	.71	.72	.34	1.0							
14	.54	.50	.45	.60	.66	.58	.56	.62	.15	.65	1.0						
15	.65	.69	.55	.48	.55	.47	.63	.63	.53	.63	.42	1.0					
17	.62	.58	.53	.63	.63	.56	.70	.68	.29	.74	.63	.65	1.0				
18	.42	.46	.52	.28	.34	.31	.41	.35	.26	.34	.28	.45	.36	1.0			
19	.54	.61	.53	.50	.61	.49	.56	.58	.38	.63	.55	.55	.58	.65	1.0		
23	.60	.47	.47	.61	.61	.56	.58	.63	.25	.65	.51	.50	.55	.32	.58	1.0	
30	.56	.47	.47	.72	.78	.55	.66	.74	.24	.64	.72	.56	.67	.39	.65	.65	1.0

Note. - The mean of the inter-item correlations is .55 ($p < .01$).

Table 5

Inter-Item-Correlations of Duty:
Factor II (Task Structure) and Factor IV (Task Characteristics)

Task Structure

Items	24	27	34
24	1.0		
27	.79	1.0	
34	.65	.61	1.0

Task Characteristics

Items	1	2	25
1	1.0		
2	.67	1.0	
25	.54	.48	1.0

Note: The means of the inter-item correlations for FACTORS II and IV are .68 ($p < .01$) and .56 ($p < .01$), respectively.

Table 6

Inter-Item Correlations of DUTY:

FACTOR III (WORK ATMOSPHERE)

Items	11	16	20	22	26	28	29	31	32	33
11	1.0									
16	.25	1.0								
20	.23	.25	1.0							
22	.29	.27	.15	1.0						
26	.47	.22	.37	.34	1.0					
28	.11	.28	.54	.28	.32	1.0				
29	.30	.39	.39	.29	.31	.30	1.0			
31	.21	.15	.22	.37	.11	.26	.22	1.0		
32	.31	.25	.19	.10	.24	.26	.31	.18	1.0	
33	.25	.31	.10	.25	.22	.18	.30	.26	.23	1.0

Note. - The mean of the inter-item correlations for this factor is .35 ($p < .01$).

Table 7

Three-Factor Solution for Job Satisfaction Scale

FACTOR I			FACTOR II			FACTOR III		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
2	hobby	.442	3	interesting	.816	9	force	.579
4	friends' jobs	.343	7	bored	.800	12	dislike	.663
5	pleasant	.609	17	uninteresting	.620	15	work never ends	.523
6	enjoyment	.442				19	disappointed	.599
8	satisfied	.732						
10	satisfied	.594						
13	happiness	.861						
14	enthusiasm	.649						
16	liking	.832						
18	enjoyment	.706						
Eigenvalue = 9.35			Eigenvalue = 1.36			Eigenvalue = 1.04		

Note.- Item 11 (other jobs) did not load heavily on any factor (communality = .084).

Table 8

Inter-Item Correlations for the Job Satisfaction Scale

Items	2	3	4	5	6	7	8	9	10	11[a]	12	13	14	15	16	17	18	19
2	1.0																	
3	.23	1.0																
4	.11	.39	1.0															
5	.29	.35	.39	1.0														
6	.30	.29	.18	.43	1.0													
7	.15	.77	.33	.44	.30	1.0												
8	.34	.49	.29	.69	.43	.52	1.0											
9	.25	.44	.29	.53	.39	.55	.60	1.0										
10	.31	.42	.30	.57	.41	.46	.78	.53	1.0									
11	.06	.11	.00	.00	.02	.09	.05	.15	-.04	1.0								
12	.32	.45	.38	.67	.40	.48	.70	.71	.64	.06	1.0							
13	.42	.44	.46	.65	.41	.44	.74	.52	.59	.01	.69	1.0						
14	.32	.51	.43	.58	.42	.51	.72	.59	.54	.11	.70	.72	1.0					
15	.27	.40	.26	.56	.30	.43	.58	.59	.48	.07	.66	.53	.60	1.0				
16	.41	.41	.37	.65	.43	.42	.73	.50	.57	.03	.71	.82	.69	.54	1.0			
17	.23	.62	.43	.51	.33	.64	.55	.53	.45	.15	.56	.46	.57	.49	.50	1.0		
18	.39	.53	.35	.65	.44	.53	.77	.62	.63	.09	.73	.72	.72	.56	.75	.58	1.0	
19	.33	.42	.38	.72	.34	.48	.67	.61	.60	.05	.82	.64	.60	.62	.69	.50	.70	1.0

[a]Item 11 does not correlate highly with any item.

Table 9

One-Factor Solution for the Job Satisfaction Scale

	FACTOR I	
Item No.	Item	Loading
2	hobby	.404
3	interesting	.616
4	friends' jobs	.461
5	pleasant	.768
6	enjoyment	.498
7	bored	.645
8	satisfied	.862
9	force	.729
10	satisfied	.731
11	other jobs	.082[a]
12	dislike	.861
13	happiness	.821
14	enthusiasm	.816
15	work never ends	.696
16	liking	.818
17	uninteresting	.688
18	enjoyment	.861
19	disappointment	.811

[a]Item 11 has the only low loading (communality = .007).

Table 10
Factors and Factor Loadings for Ratings of
Satisfaction With Social and Personal Life

FACTOR I - SOCIAL LIFE			FACTOR II - MILITARY POLICIES			FACTOR III - MILITARY DEVELOPMENT			FACTOR IV - WORK RELATIONS		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
5	socialize	.685	7	quarters	.295	1	superior	.513	3	NCOs	.635
6	marital status	.570	14	PT	.342	2	peers	.461	4	troops	.605
8	leave time	.390	16	assignment	.475	23	life as officer	.797	13	work with other sex	.482
9	recreation	.567	17	dual relocation	.569	24	career progress	.540	21	career-support	.315
10	free time	.556	19	pregnancy	.591						
11	social life	.764	20	attitude toward women	.496						
12	relations w/ other sex	.730	22	branch officer	.558						
18	goals	.516									
25	personal satisfaction	.745									
Eigenvalue = 6.67			Eigenvalue = 2.41			Eigenvalue = 1.99			Eigenvalue = 1.54		

Note. - Item 15 on fraternization did not load heavily on an factor.

Table 11

Inter-Item Correlations for FACTOR I of Social Satisfaction:

SOCIAL LIFE

Items	5	6	8	9	10	11	12	18	25
5	1.0								
6	.37	1.0							
8	.37	.20	1.0						
9	.45	.18	.45	1.0					
10	.49	.13	.55	.55					
11	.70	.35	.32	.63	.50	1.0			
12	.45	.74	.21	.24	.21	.51	1.0		
18	.44	.20	.48	.42	.78	.52	.25	1.0	
25	.55	.41	.32	.52	.57	.67	.62	.54	1.0

Note.- The mean of the inter-item correlations is .44 ($p < .01$).

Table 12

Inter-Item Correlations for FACTOR II of Social Satisfaction:

MILITARY POLICIES

Items	7	14	16	17	19	20	22
7	1.0						
14	.08	1.0					
16	.26	.24	1.0				
17	.18	.14	.45	1.0			
19	.08	.22	.16	.43	1.0		
20	.17	.28	.16	.27	.39	1.0	
22	.29	.22	.40	.35	.34	.31	1.0

Note. - The mean of the inter-item correlations is .26 ($p < .01$).

Table 13

Inter-Item Correlations for FACTORS III and IV of Social Satisfaction: MILITARY DEVELOPMENT and WORK RELATIONS

Factor III - Military Development

Items	1	2	23	24
1	1.0			
2	.28	1.0		
23	.47	.42	1.0	
24	.35	.24	.58	1.0

Factor IV - Work Relations

Items	3	4	13	21
3	1.0			
4	.58	1.0		
13	.23	.26	1.0	
21	.20	.13	.18	1.0

Note: The means of the inter-item correlations for FACTORS III and IV are .39 ($p < .01$) and .26 ($p < .01$), respectively.

Table 14 (Part I)

Correlations for All Scores for the Class of 1980

	LDR EFF	UN EFF	UN PERF1	UN PERF2	UN PERF3	UN PERF4	UN PERF5	UN PERF6	LI PERS	LI REAS	LDR INF2	LDR INF4	LDR INF5	LDR INF6	DY RELS	DY TKST	DY TKCH	DY WKATM
LDR EFF	--																	
UN EFF	07	--																
UN PERF1	26**	24**	--															
UN PERF2	07	19**	12	--														
UN PERF3	27**	12	50**	08	--													
UN PERF4	01	15*	13	48**	24**	--												
UN PERF5	-07	06	02	10	06	02	--											
UN PERF6	-14	10	-07	04	06	04	70**	--										
LI PERS	03	-06	-08	18*	15	26**	11	05	--									
LI REAS	04	10	11	01	19*	09	20*	14	03	--								
LDR INF2	19	02	13	00	13	02	04	08	12	01	--							
LDR INF4	03	07	06	02	08	03	04	00	16	05	-10	--						
LDR INF5	03	03	02	05	11	24**	10	03	27**	-06	20*	20*	--					
LDR INF6	-01	08	60	06	00	02	08	-06	23**	18*	15	04	30**	--				
DY RELS	13	23**	28**	01	27**	05	16	02	01	05	17	01	04	02	--			
DY TKST	12	09	14*	03	18*	06	09	18*	04	09	18*	02	06	08	39**	--		
DY TKCH	16*	02	26**	20**	28**	-13	-02	00	06	10	06	06	06	03	46**	15	--	
DY WKATM	37**	18*	23**	03	25**	09	18	08	07	08	12	05	-07	13	56**	31**	44**	-

NOTE: DECIMAL POINTS HAVE BEEN REMOVED

Table 14 (Part II)

Correlations for All Scores for the Class of 1980

	DUTY 21	JOB SAT	SS SOCIAL	SS POLICY	SSM DEV	SSWK REL	OCC SAT 15	SELF PLAN	SUP PLAN	A HEAD	INVOLVE	INTENT	ROLE	STYLE	SPOUSE 1	SPOUSE 2	SPOUSE 3	SEX
LDR FFF	-03	25**	09	08	34**	19*	03	28**	25**	17	26**	25**	47**	26**	12	08	07	-21**
UN FFF	02	18*	05	01	08	08	07	12	19*	02	17	12	02	05	-03	08	-07	-03
UN PERF 1	-07	23**	-10	-08	21**	00	-03	14	20**	08	26**	20*	22*	05	20*	09	-03	-12
UN PERF 2	-11	02	21**	05	07	23**	13	05	16	-10	05	00	14	22**	06	10	26**	-16
UN PERF 3	-04	22**	09	04	21**	04	03	16	14	19*	39**	22**	16	00	18*	07	01	-11
UN PERF 4	03	08	20**	07	06	10	07	05	10	03	09	01	06	15	04	16	11	09
UN PERF 5	14	05	-04	10	-01	09	-06	12	17*	01	-06	-20**	-06	-05	-11	-14	-03	06
UN PERF 6	23**	-12	02	-13	-14	05	-07	06	11	04	-11	-22**	-15	-01	-07	-10	02	02
LI PERS	-02	03	-13	-08	02	-02	-05	-01	02	03	10	00	08	-22**	18	25**	-11	-03
LI REAS	-08	-01	-02	09	03	10	13	12	14	15	15	00	-08	-01	23**	11	32*	20*
LDR INF 2	-07	14	07	-05	11	07	10	06	20*	19*	17*	16	10	12	05	-02	-16	-19
LDR INF 4	09	-01	08	-09	-07	09	12	03	-03	03	-15	-08	-07	04	12	06	13	-08
LDR INF 5	07	06	18*	03	05	-11	04	09	16	01	07	08	10	-08	10	15	06	-14
LDR INF 6	-08	00	-03	04	11	06	18*	03	13	02	12	19*	08	07	07	10	04	-12
DY RELS	-01	50**	06	12	51**	-02	09	16	36**	16	27**	19*	18*	02	-01	-01	-02	-18*
DY TKST	10	03	20*	06	25**	10	10	04	29**	-02	09	00	00	-03	10	12	-08	-10
DY TKCH	10	36**	-14	00	33**	-08	08	32**	18*	17*	20*	19*	23**	42**	11	03	-07	03
DY WKATM	05	54**	21*	28**	57**	18	13	14	33**	[illegible]	[illegible]	26**	-07	15*	07	10	03	-24**

NOTE: DECIMAL POINTS HAVE BEEN REMOVED

Table 14 (Part III)

Correlations for All Scores for the Class of 1980

	DUTY 21	JOB SAT	SS SOCIAL	SS POLICY	SSM DEV	SSWK REL	SOC SAT 15	SELF PLAN	SUP PLAN	A HEAD	INVOLVE	INTENT	ROLE	STYLE	SPOUSE 1	SPOUSE 2	SPOUSE 3	SEX
DUTY 21	--																	
JOB SAT	11	--																
SS SOCIAL	-06	20*	--															
SS POLICY	-14	37**	48**	--														
SS M DEV	-09	67**	34**	46**	--													
SS WK REL	09	08	24**	22**	18*	--												
SOC SAT 15	-11	19*	34**	34**	28**	15	--											
SELF PLAN	13	15	04	-16	13	07	-12	--										
SUP PLAN	04	30**	16	13	35**	11	12	44**	--									
A HEAD	06	25**	11	-05	29**	08	-02	36**	29**	--								
INVOLVE	12	46**	18*	19*	43**	19*	02	27**	40**	41**	--							
INTENT	03	36**	11	14	33**	09	02	06	20**	47**	60**	--						
ROLE	-06	45**	20*	33**	50**	27**	32**	07	25**	14	34**	29**	--					
STYLE	-06	25**	42**	31**	29**	35**	22**	07	10	13	29**	24**	58**	--				
SPOUSE 1	08	04	13	17	11	34**	06	-09	23**	26**	41**	42**	15	39**	--			
SPOUSE 2	14	12	30**	21**	24**	22*	20**	01	25**	29**	44**	45**	36**	38**	65**	--		
SPOUSE 3	22**	-06	18	23**	05	20*	05	-02	08	08	22**	20*	16	27**	51**	46**	--	
SEX	-03	-14	-06	-09	-19*	17	03	00	-20**	08	-11	-29**	23**	02	24**	-17	15	--

NOTE: DECIMAL POINTS HAVE BEEN REMOVED

Appendix A

Data Summary of the Postgraduation Questionnaire

and a Key to Table 14

The overall goal of both initial technical reports dealing with the 1982 data collection from the Class of 1980 was to prepare the data set for further analyses. With these descriptive and psychometric analyses complete, a summary of the data can be presented. The following 41 items represent the entire 132-item questionnaire. (The computer name of each variable will be listed as well as a brief description of the variables; the abbreviation "R" stands for Respondent.)

Variable	Description
LDREFF	R's* self-perceived leadership effectiveness
UNEFF	R's perception of his or her unit's effectiveness
UNPERF1	the degree to which the skill of the leader contributes to unit performance
UNPERF2	the degree to which the skill of subordinates contributes to unit performance
UNPERF3	the degree to which the hard work of the leader contributes to unit performance
UNPERF4	the degree to which the hard work of subordinates contributes to unit performance
UNPERF5	the degree to which good luck contributes to unit performance
UNPERF6	the degree to which bad luck contributes to unit performance
LIPERS	leader uses personal influence
LIREAS	leader explains reasons for directives
LDRINF2	skill as an influence strategy
LDRINF4	hints as an influence strategy
LDRINF5	threats as an influence strategy
LDRINF6	flattery as an influence strategy

R* refers to respondent

DYRELS	relationship of R with superior
DYTKST	task structure of R's present assignment
DYWKATM	work atmosphere of R's present assignment
DYTKCH	task characteristics of R's present assignment
DUTY21	interference by others in R's job
JOBSAT	current job satisfaction
SSSOCIAL	satisfaction with R's social life
SSPOLICY	satisfaction with R's military policies
SSMDEV	satisfaction with R's military development
SSWKREL	satisfaction with R's work relations, including career support by family
SOCSAT15	satisfaction with fraternization policy
SELFPLAN	the degree to which R plans his or her own career
SUPPLAN	the degree to which R gets advice from superior with career planning
AHEAD	how far ahead R plans his or her career
INVOLVE	an index of job involvement
INTENT	intent to stay in the Army
ROLE	adjustment to the role of Army officer
STYLE	adjustment to the life-style of the Army
MARSTAT	R's marital status
SPOUSE1	commitment of R's spouse to Army life
SPOUSE2	support of spouse for R's career

SPOUSE3	compatibility of R's career with spouse's
SPOUSE4	combining career with family
CHILD	presence of child(ren)
SEX	0 = male; 1 = female
HEAD	major command headquarters
ASSIGN	present duty assignment

DESCRIPTIVE ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE

FOR THE CLASS OF 1981

Technical Report 83-3

JEROME ADAMS

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Technical Report 3

DESCRIPTIVE ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE FOR THE CLASS OF 1981

Abstract

This report is the third in a series analyzing the information collected from 144 graduates of the U. S. Military Academy in the Class of 1981. This survey involved their post-graduate lives in the regular Army after their first year as officers. The purposes of this third report are to: (1) give details of response coding for this survey, (2) format the data for later analyses, and (3) provide general descriptive statistics. The psychometric properties of the various sections of this questionnaire are outlined, and directions for future substantive analyses are suggested.

NOTE: Any conclusions in this report are not to be construed as official U. S. Military Academy or Department of the Army positions unless so designated by other authorized documents.

Technical Report 3

DESCRIPTIVE ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE FOR THE CLASS OF 1981

The purpose of the present technical report are three-fold:

1) to verify response coding;

2) to format the data for later analyses;

3) to furnish a general pattern of responses.

The last goal will serve as a basis from which to debrief participants as well as familiarize researchers and Academy policymakers with the initial findings. The actual questionnaire may be referred to in Appendix A.

This report parallels "Technical Report 1: Descriptive Analyses of the Postgraduation Questionnaire for the Class of 1980." Both reports describe the initial data maintenance and analyses for the two surveys completed by West Point graduates in the summer of 1982. The first report deals with the responses from the Class of 1980 in their second year as officers in the regular Army, while the present report examines the Class of 1981 at the end of their first year after leaving the Academy. Before we discuss the three purposes of the present technical report, let us briefly examine the questionnaire and the method of data collection.

Method

The Questionnaire

A superficial review of the questionnaire in Appendix A shows that it is divided into ten sections which assess:

1) leader and unit effectiveness and unit performance,*

2) types of influence strategies used by leaders (scale),*

3) moral values and ethical conduct,

4) West Point experiences, including academic, social,

physical, and military development (scales),

5) military transition from cadet to officer (scale),

6) characteristics of the respondent's present duty assignment (scale),*

7) satisfaction with social and personal life (scale),*

8) degree of career involvement,*

9) overall commitment and adjustment, including commitment of spouse (where applicable),*

10) demographic information.*

The starred (*) items were duplicated from the questionnaire given to the members of the Class of 1980. Each of the five scales comprises a series of interrelated items and hence will be factor analyzed at a later time in order to understand the underlying test structure. No preliminary findings will be discussed for these five scales in the present report.

Data Collection

All participants in the study were graduates in the Class of 1981, the second co-educational class at the United Stat litary Academy at West Point. The sampling plan oversampled women in that all female graduates were contacted. A stratified sampling technique was used to select men so that the men would be representative of West Point graduates on two variables; speciality and geographic location. In this way, the sample of men reflected the same proportions on branch specialty (e.g., infantry, engineering, military police, etc.) and location (e.g., continental United States, Europe, Hawaii, etc.) as the entire population of graduates. For example, if 60% of all male graduates went overseas, the sample was selected so that 60% of the men responding were from units overseas. The sample size was determined by the number of graduating women. Three men were selected for each female respondent. All female graduates of the Class of 1981 were selected.

Data Analyses

Verification of Coding

The verification of the coding for the survey concentrated first on the raw data, then on the actual coding or labelling of these data. Regarding the former, perusal of the raw data revealed one duplication, that is, the same entry had been made two times. A check of this case verified the duplication. Thus, and one entry was eliminated. This reduced the original set of 151 respondents to 150.

The original coding of the data followed a simple pattern--the first (top) choice for each item was coded zero; the second, one; and so on. Missing scores were read as blanks. Each item was examined individually and recoded to conform to the basic rules of Likert scaling--responses ranged from one to the uppermost score with the latter representing the positive end of the scale. Blanks were recoded to the missing value of 9, and "don't know" and "not applicable" were given the missing value code of 8. Following these general rules, the first item of the questionnaire (effectiveness in present duties) was recoded so that response A = 3; B = 2; C = 1; D = 8; Blanks = 9). To verify these recodings, the frequency distributions of both the raw scores and transformed scores were cross-checked.

To be consistent with the pattern described above where high numbers represent the positive responses for each item, four items in the scale, military transition, were reverse coded from the remaining items. In order to be positive, a respondent would disagree with items 2, 3, 4, and 6 of this scale. Finally, item 132 checked the class year of all respondents. Since this is a survey of only the Class of 1981, six of these marking another year were removed from further analyses. This reduced the data set of 150 entries

to our final sample size of 144 cases.

Preparation for Further Analyses

Prior research using the items assessing leader and unit effectiveness found that a composite of each of these measures was best formed by converting each item to its z-score (X = 0; sd = 1), then summing the items (Adams, Rice, & Instone, 1980). This was done with the reduced set of 144 viable cases and with the item means generated without the missing data.

The internal consistency (coefficient alpha) was calculated for all multi-item measures. The reliabilities and factor analyses of the five scales (leader's influence, West Point experiences, military transition, present duty, and social/personal satisfaction) will be described in another report. Data reduction of of these scales will be necessary for further analyses. The reliabilities of the remaining three measures (unit performance = .52; moral values = .14; career involvement = .85) are useful in creating composites of these measures for later analyses.

Since the internal-consistency reliabilities of the six items assessing unit performance and of the five items measuring moral values are weak, these items will be treated singularly. In contrast, the high inter-item reliability of the six items of career involvement justifies the summation of these items to produce an unit-weighted composite.

Preliminary Findings

Respondents' characteristics. Let us first review the basic background information concerning respondents. Thirty women (21%) and 114 men responded to the survey. All graduated in the Class of 1981. The majority of men are single (44% single; 36% married; 9% engaged), while equal numbers of women are single (43%) and married (43%, 13% engaged; see Table 1). Of those who are married, most (85%) have at least one child.

Men and women have similar major command headquarters ($x(4) = 3.29$, ns; see Table 2). The largest number are at Forces Command (58% of the men; 47% of the women), with the U. S. Army in Euripe coming in second (24% of the men; 40% of the women). The remainder are spread over Training and Doctrine Command (men = 5%; women = 3%), Western Command (10%; 7%, respectively), and other locations (4%; 3%).

There is a significant difference in the present duty assignments of male and female officers ($\overline{X}(3) = 15.96$, $p<.01$; see Table 2). Combat Arms is the most frequent assignment for men (73%; compared to only 37% of the women), while women cluster in Combat Support (43%, compared to 21% of the men). Women (17%) also dominate Combat Service Support as only four per cent of the men report having this duty assignment.

Standings at West Point. Each respondent was asked to estimate his or her final academic, physical, and military standings at West Point by indicating in which quarter of the class he or she finished. As can be seen in Tables 3 and 4, there were no differences in these ratings for male and female officers on measures of military development and physical education. With four indicating the top quarter in military development, both women ($\overline{X} = 2.93$) and men ($\overline{X} = 3.14$) rated themselves, on the average, near the middle of their class ($t(141) = 1.33$, ns; see Table 3).

Similar ratings were given for physical training by men ($X = 2.94$) and women ($\overline{X} = 2.93$, $t(142) = .03$, ns). In fact, when asked to list whether or not they participated in corps squad sports, many women (70%) reported that they participated in some sport, while only 28% of the men played individual and/or team sports (see Table 5). Women are physically capable and their activities while at the Academy demonstrate active participation in the sports programs.

An interesting gender difference appears for the estimates of academic standing. Although there is no significant mean difference for women ($\overline{X}$ = 2.70) and men ($\overline{X}$ = 2.99, t(142) = 1.40, ns), a superficial glance at Table 6 shows that few (7%) men ranked themselves at the bottom of their class in contrast to the women (27%). It is this difference between men and women in the last quartile that produces a significant Chi Square ($x(3) = 10.08$, $p<.02$).

There are two aspects of this finding that deserve thought before we conclude that the men represent the higher levels of their class academically. First, these ratings represent estimates--estimates tnat we would expect to be accurate given the Academy's publication of class standings. Secondly, if our sample is representative of the graduating Class of 1981, then we would expect twenty-five per cent of all responses to fall into each quarter. This last point argues that the women's estimate of 27% is more probable than the men's.

Because of this last point, an explanation for this apparent gender difference focuses on the men's rating, not the women's. There are two reasons why the men's proportion of 7% should fall so far below the expected value of 25%. First, given that the men represent a sample of the Class of 1981 (while the women are the population of female graduates), we inadvertently could have selected a biased group of men such that they are an academically superior segment of their class. The careful sampling plan design does not add support for this explanation. On the other hand, given a natural reluctance to identify oneself in the bottom quarter of one's class, men may have distorted their academic standing. However, to adopt this argument, one would have to show why this is true just for men. At this point, we only can engage in speculation.

Career planning. With only one year experience as an officer, the plurality (44%) are undecided about their career intentions. There are no significant differences between men and women in this regard ($x(4)=6.75$, ns; see Table 7). Overall, 7% of the respondents are planning to stay in the Army until retirement, and 24% plan to stay beyond their original obligation of five years. Five percent feel that they definitely will leave, and 21% indicate that they probably will leave the service. Given the high levels of indecisiveness on this issue, future data on this subject will present interesting trends as they approach the end of the five year obligation.

Career involvement. Using the composite of career involvement, overall involvement is moderately high ($\overline{X}$ = 3.4 on a five-point scale), and there are no significant differences between women ($\overline{X}$ = 3.3) and men ($\overline{X}$ = 3.4, $t(129)$ = .24, ns). Overall, many officers showed some career involvement by agreeing with the six items of the scale. Agreement ranged from 49% who identify with their careers to 78% who get a sense of pride from their career (see Table 8).

Although there are no significant differences in the career involvement reported by women and men, Table 8 does show some interesting descriptive data about officers' career involvement. For example, a full 46% of the women and 29% of the men would not state their career as the first part of a self-description. Similarly, 29% of the men and 20% of the women would not rank their career at or near the top of what they do.

Although career involvement is important to these officers, it is one of many aspects of the officers' lives and is treated as such. Career then is only a portion of what officers consider when they describe the quality of their lives. Further work, especially with the scale on social and personal

satisfactions, may help identify some of the other contributors to the quality of officers' lives.

Overall commitment and adjustment. Graduates' adjustments to both the role of an officer and the Army's life-style are high ($\bar{X}$ = 4.17; $\bar{X}$ = 4.00, respectively; five-point scales). Additionally, there are no significant gender differences on these variables. Women ($\bar{X}$ = 3.97; $\bar{X}$ = 4.07) and men ($\bar{X}$ = 4.23; $\bar{X}$ = 3.98) adjusted equally well to the role of an officer and the military's life-style, respectively ($t(142) = 1.63$, ns; $t(141) = -.46$, ns).

The 51 (45%) men and 17 (56%) women who are married or engaged were asked to rate: the commitment they feel their spouse or fiance exhibits (1) toward Army life and (2) toward the respondent's career; and (3) the degree to which the careers of these partners are compatible. Most officers (73%) feel that their spouse is committed to the officers' career, and of the 64 dual-career couples, the majority (60%) experience career compatibility (see Table 9). There are no gender differences for these two measures.

As can be seen in Table 9, the husbands of female officers ($\bar{X}$ = 4.8) seem to be more adjusted to the Army's life-style then are the wives of male officers ($\bar{X}$ = 3.5, $t(66) = -5.07$, $p<.05$). In fact, all women rated their husbands' commitment to the Army's life-style as being positive. As noted in the first technical report when a similar pattern of results was found for the Class of 1980, this finding may be confounded by the possibility that husbands of female officers tend to be military personnel, more so than the wives of most male officers. Hence, the former would be committed to the Army's life-style by virtue of both their own career as well as that of their wives.

The final item in this section deals with the plans of married and engaged officers to combine or separate career and family plans (see

Table 10). The pattern of responses of women and men do not differ for this item ($x(5) = 8.61$, ns). Although most officers (86%) do plan to have children, there are variations in how they plan to combine these familial plans with their careers. Men are equally split between combining a family with a military (43%) and with a civilian (43%) career. In contrast, the majority of women (53%) plan to have a military career and a family. Only 20% of these women are planning to pursue a civilian career in combination with raising a family.

These seeming differences between men and women fade when we take a broader look at this table. Forty-eight percent of the men and 53% of the women are planning military careers. Although women seem to have an option open to them that is socially undesirable for the men (i.e., they can return to civilian life, have children, and give up their careers), interviews by Major Jerome Adams indicate that few women read the fifth item (children after the Army) this way. Rather, most regard this item as similar to the preceeding one; that is, both items seem to measure the respondent's willingness to combine a civilian career with having children. When we combine these two items (total civilian life/children), the figures for men (43%) and women (33%) become more compatible. Follow-up interviews will add additional information whether respondents are planning to abandon their career and remain at home with their children.

Comparisons of the Classes of 1980 and 1981

Although the data sets for both the Classes of 1980 and 1981 are separate so that direct statistical comparisons cannot be made at this time, we can compare general trends across the two samples. Remember that both surveys were distributed in the summer of 1982 when the Class of 1980 had been officers for two complete years and the Class of 1981 was just finishing

their first year. A comparison of the two classes may reveal some insights into changes that take place across this second year as well as illustrate some similarities and differences across the two classes. It is to these similarities that we first will turn.

Similarities. The sample sizes are strikingly similar with equal proportions of women and men. Furthermore, both groups report comparable duty assignments, with men clustering in Combat Arms and women in Combat Support.

Both samples show moderate levels of career involvement for both women and men. Officers are committed to their careers, but not to the exclusion of other aspects of their personal and social lives. The additional research exploring the quality of life of these graduates will be most information on this issue.

Men and women in both classes report few difficulties in adjusting to the life-style of the Army. After four years at the Academy, the life-style of the regular Army probably comes as no surprise. Furthermore, married and engaged officers from both classes find that their spouse supports the respondents' career. Dual-career couples report that their careers are compatible. Even spouses seem committed to the Army's life-style in many marriages. In sum, Army life seems to agree with the officers and their spouses in both the Class of 1980 and 1981.

In both surveys, spouses' commitment to the Army's life-style was higher for husbands than for wives. It is likely that female military personnel marry other military men, while, with so few military women to choose among (8%), many male officers probably marry civilian women. If this is true, husbands of military women are likely to be committed to the Army's life-style by virtue of both their own and their wives' careers.

Differences. Before we explore the differences between the Classes of 1980 and 1981, remember that there are two confounded explanations for these differences: (1) they may be a function of characteristics of the difference classes, that is, of different populations and/or (2) they may result from changes that take place between the first and second years after graduation from the Academy. These two potential explanations cannot be differentiated within the current data sets. However, the broader research project of multiple testings of each class across several years will shed some light on these two competing possibilities. For now, it is best to consider the following to be descriptive, rather than explicable, differences.

The most basic difference in the demographics of the two classes is their marital status and children. Fewer men and women in the younger class are married, however, among these married officers, most have children. The prototype of the Class of 1980 is married and childless. The average man in the Class of 1981 is single while women in this class are split between marriage and being single. One begins to wonder if the younger class will catch up in the next year.

The women in the first coed class are stationed at a different pattern of command headquarters than are the other groups. These women are most likely to be in Europe, while the remaining groups cluster at Forces Command. In fact, for the younger class, there are no differences in the patterns of assignments for women and men.

A comparison of Table 1 of the first technical report and Table 7 of the present report shows a differet pattern of responses concerning officers' career plans. Most notably, the statistical analyses reveal a gender difference in the more experienced class in which women report greater

intentions to leave the Army. However, it must be noted that the Army had began a study to reevaluate the roles and specialties for women in the Army. The pioneering class of women in 1980 were more sensitive to this policy review as they would be the first groups affected by it (e. g., assignment, career tracking, etc.). Women in the class of 1981 were more likely to focus on learning their initial jobs. There are no differences in the career intentions of men and women in the Class of 1981. A quick review of the distributions of the two classes on this variable shows that more younger officers tend to be undecided about their career plans. If the Class of 1981 follows in the footsteps of the Class of 1980, we would expect more of these undecided women to opt for leaving the Army rather than staying. If this happens, the two classes will be more comparable.

This speculation raises some serious questions about the career intentions of women. If there originally are no gender differences but they develop over time, then policymakers need to explore the reasons for these changes. Does disillusionment set in among the women? Again, longitudinal analyses need to be completed to explore these ideas. However, the data at this time are suggestive and should be explored further to encourage continued success among female officers.

The above argument is strengthened by the existent data on respondents' evaluations of their own adjustments to the role of an Army officer. In the Class of 1981, the reported adjustment of both male and female officers is high and similar. In contrast, in the older class, women are less satisfied with their adjustment to this role than are men. Again, we need to know if the adjustment of these women declined or if these women faced particularly difficult circumstances as the first group of West Point graduated.

Interesting differences between the two classes are illustrated in Table 5 of the previous report and Table 10 of the present report which deals with career and family planning. Among these married and engaged officers, men in the Class of 1981 are split between a military and a civilian career, while more older men prefer a military career. In both cases, women who plan a career are more likely to plan a military career. The proportion of women selecting the option, "children after the Army," (which implies the abandonment of a career) is cut in half by the Class of 1981. Are the older women again more frustrated with their careers than their younger counterparts?

Conclusion. With only these two data sets available at the present time, the similarities and differences reported here between the Classes of 1980 and 1981 surveyed in the summer of 1982 are best regarded as descriptive. To make inferences as to the reasons behind these similarities and contrasts would be to spectulate beyond the existent data. However, it is speculation of this sort that is most interesting as it allows us to better understand each unique class as well as the elements they both share as these graduates travel along similar career paths. Some ideas concerning how to pursue this exploration will be forwarded in the last section of the present report on substantive issues.

Conclusions

In concluding this report on the data collected from the Class of 1981, there are two general areas for comment: (1) statistical and (2) substantive. The statistical concerns outlined here will guide further analyses of the postgraduation questionnaire. Additional inferential analyses are suggested in the section on substantive concerns.

Statistical Concerns

The following statistical guidelines will be followed in future analyses of each of the ten sections of the questionnaire:

1) Leader effectiveness will be measured by a composite (unit-weighted summation) of the z-scores for the first three items; unit effectiveness will be designated by the sum of the z-scores for the next two items; the six items of unit performance will be analyzed separately.

2) The internal consistency of the five scales (the nine items measuring strategies of leaders' influence; the 22 items describing the officers' West Point experiences; the nine-item scale of military transition; the 34 items outlining the characteristics of the respondents' present duty assignment; and the 25-item assessment of satisfaction with social and personal life) will be calculated. Additionally, each scale will be factor analyzed and a composite for each factor will be computed. The primary purpose of these analyses will be data reduction.

3) The five items assessing moral values and ethical conduct will be analyzed as single variables.

4) Career involvement may be represented by the single, unit-weighted sum of the six items.

5) The items which compose the section on overall adjustment and commitment (intentions for military career, adjustment to role of officer, adjustment to Army life-style, the three items on spouses' commitment and career compatibility, and combining career with family) will be used as individual items.

6) The demographic information (marital status, children, sex, class year, command headquarters, present assignment, standings at the Academy in academics, physical training, and military development, and squad) will be used as separate items.

Substantive Concerns

The following substantive concerns deal with the substance of the 1982 surveys. In particular, two lines of thinking will be pursued: (1) ideas for future analyses suggested by the descriptive analyses of the survey from the Class of 1981, and (2) thoughts about what comparisons between the two classes will be of interest as the longitudinal data of the larger project are available.

Future analyses. The present data set alone offers some intriguing possibilities for additional exploration. For example, it would be interesting to uncover the relationship between an officer's West Point experiences and achievements and that officer's present success in the regular Army. The many items dealing with West Point experiences and the respondents' ratings of their academic, physical, and military standings offer us the chance to measure the former cadets' training at the Academy. The measures of both unit and leader effectiveness provide a basis from which the officers' current success can be assessed.

A second area for future work concerns intent to remain after five years. First, this is a good general measure of each officer's present, overall satisfaction. Secondly, it will be worthwhile to note whether these early assessments of intention are related to actual Army commitment. Finally, given these strengths of this item, it will be informative to explore the correlates of it. Some potential correlates are respondents' overall career

involvement, commitment, and adjustment to both the Army's life-style and the role of an officer.

Furth. work with this measure of career intentions could focus on the relationship between this measure and demographic measures. For example, is intent to remain associated with an officer's marital status or the compatibility of the careers of dual-career couples? It would be informative for admissions officers to compose a commitment profile of the most likely and wavering candidates. A final focus for immediate work is on the relationship between the influence strategies used by current young officers and their degree of leadership effectiveness. These types of analyses may shed some light on what the present officers can do to improve their own leadership behaviors.

Overall, these analyses involve correlations and regression analyses which can be conducted within the present data set. The results of such work should be of interest to the officers themselves, their superiors in the field, policymakers at the Academy, and other researchers.

Future comparisons. The goal of these analyses is to tease out the reasons behind the differences between graduated classes. To do this, longitudinal data collections for each classs must be available. The focus in this work will be to distinguish between true developmental trends and class differences. Often, the Class of 1980 has been regarded as an unique entity because of its destiny as the first coeducational class. These data will show where this is true and where the problems and successes of this first class are repeated in later classes.

The present comparisons of the Classes of 1980 and 1981 suggest several areas for additional work. For example, will the Class of 1981 reach the

higher level of marriage shown for the Class of 1980 two years after leaving the Academy? Will these newer marriages wait to have children so that the birth rates between these classes become comparable?

A second series of questions centers on intention to stay beyond obligation. In the younger class, a plurality of officers are undecided about their future career plans. To parallel the data from the older class, the members of the Class of 1981 will have to lean more heavily toward the negative end of this scale. In other words, the most likely and consistent scenerio is that undecided female officers will decide to leave the Army within the next year. If this happens, it would be informative to explore the reasons behind this change of heart. If it does not happen, then questions remain concerning the less optimistic intentions of female graduates in the Class of 1980.

A parallel line of logic can be pursued with the measures of adjustment. Both groups report satisfactory adjustment to the Army's life-style, but women in the Class of 1980 do not feel well-adjusted to the role of officer. Is it because these are the pioneering, ground-breaking women? Do they indeed make it easier for subsequent classes. Or, will the women in the younger class come to feel equally discontent by their second year? Again, class versus developmental patterns need to be distinguished.

A final note concerns a point of congruence between the two data sets. In both cases, career-oriented women are more likely to choose military over civilian careers. The same is true for men in the Class of 1980. However, the men in the younger class are split between military and civilian careers. It is fair to say that coroborating information obtained from these graduates in group structured interviews suggests that the less experienced

officer has adopted a wait and see attitude. That is they want to give the Army a chance and see if their personal expectations approximate their actual experiences during the first five years in the Army.

In sum, this is a rich data set that will be enhanced by future data collections on both the Classes of 1980 and 1981. The questions which can be explored within this project will be informative to policymakers at the United States Military Academy, to superior officers working with these graduates in the field, to the personnel making field assignments for graduates, to recruiters, and to researchers.

Table 1

Marital Status by Sex for the Class of 1981

Marital Status	Men	Women	Total
Single	63(55%)	13(43%)	76(53%)
Engaged	10(9%)	4(13%)	14(10%)
Married	41(36%)	13(43%)	54(38%)
Total	114(79%)	30(21%)	144(100%)

Note.-The first entry is the raw number; the percentage in parentheses is the column percentage, that is, the proportion within each sex. The column total reflects total marital status; the raw total indicates sex percentages.

Table 2

Percentage of Men and Women in the Class of 1981

by Major Command Headquarters and Present Assignment

Major Command Headquarters	Men	Women
Forces Command	58	47
Training and Doctrine Command	5	3
U. S. Army Europe	24	40
Western Command	10	7
Other	4	3

Present Assignment[a]	Men	Women
Combat Arms	73	37
Combat Support	21	43
Combat Service Support	4	17
Other	3	3

[a]There is a significant difference in the present duty assignments of men and women ($x(3) = 15.96$, $p < .01$).

Table 3

Men's and Women's Estimates of Their Military Development Standing

Estimate	Men	Women
Top Quarter	36	23
Second Quarter	43	27
Third Quarter	20	30
Fourth Quarter	1	0
Mean	3.14	2.93

Note.-The entries represent column percentages and the means for each sex. There are no significant differences between men and women for either the proportions ($x(3) = 2.53$, ns) or the means ($t(141) = 1.33$, ns).

Table 4

Men's and Women's Estimates of Their Physical Education Standing

Estimate	Men	Women
Top Quarter	28	33
Second Quarter	45	40
Third Quarter	20	13
Fourth Quarter	7	13
Mean	2.94	2.93

Note.-The entries represent column percentages and the means for each sex. There are no significant differences between men and women for either the proportions ($x(3) = 2.03$, ns) or the means ($t(142) = .03$, ns).

Table 5

Male and Female Members of a Corps Squad

Squad	Men	Women
No Sport	82(72)	9(30)
Individual Only	11(10)	5(17)
Team Only	14(12)	10(33)
Both Sports	7(6)	6(20)

Note.-The first entry is the raw number; the number in parentheses is the column oercentage. The patterns for women and men are significantly different ($x(3) = 19.03$, $p<.01$).

Table 6

Percentage and Mean Estimates

of Officers' Final Academic Standing at the Academy

Standing	Men	Women
Top Quarter	37	37
Second Quarter	33	23
Third Quarter	24	13
Fourth Quarter	7	27
Mean	2.99	2.70

Note.-A chi square test achieved significance ($x(3) = 10.8$, $p<.02$), although a significance test of the means did not ($t(142) = 1.40$, ns).

Table 7

Percentage of Men and Women

Reporting Each Career Intention

	Career Intentions				
Gender	Definitely Leave Army	Probably Leave Army	Undecided	Stay	Stay Until Retirement
Men	3	22	45	25	6
Women	13	17	40	20	10

Note.-Raw percentages sum to about 100, and the chi square is not significant ($x(4) = 6.75$, ns).

Table 8

Percentage and Mean of Women and Men

Agreeing With Each Statement of Career Involvement

Item	Response			
	Agreement	Neutral	Disagreement	Means
	Men/Women/Total[a]			
Identify	50/43/49	20/23/21	30/33/30	3.3/3.1/3.2
Well-being	58/64/58	20/13/19	22/23/22	3.4/3.4/3.4
Pride	76/87/78	16/3/13	8/10/8	3.9/4.0/3.9
Importance	53/40/50	20/37/24	26/24/26	3.3/3.2/3.3
Self-description	53/46/52	17/7/15	29/46/33	3.3/3.0/3.2
Ranking	51/53/52	20/27/21	29/20/27	3.3/3.3/3.3
Composite	52/56/53	33/27/32	15/17/15	3.4/3.3/3.4

Note.-Agreement reflects both responses, agree and agree strongly; disagreement is the sum of both disagree and disagree strongly. The overall degree of involvement is reflected in the means.

Table 9

Percentage and Mean

Committment and Career Compatibility of Spouses

Item	Response			
	Positive	Neutral	Disagreement	Means
	Men/Women/Total[a]			
Commitment to Life-Style	62/100/71	16/0/12	22/0/16	3.5/4.8/3.9[b]
Commitment to Career	74/72/73	12/22/18	9/6/8	3.9/4.1/3.9
Dual-Career Compatibility	59/64/60	20/18/20	20/18/20	3.5/3.7/3.6

Note.-Positive combines the responses committed/compatible and extremely committed/compatible, negative combines uncommitted/incompatible and extreme uncommitted/incompatible. The overall degree of commitmen/compatibility is reflected in the means. The raw percentages sum to approximately 100, given rounding error.

[a]The first figure in column is for men/the second is for women/the third is the total.

[b]The mean difference between men and women is significant ($t(66) = -5.07$, $p<.05$).

Table 10

Percentage of Married and Engaged Officers

Combining Career and Family

Career/Family Plans	Men/Women/Total[a]	
1. Military Career/No Children	5/0/3	
2. Military Career/Children	43/53/46	
Total Military Career		48/53/49
3. Civilian Career/No Children	5/7/5	
4. Civilian Career/Children	43/20/37	
5. Children After Army	0/13/3	
Total Civilian Career		48/27/42
Total Civilian Life/Children		43/33/40
6. No Family/Career Plans	5/7/5	
Total Wnating Children		86/86/86

Note.-Percentages are calculated by gender; for example, the first entry (5) means that 5% of all men plan a military career with no children. The numbered items are the original questionnaire items. The first column percentages for these numbered items sum to about 100.

[a]The first figure is for men/the second for women/the third is the total.

[b]This is the total who plan to return to civilian life, with or without a career, and have children.

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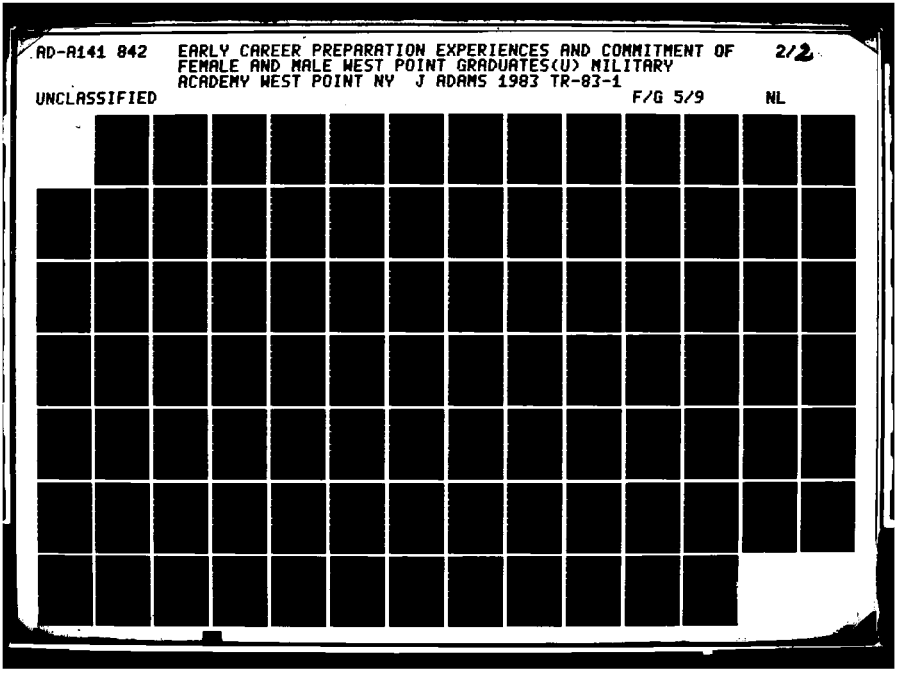

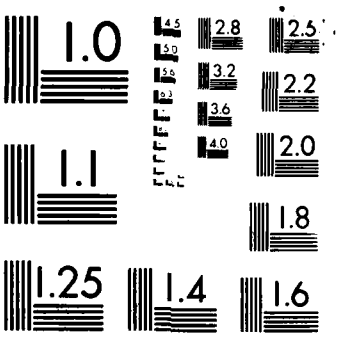

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Table 3

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Third Quarter	20	30
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Men's and Women's Estimates of Their Physical Education Standing

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Male and Female Members of a Corps Squad

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Percentage and Mean Estimates

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Percentage of Men and Women

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	Career Intentions				
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Note.- Row percentages sum to about 100, and the chi square is not significant ($x(4) = 6.75$, ns).

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Percentage and Mean of Women and Men

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Item	Response			
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Well-being	58/64/58	20/13/19	22/23/22	3.4/3.4/3.4
Pride	76/87/78	16/3/13	8/10/8	3.9/4.0/3.9
Importance	53/40/50	20/37/24	26/24/26	3.3/3.2/3.3
Self-description	53/46/52	17/7/15	29/46/33	3.3/3.0/3.2
Ranking	51/53/52	20/27/21	29/20/27	3.3/3.3/3.3
Composite	52/56/53	33/27/32	15/17/15	3.4/3.3/3.4

Note.- Agreement reflects both responses, agree and agree strongly; disagreement is the sum of both disagree and disagree strongly. The overall degree of involvement is reflected in the means.

Table 9

Percentage and Mean

Commitment and Career Compatibility of Spouses

Item	Response			
	Positive	Neutral	Disagreement	Means
	Men/Women/Total[a]			
Commitment to Life-Style	62/100/71	16/0/12	22/0/16	3.5/4.8/3.9[b]
Commitment to Career	74/72/73	17/22/18	9/6/8	3.9/4.1/3.9
Dual-Career Compatibility	59/64/60	20/18/20	20/18/20	3.5/3.7/3.6

Note.- Positive combines the responses committed/compatible and extremely committed/compatible, negative combines uncommitted/incompatible and extreme uncommitted/incompatible. The overall degree of commitment/compatibility is reflected in the means. The raw percentages sum to approximately 100, given rounding error.

[a]The first figure in each column is for men/the second is for women/the third is the total.

[b]The mean difference between men and women is significant ($t(66) = -5.07$, $p < .05$).

Table 10

Percentage of Married and Engaged Officers

Combining Career and Family

Career/Family Plans	Men/Women/Total[a]	
1. Military Career/No Children	5/0/3	
2. Military Career/Children	43/53/46	
Total Military Career		48/53/49
3. Civilian Career/ No Children	5/7/5	
4. Civilian Career/Children	43/20/37	
5. Children After Army	0/13/3	
Total Civilian Career		48/27/42
Total Civilian Life/Children		43/33/40
6. No Family/Career Plans	5/7/5	
Total Wanting Children		86/86/86

Note.- Percentages are calculated by gender; for example, the first entry (5) means that 5% of all men plan a military career with no children. The numbered items are the original questionnaire items. The first column percentages for these numbered items sum to about 100.

[a]The first figure is for men/the second for women/the third is the total.

[b]This is the total who plan to return to civilian life, with or without a career, and have children.

PSYCHOMETRIC ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE

FOR THE CLASS OF 1981

Technical Report 83-4

JEROME ADAMS

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Technical Report 4

PSYCHOMETRIC ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE FOR THE CLASS OF 1981

Abstract

This report is the fourth in a series analyzing the information collected from 144 graduates of the U. S. Military Academy in the class of 1981. This survey involved their post-graduate lives in the regular Army. The purposes of this first report are (1) to present the psychometric analyses of the scales of this survey and (2) to do preliminary analyses relating these scales to each other and the other measures of this survey. The original 138 items of the questionnaire are reduced to a set of 66 factors and items which prepare these data for further, more sophisticated work.

NOTE: Any conclusions in this report are not to be construed as official U. S. Military Academy or Department of the Army positions unless so designated by other authorized documents.

Technical Report 4

PSYCHOMETRIC ANALYSES OF THE POSTGRADUATION QUESTIONNAIRE FOR THE CLASS OF 1981

The purposes of the present technical report are twofold:

1) to present the psychometric analyses of the scales that are included in the postgraduate questionnaire given to the Class of 1981 in the summer of 1982;

2) to do preliminary analyses relating these scales to each other and to the other measures included in this survey.

This report will serve to supplement "Technical Report 3: Descripti Analyses of the Postgraduation Questionnaire for the Class of 1981," to pave the way for future analyses involving these data from the Class of 1981, and to verify some of the factor analyses completed with similar scales given to the Class of 1980. The last can be found in "Technical Report 2: Psychometric Analyses of the Postgraduation Questionnaire for the Class of 1980." Regarding future analyses, correlations among these scales and among the scales and the remaining components of the postgraduation questionnaire will suggest areas for future hypothesis testing.

Method

The Scales

For a complete copy of the postgraduation questionnaire refer to Appendix A of Technical Report 3 alluded to above. The work reported in this earlier report showed that five scales required psychometric examination. These are:

1) a nine-item measure of leaders' influence strategies,*

2) a 22-item description of West Point experiences, including academic, social, physical, and military development,

3) a nine-item assessment of the military transition from cadet to officer,

4) a 34-item evaluation of the characteristics of the officer's present duty assignment,*

5) a 25-item measure of the officer's satisfaction with his or her social and personal life.*

The starred (*) items listed above were duplicated on the survey given to the Class of 1980. We will refer to these scales and their psychometric properties (fully described in Technical Report 2) as we present the parallel scales here. This will be done in order to assure consistency in the reporting of these scales. This consistency will be crucial when comparisons of the two data sets are made.

Respondents

All participants graduated from West Point in the Class of 1981, the second co-educational class. The questionnaire was completed by 30 women and 114 men during the summer of 1982 which was one year after their graduation from the Academy (the total sample size is 144). The sample was selected by oversampling women and by stratifying the sample of men on two variables: speciality and geographic location. For a full description of the respondents, again refer to the earlier report dealing with the Class of 1981 (Technical Report 3).

DATA ANALYSES

Psychometrics

The purpose of this section is to provide basic psychometric information about each of the five scales. Specifically, each test will be factor analyzed, and the inter-item reliability of each scale will be checked. The purpose of these analyses is to uncover the underlying factor structure of

each measure for the purposes of data reduction. Then, these scales can be represented later by a few appropriate factors. This information will be presented with an eye toward future analyses which will depend on reliable and valid composites of each of these measures.

Leader's Influence Strategies

This nine-item scale assesses the type of leadership influence strategy the officer feels that he or she uses in his or her present duty assignment to deal with subordinates. Influence is defined as the "ability to get another person to think, feel or act in a manner they would not have done otherwise." Using a six-point Likert scale from never (1) to always (6), respondents rated the frequency with which they used strategies, such as reasoning, threats, and rewards, to influence the actions of subordinates.

A factor analysis of these nine items yielded four factors (with eigenvalues greater than one) which account for 64% of the total variance. A quick look at the factor loadings showed that the last two factors were created mainly by one variable each. Since the purpose of this analysis is data reduction, factors represented by only one variable are not useful. Furthermore, since work done with the data from the Class of 1980 argued for two factors (personal influence and reasoning) and four items (2, 4, 5, 6), both three-and two-factor solutions were forced.

A three-factor solution accounts for 52% of the total variance (see Table 1). The first factor, unlike the earlier analysis, involves four items (6, 7, 8, 9; earlier work did not include item 6, flattery, in this factor). The second factor confirms the earlier work as it too is an artifact of the reverse wording of items 1 and 3. In order to draw on the strength of both these items, they will be combined to form the second factor which measures the leader's use of reasoning to influence subordinates. (Note that the

loading for item 3 is negative so that a composite involving these items must reverse code one of then. To be consistent with the earlier work and with the general coding strategy for these quest nnaires which codes the positive end of a scale with a high number, item 1 will be reverse coded). Finally, the last factor comprises items 2 (skill) and 5 (punishment).

In considering the third factor, let us review one of the rules of thumb we used in Technical Report 2 to judge the validity of a factor. For a factor to be regarded as real, Nunnally (1967, p. 356) suggests that the inter-item correlations need to be significant. A conservative means for testing this significance is to calculate the mean correlation of the items and compare this to the third standard error for the sample. The latter is computed by taking the reciprocal of the square root of the sample size ($1/\sqrt{144} = .08$). This standard error then is multiplied by three (.24) to given a probability of less than .01. For all such tests then, the mean of the inter-item correlations must be greater than .24 to be significant and hence indicative of a true factor.

A closer look at the third factor shows that it is not a real factor because the correlation of items 2 and 5 ($r = .15$) is not significant (see Table 2). Forcing a two-factor solution, the two other factors are reaffirmed (see Table 3). Although a two-factor solution accounts for only 39% of the total variance, it is somewhat consistent with the earlier work with this scale and by adding the individual items to any analyses involving this scale, the representativeness of these factors will be enhanced.

The one remaining inconsistency concerns the first factor which previously had been labeled as the leader's use of personal influence strategies. The loading of item 6, flattery, on this factor does fit this earlier interpretation as all items deal with the interpersonal relationship

between the leader and his or her subordinates. Furthermore, returning to the second technical report (Table 14), there is evidence that item 6 belongs with this factor as the correlation between these two measures is .23, which is significant at the .01 level. For these reasons, the first factor in all analyses of this scale using the data from either the Class of 1980 or 1981 will be the unit-weighted composite of items 6 (flattery), 7 (personal punishments), 8 (personal reward), and 9 (helping the leader), and it is reasonably reliable (alpha = .61). It is felt that this composite will best represent the leader's use of personal influence. Also, the mean inter-item correlation for this factor is .27 which is significant at the .01 level (see Table 2).

Summary of leader's influence. This scale will be well represented by two factors (personal influence and reasoning) and three items (skill, hints, and threats). Personal influence is an unit-weighted composite of items 6 (flattery), 7 (personal punishments), 8 (personal rewards), and 9 (help the leader). Reasoning is a combination of item 3 and a reverse-coded item 1. The remaining aspects of this scale will be represented by the remaining single items which, when used separately, enhance the richness of this measure of leader's influence. Furthermore, this breakdown is more reliable than the nine-item scale (alpha = .36) would be.

West Point Experiences

This section of the questionnaire is divided into two subsections: (1) 18 items describing the respondent's preparation for his or her career while at the United States Military Academy and (2) four items asking officers to evaluate the value of their military training at the Academy. These items are distinct both because of the method of presentation of each (they are physically separated on the questionnaire) and because they use different

scales (the former ask for degree of agreement with each item while the latter ask the rater to evaluate the value of each training program). For these reasons, these subsections will be treated separately.

Military training. Let us turn first to the briefer scale--military training. Here, officers were asked to indicate on five-point scales how valuable each summer's military training at the Academy is for them now as officers. Although these four items were designed to assess military development, they do not combine in a sound way. This is shown both by the low internal consistency of these items (alpha = .25) and by the low inter-item correlations (see Table 4). These items will not be combined in future analyses; rather, they will be used individually.

Cadets' preparation. Cadets' preparation for the role of Army officer while at the Academy can be classified into five general categories: moral, academic, physical, social, and military. These areas of development are represented in the present survey by the five items on moral values and ethical conduct, the measures of military development, and some of the items in the scale entitled, "West Point Experiences." We then will look at this last scale with the expectation that we will find the remaining three categories of cadets' preparation--academic, physical, and social.

Given these intentions, the purpose of this factor analysis is to substantiate these three measures and to find the items which best represent each. Selecting eigenvalues greater than one, the first factor analysis produced a five-factor solution which accounts for a full 65% of the total variance (see Table 5).

The first factor encompasses four items, all of which deal with physical training at the Academy (items 6, 7, 8, and 9; see Table 5). As can be seen in Table 6, these four items are highly and significantly correlated ($\bar{X}$ = .51,

$p<.01$). Hence, the first factor represents the ratings of physical training that were expected to be measured by this scale. Furthermore, the four items of this factor combine to give a reliable measure of physical training (alpha = .69). Note that this factor incorporates item 8 which had not been included in earlier work.

The first five items of the scale on West Point experiences were designed to measure the impact academic training had on preparing junior officers for their initial assignments. The second factor on Table 5 comprises four of these five items. The first item which concerns preparation for Branch Course does not load on this factor (loading = .079) nor any other factor (its communality is .193). Table 7 shows that this item can be added to the other four to make a composite as the mean correlations with and without this item are both significant. However, the internal consistency of this factor is notably reduced when item 1 is included (alpha drops from .80 to .68). For this reason, a better measure of academic training does not include item 1; rather, an unit-weighted composite of items 2 (oral briefings), 3 (written correspondence), 4 (reports), and 5 (ability to communicate) is both a real and reliable factor.

The four items intented to compose a measure of each officer's social life at the Academy and the contributions this training made to his or present duty assignment created the fourth factor of this scale on West Point experiences. As can be seen in Table 8, items 15 (social obligations), 16 (social relationships), 17 (social life), and 18 (friendships) are all correlated, and their mean correlation (.37) is significant. This composite of social activities is internally consistent (alpha = .67).

The scale of West Point experiences was designed to contain items in

addition to the three categories of training described above. These items make up the remaining two factors (see Table 9). Items 11 (finances), 12 (personal time), and 14 (career/personal life) are highly and significantly inter-related. These form the third factor which can best be defined at the Academy's contributions to later personal life.

The final factor comprises only two correlated (.48) items: time and stress. Both items deal with West Point training that has helped officers to manage both time and stress on the job. Both these items then deal with work-oriented aspects of the officer's prior training.

Summary of West Point experiences. This scale represents four of the five pillars of training at West Point. Physical training is measured by items 6, 7, 8, and 9; social training by items 15, 16, 17, and 18; and academic training by items 2, 3, 4, and 5. The fourth area of cadets' preparation is assessed separately by the four items which compose the scale on military development. The focus of each of these measures is on how the respondent views the contribution of each area of training to his or her present capabilities as an officer.

The remaining items of this scale also may be useful. One factor (FACTOR III) assesses how well education at the Academy prepared each officer to deal with his or her personal life. Specifically, respondents report how well prepared they feel they are to deal with their own finances, personal time management, and balancing the demands of a career with their personal lives. The final factor (FACTOR V) is work-oriented, measuring the officers' ability to cope with stress and time pressures at work. Item 1 seems to add nothing to the other measures so that it will either be used individually or be dropped from future work.

Military Transitions

This nine-item scale of military transitions assesses the experiences and feelings each repondent encountered as he or she made the transition from cadet to officer. Repspondents rated each statement according to how much they agreed with it using a five-point scale with five representing strong agreement. As noted in Technical Report 3, four items of this scale (items 2, 3, 5, and 6) were reverse coded to conform to the general coding rules which dictate that positive activities are to be given ratings at the high end of each scale. These four items represent negative feelings or experiences so that it is positive for the respondent to disagree with them.

The initial factor analysis produced a three-factor solution which accounts for a full 66% of the total variance (see Table 10). The first factor represents the first three items of the scale all of which concern the confidence of the cadet turning to become an officer. As can be seen in Table 11, these three items are highly and significantly correlated.

The second factor will be computed as the unit-weighted summation of the scores for the last three items of the scale (see Table 10). These three items all deal with how effectively the new officer feels he or she can balance the responsibilities of both a career and a family. Again, the inter-relations of these items are significant, indicating that this indeed is a real factor (see Table 11).

The final factor is the simple combination of two variables--adjustment to the freedoms of being an officer (item 5) and handling that feeedom (item 6). The correlation of these two items is significant ($r = .48$). The third factor then measures reactions to new-found freedoms (see Tables 10 and 11). Finally, item 4, concerning how well informed the new officer felt about his

or her first assignment, did not load heavily on any factor (communality = .057).

Summary of military transitions. This nine-item scale is represented well by three factors and one variable (item 4). Feelings of confidence about the transition from cadet to officer are reflected in the unit-weighted composite of items 1, 2, and 3. Items 7, 8, and 9 combined to produce a rating of how well the respondent feels or she can balance career and familial responsibilities. Finally, the simple sum of scores for items 5 and 6 assesses how the new officer is reacting to the new-found freedoms which accompany the transition from cadet to officer.

Characteristics of Present Duty Assignment

Respondents were asked to think of their first duty assignment and to describe it on the next 34 items. Officers rated their assignment, in comparison to those of other new officers, on a five-point scale with five being "well above average." The overall reliability of this 34-item scale is .93.

This same scale was given to the members of the Class of 1980 in the summer of 1982, and its psychometric properties were reviewed in Technical Report 2. The analysis of the present data from this scale was not pursued in isolation; rather, comparisons between both data sets were made in order to confirm and/or improve the previous work. Before, we turn to the present data, let us briefly review the prior conclusions.

In technical Report 2 (see Table 3), four factors were uncovered: (1) relations with superior (items 3-10, 12-15, 17, 18, 19, 23, and 30); (2) task structure (items 24, 27, and 34); (3) work atmosphere (items 11, 16, 20, 22, 26, 28, 29, 31-33); and (4) task characteristics (items 1, 2, and 25). This

four-factor solution accounts for 59% of the total variance. Item 21 was dropped from the analysis because of its low communality, and item 12 was reverse coded.

A very similar pattern was produced for this scale by respondents from the Class of 1981. The original factor analysis yielded an eight-factor solution (accounting for 67% of the total variance). A Scree test of the eigenvalues again argued for a four-factor solution which accounts for 53% of the total variance (see Table 12 for the eigenvalues; the eigenvalue for the fifth factor is 1.32). A comparison of the varimax rotated factor matrices of each data set showed great similarity in the factor structures across the two samples. Ideally, one pattern for this scale would enhance the possibilities for direct comparisons of these data sets in the future. With this goal of one factor structure in mind, the factors and factor loadings for the Class of 1981 were explored with the previous table close at hand.

The four factors of the previous analysis essentially are replicated in the present analysis. The one large difference is that the third and fourth factors are reversed. However, since we simply are interested in factor analysis as a technique of data reduction, this has no ramifications for this presentation. There are some minor changes within the factors, and some alternate approaches were tried and discarded. Furthermore, item 21 which did not load on any factor in the 1980 data set does load somewhat on both the first (-.335) and third (-.316) factors of the present data. Since this one item was so out of place in our earlier work, it will be disregarded in the present factor analysis and will be treated as an individual item.

Let us follow the logic that produces Table 12 which is a final factor solution apropriate for both data sets. As can be seen in Table 12, the first factor almost totally replicates our earlier work. The only

difference is that item 6 failed to load on this factor for the 1981 data. Removing item 6 from our measure of officers' relationship with their superiors does not affect the internal consistency of this factor for the 1980 data (it remains high at .95), and an equally high reliability (.92) is found for the 1981 data. This factor is real as the inter-item correlations are high and their mean is significant (see Table 13).

That elusive item 6 showed up in FACTOR II, loading heavily (.615) on this factor for the 1981 data. However, returning to the original factor matrix for the 1980 data, item 6 did not load heavily on this factor, even though there was perfect agreement for the remaining items (24, 27, and 34). The acid test for this item then became the reliability estimates for the second factor with and without this item. For both data sets, the three original items produced a more internally consistent scale (with item 6: r (1980) = .84; r (1981) = .82)/ without item 6: r (1980) = .90; r (1981) = .85). There is no reason to add an item to a scale that is more reliable without it. For this reason, the third factor, task structure, is defined by the unit-weighted summation of scores for items 24, 27, and 34 (see table 14)

There were several items which loaded on the third factor, task structure, that had not done so previously. However, consistency across the two data sets and data reduction are the desired endpoints, and these items (16, 18-20) also loaded on the same other factors that they had previously. Ignoring these items then, there is perfect agreement between the two data sets. The third factor, task structure, is a composite of items 1, 2, and 25 which are significantly inter-related (see Table 14).

The fourth factor, work atmosphere, again is represented by items 11, 16, 20, 22, 28, 29, and 31-33 (see Table 12). Earlier work had included

item 26, personal morale, in this factor score. In the present data set, item 26 did not load heavily on this factor. Again, the reliabilities with and without this item were checked. In the 1980 data set, where this item did load on this factor, the reliability of the factor score is reduced only slightly by the deletion of item 26 (1980: with 26, r = .77; without 26, r = .75). The internal consistency of this factor without item 26 for the 1981 data also is sound (r = .71). Since this item adds so little to our measure of work atmosphere for the 1980 data, it will be removed from this factor in all future analyses. The factor score for work atmosphere then for both data sets will be the unit-weighted summation of the scores for items 11, 16, 20, 22, 28, 29, and 31-33. The inter-item correlations for this factor again confirm its existence (see Table 15).

Summary for present duty assignment. The factor structure outlined in Table 12 holds for both the 1980 and 1981 data sets. The first factor, relations with the superior, is the unit-weighted composite of items 3-10, 12-15, 17-19, 23, and 30. Task structure is computed by summing items 24, 27, and 34; and task characteristics by adding items 1, 2, and 25. Items 11, 16, 20, 22, 28, 29, and 31-33 compose the fourth factor of work atmoshere. Items 6, 21 and 26 are dropped from these factors and may be examined individually. Item 12 is reverse coded. All items of the scale also may be summed to give an overall rating of each officer's present duty assignment (alpha = .93).

Satisfaction with Social and Personal Life

On this 25-item scale, officers were asked to rate their early career satisfactions including satisfaction with their social and personal lives. They rated how satisfied they were for each entry on a five-point scale where five indicated extremely satisfied. Items ranged from satisfaction with marital status to living quarters to pursuit of personal goals.

The initial factor analysis yielded an eight-factor solution which accounts for 74% of the total variance. Prior work with this scale with the Class of 1980 gave a four-factor solution, and a Scree test of the eigenvalues confirmed the appropriateness of such a solution for the present data (see Table 16; the eigenvalue of the fifth factor is 1.42). A four-factor solution for these data accounts for 55% of the total variance.

Following the pattern of comparisons we used for the two data sets describing the characteristics of the present duty assignment (see the previous section), the factor analyses of this scale for both the 1980 and 1981 data sets were compared. Let us briefly review the conclusions for this scale described earlier in Technical Report 2.

The prior analysis generated four factors: (1) satisfaction with social life (items 5, 6, 8-12, 18, and 25), (2) satisfaction with military policies (items 7, 14, 16, 17, 19, 20, and 22), (3) satisfaction with military development (items 1, 2, 23, and 24), and (4) satisfaction with work relations (items 3, 4, 13, and 21). Item 15 on fraternization policies did not load heavily on any factor. For a quick review of these factors, refer to Table 10 of Technical Report 2.

The factor structure for the present data is similar but not parallel to the earlier structure. In fact, this different pattern opens up some additional ways to analyze this scale. Because of these differences, the factor structure for the 1981 data will be presented first without reference to the earlier work. Then, we will merge the two analyses to give a summary of this scale which can be used for both data sets. This last step is important for future analyses that wish to directly compare these data set using this scale.

The first factor again measures officers' satisfactions with their social lives, and it includes items 5, 7, 8-11, 15, 18, and 25. All these deal with aspects of the respondents' social life, including leave time, personal goals, and living quarters (item 7). These items are highly and significantly inter-related (see Table 17). Item 7 did not load on this first factor previously; items 6 and 12 no longer load on this item. In fact, the last two factors, both of which deal with social relations with the other sex, split off from the first factor to form the third factor (see Table 16).

The second factor deals with military life, including both military policies and military development. With the exception of item 7, this second factor is a combination of the earlier FACTORS II and III (see Table 16). These items, which cover many aspects of military life from pregnancy policies to career progress, are highly and significantly correlated (see Table 18).

The third and fourth factors comprise two and three items, respectively (see Table 16). The items that compose the third factor had been part of the first factor in the previous analyses. With the 1981 data, on the other hand, they form their own factor ($r = .76$; see Table 19), which is best described as social relations with the opposite sex. The fourth factor concerns work relations, combining satisfactions with noncommissioned officers, troops, and career supports (see Table 16). These three items form a real factor (the mean of the correlations is significant; see Table 19).

Item 13 did not load on the fourth factor, work relations, as it had done in our earlier work. In fact, this item did not load on any factor in the present analysis (communality = .162). Items 7, quarters, and 13, work relations with the opposite sex, do not fit both analyses.

Summary of satisfaction with social and personal life. Having reviewed both analyses with an eye to combining them, let us pull this all together and devise summary composites that reflect both analyses. Consistency across both data sets will be useful for later analyses that wish to directly compare graduates in the different classes.

When the non-overlapping items of the first factors are dropped (items 6, 7, 12, and 15), a highly reliable composite is created for both data sets (alpha (1980) = .88; alpha (1981) = .89). This composite is the unit-weighted summation of items 5, 8-11, 18, and 25. This composite is a measure of officer's satisfaction with their social lives. Related to this is the summation of items 6, marital status, and 12, relations with opposite sex. However, these items reflect only one important aspect of the new officers' social lives--their social relations with the opposite sex. For young officers these are important relationships, enough so that they merit their own factor separate from the first, broader measure of social life.

The argument made above tries to balance the demands of data reduction with a desire to represent the richness of the scale. A similar balance is sought with the factors concerning military life, policies, and development. A reasonably reliable measure of satisfaction with military policies can be computed by adding the scores for items 14, 16, 17, 19, 20, and 22 (alpha (1980) = .67; alpha (1981) = .72). An equally sound evaluation of satisfaction with military development, which captures the officers' concerns with their career development, can be made by combining items 1, 2, 23, and 24 (alpha (1980) = .70; alpha (1981) = .66).

These separate measures of satisfaction with military policies and military development may be useful for future researchers interested in these specific aspects of military life. A more global measure of military life also can be computed by simply adding these two factors. Hence, the combination of items 1, 2, 14, 16, 17, 19, 20, 22, 23, 24 will give a sound assessment of satisfaction with military life in general (alpha (1980) = .77; alpha (1981) = .80). The usefulness of each of these factors will depend upon the hypotheses and interests of future researchers.

Finally, satisfaction with work relations is reliably measured by summing items 3, 4, and 21 (alpha (1980) = .80; alpha (1981) = .81). Items 7 (quarters), 13 (work relations with the other sex), and 15 (fraternization policy) are not involved in the above factors. These items may be used individually by interested researchers. Additionally, all 25 items can be combined to form one overall measure of satisfaction (alpha (1980) = .90; alpha (1981) = .88). Again, the interests of future researchers will dictate which of the preceeding combinations will be useful.

Overall Summary

The five scales will be represented by the following factors and items (an abbreviated name for each is listed in parentheses; labels with numbers correspond to the same-numbered, single item of the scale): A) Leader's Influence Strategies

1. influence based on personal directives (LIPERS)
2. influence based on reasoning (LIREAS)
3. influence based on skill (LDRINF2)
4. influence based on hints (LDRINF4)
5. influence based on threats (LDRINF5)

B) West Point Experiences

1. academic training (WPACAD)
2. physical training (WPPT)
3. social skills (WPSOCIAL)
4. contributions to personal life (WPPERS)
5. contributions to work life (WPWORK)
6. military development (MILDEV1 - MILDEV4)

C) Military Transitions

1. confidence in transition (MTCONFID)
2. balance of career and family obligations (MTCARFAM)
3. adaption to new freedoms (MTFREE)
4. informed about first assignment (TRANS4)

D) Characteristics of Present Duty Assignment

1. relationship with superior (DYRELS)
2. task structure (DYTKST)
3. task characteristics (DYTKCH)
4. work atmosphere (DYWKATM)
5. administrative effectiveness of superior (DUTY6), interference (DUTY21), and contentment (CUTY26)

or

1. overall rating (sum of all items) (DUTY)

E) Satisfaction with Social and Personal Life

1. satisfaction with social life (SSSOCIAL)
2. satisfaction with military policies (SSPOLICY)
3. satisfaction with military career development (SSMDEV)
4. satisfaction with work relations (SSWKREL)
5. satisfaction with social relations with opposite sex (SSXSEX)

6. satisfaction with quarters (SOCSAT7), work relations with opposite sex (SOCSAT13), and fraternization (SOCSAT15)

or

1. overall satisfaction (sum all items) (SOCSAT)

or

2. combine policies and military development to give an overall measure of satisfaction with military life (SSMLIFE)

Construct Validity

Each of the above factors represents a reasonable interpretation of a factor analysis of a multi-item scale. Furthermore, each factor withstood a significance test of its inter-item correlations, and all are substantially internally reliable. As future data sets become available, the test-retest reliability of each factor will lend additional evidence of their stability over time. The final issue that we need to consider is their validity; most importantly, their construct validity. Do each of these factors measure what they purport to measure? If so, factors should be related to other variables in the data set in a pattern consistent with our interpretations (see Table 20).

Leader's influence strategies. A leader's reliance on reasoning to influence subordinates shows a preference for cognitive skills that should be utilized by intellectually astute individuals. Hence, we would expect this factor to be related to an officer's academic standing while at the Academy if our interpretation of this factor indeed is valid. The positive and significant correlation between a leader's reported use of reasoning and his or her academic standing ($r = .25$, $p < .01$) is consistent with his logic. As in Technical Report 2, no variables within the present data set appear to be logically connected with the other factor for this scale, personal influence. Again, caution is warranted regarding the future use of this second factor.

West Point experiences. We would expect the academic, physical, and social training of cadets at the Academy to contribute to later success as an officer. Indeed, officers who report that their academic, physical and social training helps them in the regular Army also describe themselves as effective leaders ($r = .46$, $p<.01$; $r = .17$, $p .05$; $r = .29$, $p<.01$, respectively). Furthermore, social training is positively related to both adjustment to the Army's life-style (STYLE; $r = .32$, $p<.01$) and satisfaction with work relations ($r = .31$, $p<.01$).

Following a parallel train of thought for the remaining two factors, both seem valid. The cadets' preparation for their personal lives is associated with satisfaction with their social lives ($r = .25$, $p<.01$) and keeping a good balance between career and family demands ($r = .19$, $p<.05$). Like the three pillars of cadet development, training for work (WPWORK) predicts reported leader effectiveness ($r = .40$, $p<.01$); and it also is related to confidence in making the transition from cadet to officer ($r = .27$, $p<.01$).

Military transitions. Confidence in making the transition from cadet to officer is corelated with both leadership effectiveness ($r = .30$, $p<.01$) and adjustment to the role of Army officer ($r = .28$, $p<.01$). Predictably, being able balance career and familial demands (MTCARFAM) is associated with dual-career compatibility ($r = .25$, $p<.05$). Finally, respondents who report a favorable work atmosphere also are coping well with the new freedoms of being an officer ($r = .24$, $p<.01$).

Characteristics of present duty assignment. An officer's relationship with his or her superior is a central component of the present duty assignment. This important relation is related to both leader ($r = .19$,

$p<.05$) and unit ($r = .20$, $p< .05$) effectiveness. Additionally, good relations with the superior are associated with satisfaction with work relations in general ($r = .28$, $p<.01$). When the officer's tasks are highly structured, we would expect that the officer would regard the skill of subordinates to be less important to unit effectiveness ($r = -.27$, $p< .01$). Also, when the task characteristics of an officer's job are favorable, he or she is more content with the work (26; $r = .23$, $p<.01$). Finally, both leader and unit effectiveness are correlated with a positive work atmosphere ($r = .48$, $p<.01$; $r = .29$, $p<.01$, respectively).

Satisfaction with social and personal life. Satisfaction with one's social life is associated with adjustment to the life-style of the Army ($r = .37$, $p<.01$) and social preparation at the Academy ($r = .26$, $p<.01$). Both components of satisfaction with military life are correlated with intent to remain ($r = .42$, $p<.01$; $r = .45$, $p<.01$, respectively) and job involvement ($r = .40$, $p<.01$; $r = .55$, $p<.01$, respectively). Officers with good work relations report that their spouse is committed to the officer's career ($r = .46$, $p<.01$), and they regard the skill of their subordinates to be important for unit effctiveness ($r = .27$, $p<.01$). Finally, officers who feel that they can manage the responsibilities of both their career and family (MTCARFAM) describe favorable social relations with the other sex ($r = .24$, $p<.01$).

Descriptive Findings

Now that we feel confident about the factors for the survey of the Class of 1981, let us briefly examine of the descriptive statistics for these data (see Table 20 for a correlation matrix of all variables and Appendix A for a listing and description of all the elements of the data set). These correlations may suggest more sophisticated analyses to be conducted at a later time. A similar exploration of descriptive findings for the data from

the Class of 1980 can be found in Technical Report 2.

Gender

A central focus of these data collections is a comparison of the men and women in the first two co-educational classes to graduate from the U. S. Military Academy. Are precommissioning training and development programs sound for all graduates? Table 20 then by concentrating on gender and its biserial correlated (sex is coded 0 = M; 1 = F). Unlike Table 14 of Technical Report 2, few variables significantly correlated with gender: (1) interference by others in areas of the officer's responsibility ($r = -.22$, $p<.01$), (2) work relations with the opposite sex ($r = .30$, $p<.01$), and (3) spouse's commitment to the Army's life-style ($r = .52$, $p<.01$). The last of these already was discusses in Technical Report 3.

The paucity of gender differences within the Class of 1981 confirms our earlier comparisons made in Technical Report 3. In this last report, we discovered that several of the gender differences shown for the Class of 1980 (see Technical Report 1) were not duplicated in the younger class. The data collections completed in 1983 from both classes will reveal whether or not these class differences persist. Since gender is not a central variable for the present data set, we will take our lead from Technical Report 2 and deal with those central variables of Table 20 that previous work has highlighted. We then will explore leader effectiveness, relationship with the superior, work atmosphere, and military development with an eye to comparing the two classes. In order to examine the dominant trends of Table 20, we will restrict our focus to only those correlations which are significant beyond the .01 level.

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Leadership Effectiveness

The findings from the Class of 1981 concerning leaders' effectiveness parallel and extend those reported for the Class of 1980 (see Technical Report 2). In both classes, leaders who think they are effective regard themselves as central to the functioning of their unit. Specifically, for the Class of 1981, officers who rated themselves high in leadership effectiveness feel that their own skills affect unit performance ($r = .30$), and they are confident as they make the transition from cadet to officer ($r = .30$).

Respondents who regard themselves as effective leaders also rate their preparation at the Academy as important to their successes as officers. High leadership effectiveness is assoicated with favorable training at the Academy in academic ($r = .31$) and work ($r = .40$ spheres. Further more, officers who rated high in military standing at the Academy ($r = .25$) regard themselves as most effective.

Respondents who feel effective as leaders then are self-confident, they feel well-trained, and they did well in military training while at the Academy. This positive aura spills over into other aspects of the new officers' work. For example, the more positive the leadership effectiveness ratings are, the more favorable is the work atmosphere ($r = .48$), the more optimistic is the officer's military career development ($r = .38$), the better is adjustment to the role of officer ($r = .55$), and the greater is the reported likelihod that the officer will remain ($r = .55$). Feelings of leadership effectiveness then are central to military career development and satisfaction.

Relationship with Superior

The new officer's relationship with his or her superior is central to the career development and satisfaction of any novice. Training at the Academy in social skills helps nurture this relationship (r = .24). Having a positive relationship makes the novice more confident so that he or she feels that skill and hard work will influence unit performance (r = .29, respectively).

The officer's relationship with his or her superior is felt in other aspects of the newcomer's job. Respondents who report a positve relationship feel that their tasks are more structured (r = .23), have a better work atmosphere (r = .48), and experience favorable work relations (r = .28).

Optimistic feelings about one's own career development also are associated with a positive relationship with one's superior (r = .44). These positive feelings about one's superior are related to both adjustment of the new officer (r = .27) and his or her intent to remain (r = .27). Clearly, a positive working relationship with one's superior is central to the new officer's happiness and effectiveness.

Work Atmosphere

Officers' feelings about their work atmosphere are associated with their effectiveness both as leaders (r = .48) and within their units (r = .29). In addition, training at the Academy is associated with a favorable work atmosphere (r = .36, r = .36, r = .34, r = .35). Perhaps good training prepares the individual so that he or she adjusts easier andhence feels that the work atmosphere is more favorable. Indeed, the correlations between work atmosphere and adjustment to the officer's role (r = .44) and the Army's life-style (r = .29) are consistent with this interpretation.

A positive work atmosphere reinfluence overall feelings about one's career. The better the work atmospher, the more satisfied officers are with their own military development (r = .53) and the more likely they will be to remain (r = .28). As noted previously, the new officer's relationship with his or her superior is highly related to this feneral rating of work atmosphere.

Military Development

Satisfaction with military career development seems to first take root at the Academy through academic (r = .28), social r = .38), personal (r = .24), and work (r = .42) training. In fact, academic success at West Point is related to later satisfaction with military development (r = .26). The relationship between success and career development continues in the regular Army as effective leaders report greater military development (r = .38).

Military development is associated with more than work successes. It is also related to social contentment (r = .50). Relatedly, career development correlates with balancing career and familial demands (r = .39) and the commitment of the spouse of the officer to the latter's career (r = .32). As we argued in Technical Report 3, work life cannot be confined to on-the-job qualities; rather, it must include several aspects of the officer's work, social, and personal lives.

Consistent with the above argument are the correlations of military development with adjustment to both the role of the officer (r = .55) and the life-style of the Army (r = .41). Given this conglomeration of work and personal satisfactions, military development is associated with both high job involvement (r = .55) and significant intentions to remain (r = .45). A consistent picture of inter-relations among these variables is evolving similar to the pattern found in Technical Report 2 for the Class of 1980.

Conclusion

Unlike the data from the Class of 1980, gender is not emerging as a central variable in these exploratory analyses. As we discussed in Technical Report 3 when we first compared these two classes, it is impossible to tell at this time if this failure to replicate the gender differences apparent in the data from the Class of 1980 is the result of class differences or contrasts between first and second year officers. As the data are collected in 1983, this will be a central focus for later analyses.

Earlier explorations of the correlation matrix of variables from the Class of 2980 identified two other global areas for future work: current job satisfaction and future planning. The review of the 1981 data presented here in Table 20 again identifies these two broad areas. A review of these descriptive findings shows a pattern emerging whereby the officer's relationship with his or her superior, training at the Academy, work atmosphere, leadership effectiveness, career development, and intent to stay in the Army are all inter-related. This consistency which emerges from a massive array of data across two data sets reaffirms our earlier conclusion that future analyses should be directed at more complex tests of hypotheses involving each of these factors.

DIRECTIONS FOR FUTURE RESEARCH

The 138-item postgraduation questionnaire completed by the Class of 1981 in the summer of 1982 can be reduced to 66 variables listed and described in Appendix A. This reduced data set can be effectively and efficiently analyzed to test hypotheses. Exploratory analyses suggest that hypotheses concentrating on gender differences (especially in light of cross-sample differences), predictors of positive work atmosphere and leadership effectiveness, and career planning and future commitment would be most informative. Additional data collections might be most useful if they concentrate on these three broad areas.

Table 1

Three-Factor Solution for Ratings of

Leadership Influence Strategies

FACTOR I - PERSONAL INFLUENCE			FACTOR II - REASONING			FACTOR III - OTHER		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
6	flattery	.487	1	no reasons	.529	2	Skill	.599
7	personal punishment	.403	3	give reasons	-.724	5	Punish	.317
8	personal rewards	.865						
9	help leader	.403						
	Eigenvalue = 1.86			Eigenvalue = 1.65			Eigenvalue = 1.15	

Table 2

Inter-Item Correlations for Ratings of Leader Influence

Items	1	2	3	4	5	6	7	8	9
1	1.0								
2	.12	1.0							
3	-.41	.01	1.0						
4	.01	-.07	-.06	1.0					
5	.20	.15	-.15	.01	1.0				
6	.00	.00	.05	-.10	.02	1.0			
7	.12	.20	-.07	.09	.08	.18	1.0		
8	.01	-.02	.14	-.02	-.16	.44	.28	1.0	
9	.07	.05	-.07	.15	.00	.19	.22	.31	1.0

Note.- The four items of FACTOR I are highlighted in the box; the mean of these correlations is .27(p .01).

Table 3

Two-Factor Solution for Ratings of

Leader's Influence Strategies

FACTOR I - PERSONAL INFLUENCE			FACTOR II - REASONING		
Item No.	Item	Loading	Item No.	Item	Loading
6	flattery	.496	1	no reasons[a]	.653
7	personal punishment	.400	3	give reasons	-.561
8	personal rewards	.839			
9	help leader	.409			

[a]Item 1 will be reverse-coded to form a composite for FACTOR II.

Table 4

Inter-Item Correlations of Ratings of Military Development At the Academy

Items	1	2	3	4
1	1.0			
2	.27	1.0		
3	.20	.10	1.0	
4	.23	.01	.18	1.0

Note.- The mean of these correlations is .17 which is not significant; the inter-item reliability also is low (alpha = .25).

Table 5

Factors and Factor Loadings for Ratings of West Point Experiences

FACTOR I - PHYSICAL			FACTOR II - ACADEMIC			FACTOR III - PERSONAL			FACTOR IV _ SOCIAL			F	TOR V - WORK	
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loadin
6	Unit PT	.673	2	Orals	.523	11	Finances	.771	15	Obligations	.419	10	Time	.357
7	Standards	.652	3	Memos	.697	12	Personal Time	.592	16	Relations	.821	13	Stress	.744
8	Sports	.646	4	Reports	.767	14	Career/ Personal	.536	17	Social Life	.655			
9	Duty	.742	5	Communicate	.517				18	Friendships	.346			
Eigenvalue = 6.05			Eigenvalue = 1.81			Eigenvalue = 1.46			Eigenvalue = 1.29			Eigenvalue = 1.15		

Note.- This solution accounts for 65% of the total variance.

Table 6

Inter-Item Correlations for FACTOR I - PHYSICAL TRAINING: West Point Experiences

Items	6	7	8	9
6	1.0			
7	.56	1.0		
8	.37	.44	1.0	
9	.51	.46	.70	1.0

Note.- The mean of these correlations is .51($p < .01$).

Table 7

Inter-Item Correlations for FACTOR II - ACADEMIC TRAINING: West Point Experiences

Items	1	2	3	4	5
1	1.0				
2	.27	1.0			
3	.17	.51	1.0		
4	.16	.50	.65	1.0	
5	.16	.41	.41	.54	1.0

Note.- Item 1 does not load heavily in this (.079) or any other factor (communality = .193). Its inclusion reduces the mean correlation from .50 to .38, both of which are significant ($p < .01$).

Table 8

Inter-Item Correlations for FACTOR IV - SOCIAL LIFE:

West Point Experiences

Items	15	16	17	18
15	1.0			
16	.49	1.0		
17	.27	.58	1.0	
18	.11	.37	.38	1.0

Note.- The mean of these correlations is .37($p < .01$).

Table 9

Inter-Item Correlations for FACTORS III and IV:

West Point Experiences

FACTOR III - PERSONAL			
Items	11	12	14
11	1.0		
12	.58	1.0	
14	.46	.55	1.0

FACTOR V - WORK-ORIENTED		
Items	10	13
10	1.0	
13	.48	1.0

Note.- The mean of the three correlations of FACTOR III is .53($p < .01$).

Table 10

Factors and Factor Loadings of Military Transitions

FACTOR I - CONFIDENCE			FACTOR II - CAREER/FAMILY			FACTOR III - FREEDOM		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loadi
1	ability	.712	7	spouse	.723	5	adjust	.52
2	role	.827	8	parenting	.628	6	handle	.86
3	tasks	.778	9	family	.862			
Eigenvalue = 2.89			Eigenvalue = 1.89			Eigenvalue = 1.19		

Table 11

Inter-Item Correlations of Military Transitions

Items	1	2	3	4	5	6	7	8	9
1	1.0								
2	.59	1.0							
3	.54	.70	1.0						
4	.28	.08	.15	1.0					
5	.14	.08	.06	-.01	1.0				
6	.02	.03	.08	-.11	.48	1.0			
7	.19	.15	.17	-.01	.17	.38	1.0		
8	.22	.17	.13	.08	.12	.23	.48	1.0	
9	.13	.13	.22	-.01	.16	.28	.66	.56	1.0

Note.- The boxed correlations show the true factors of this scale. The mean of the correlations among items 1,2, and 3 (FACTOR I) is .61($p < .01$); the mean of 7,8,9 (FACTOR II) is .57($p < .01$); FACTOR III is items 5 and 6 ($r = .48$, $p < .01$).

Table 12

Factors and Factor Loadings for Ratings of Characteristics of the Present Duty Assignment

FACTOR I - RELATIONS W/SUPERIOR			FACTOR II - TASK STRUCTURE			FACTOR III - TASK CHARACTERISTICS			FACTOR IV - WORK ATMOSPHERE		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
3	express ideas to superior	.770	24	direction from superior	.840	1	work responsibility	.589	11	group morale	.314
4	superior accepts ideas	.722	27	guidance from superior	.780	2	challenge	.735	16	military tasks	.304
5	contributes to decisions	.565	34	task structure	.672	25	work load	.649	20	initiative exercised	.410
7	leadership effect of superior	.522							22	get to know people	.610
8	discuss work with superior	.522							28	confidence in work	.504
9	friendship with superior	.704							29	acceptance by officers	.582
10	respect for superior	.678							31	acceptance by troops	.491
12	control by superior	-.519[a]							32	adequacy of training	.374
13	interest by superior	.625							33	assistance from others	.420
14	criticism from superior	.360									
15	equal treatment by superior	.691									
17	non-work talks by superior	.546									
18	opportunity for initiative	.562									
19	superior wants initiative	.554									
23	superior notes accomplishments	.554									
30	leadership from superior	.595									
	Eigenvalue = 9.95			Eigenvalue = 3.27			Eigenvalue = 2.71			Eigenvalue = 2.12	

Note.- Items 6, 21, and 26 were not consistent across the two surveys.

[a]Item 21 will be reverse coded in all future analyses.

Table 13

Inter-Item Correlations for FACTOR I - RELATIONS WITH SUPERIOR:

Characteristics of Present Duty Assignment

Items	3	4	5	7	8	9	10	12	13	14	15	17	18	19	23	30
3	1.0															
4	.73	1.0														
5	.62	.64	1.0													
7	.40	.47	.32	1.0												
8	.52	.43	.36	.41	1.0											
9	.56	.47	.35	.40	.47	1.0										
10	.52	.54	.38	.71	.47	.62	1.0									
12	.36	.29	.22	.16	.15	.35	.25	1.0								
13	.55	.48	.37	.55	.53	.62	.55	.12	1.0							
14	.32	.26	.22	.51	.52	.40	.47	-.03	.58	1.0						
15	.60	.51	.39	.37	.41	.62	.51	.38	.57	.38	1.0					
17	.48	.39	.36	.30	.37	.46	.37	.24	.54	.41	.40	1.0				
18	.51	.52	.49	.41	.28	.27	.34	.35	.29	.30	.34	.34	1.0			
19	.50	.54	.60	.52	.38	.32	.44	.18	.35	.37	.35	.30	.80	1.0		
23	.43	.49	.43	.40	.37	.43	.37	.23	.49	.43	.52	.36	.45	.50	1.0	
30	.48	.50	.36	.73	.54	.50	.68	.13	.61	.64	.44	.41	.40	.48	.49	1.0

Note.- The mean of the inter-item correlations is .43($p < .01$).

Table 14

Inter-Item Correlations of FACTORS II and III:

Characteristics of Present Duty Assignment

FACTOR II - TASK STRUCTURE			
Items	24	27	34
24	1.0		
27	.78	1.0	
34	.63	.55	1.0

FACTOR III - TASK CHARACTERISTICS			
Items	1	2	25
1	1.0		
2	.59	1.0	
25	.57	.55	1.0

Note.- The means of the inter-item correlations are significant for both factors (II = .65, $p < .01$; III = .57, $p < .01$).

Table 15

Inter-Item Correlations for FACTOR IV - WORK ATMOSPHERE:

Characteristics of Present Duty Assignment

Items	11	16	20	22	28	29	31	32	33
11	1.0								
16	.11	1.0							
20	.33	.22	1.0						
22	.35	.32	.19	1.0					
28	.34	.14	.38	.31	1.0				
29	.22	.10	.14	.35	.35	1.0			
31	.25	.21	.15	.38	.36	.35	1.0		
32	.06	.14	.02	.21	.09	.27	.17	1.0	
33	.08	.09	.05	.33	.14	.42	.07	.20	1.0

Note.- The mean of these correlations is .23($p < .05$).

Table 16

Factors and Factor Loadings for Ratings of Satisfaction With Social and Personal Life

FACTOR I - SOCIAL LIFE			FACTOR II - MILITARY LIFE			FACTOR III - OTHER SEX			FACTOR IV - WORK RELATIONS		
Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading	Item No.	Item	Loading
5	socialize	.561	1	superior	.369	6	marital status	.827	3	NCOs	.924
7	quarters	.520	2	peers	.313	12	relations with other sex	.803	4	troops	.659
8	leave time	.672	14	PT	.373				21	career support	.338
9	recreation	.737	16	assignment	.671						
10	free time	.746	17	dual relocations	.547						
11	social life	.558	19	pregnancy	.441						
15	fraternization	.504	20	attitudes toward women	.375						
18	goals	.761	22	branch officer	.487						
25	personal satisfaction	.387	23	life as officer	.407						
			24	career progress	.634						
Eigenvalue = 7.65			Eigenvalue = 2.49			Eigenvalue = 2.01			Eigenvalue = 1.70		

Note.- Item 13, work relations with the opposite sex, did not load heavily on any factor (communality = .162

Table 17

Inter-Item Correlations for FACTOR I - SOCIAL LIFE:

Satisfaction with Social and Personal Life

Items	5	7	8	9	10	11	15	18	25
5	1.0								
7	.20	1.0							
8	.40	.42	1.0						
9	.57	.54	.50	1.0					
10	.60	.43	.48	.62	1.0				
11	.58	.42	.51	.55	.51	1.0			
15	.41	.40	.35	.36	.33	.39	1.0		
18	.45	.51	.68	.55	.65	.53	.39	1.0	
25	.48	.27	.31	.46	.35	.71	.34	.43	1.0

Note.- The mean of the inter-item correlations is .46 ($p < .01$).

Table 18

Inter-Item Correlations for FACTOR II - MILITARY LIFE:

Satisfaction With Social and Personal Life

Items	1	2	14	16	17	19	20	22	23	24
1	1.0									
2	.29	1.0								
14	.34	.23	1.0							
16	.20	.13	.36	1.0						
17	.08	.31	.23	.45	1.0					
19	.31	.23	.37	.25	.27	1.0				
20	.35	.22	.28	.16	.07	.32	1.0			
22	.31	.13	.32	.42	.33	.27	.11	1.0		
23	.39	.16	.43	.32	.22	.19	.16	.34	1.0	
24	.32	.20	.18	.45	.40	.15	.21	.41	.52	1.0

Note.- The mean of the inter-item correlations is .28($p < .01$).

Table 19

Inter-Item Correlations for FACTORS III and IV:

Satisfaction with Social and Personal Life

FACTOR III - RELATIONS WITH OTHER SEX

Items	6	12
6	1.0	
12	.76	1.0

FACTOR IV - WORK RELATIONS

Items	3	4	21
3	1.0		
4	.68	1.0	
21	.29	.34	1.0

Note.- The mean of the inter-item correlations for FACTOR IV is .44($p < .01$).

Table 20 (Part I)

Correlation for all Scores for C ase of 1981

LDREFF	-																														
UNEFF	21*	-																													
UNPERF1	30**	16	-																												
UNPERF2	14	-04	08	-																											
UNPERF3	15	00	49**	-07	-																										
UNPERF4	16	12	07	50**	12	-																									
UNPERF5	-17	00	10	03	04	-02	-																								
UNPERF6	-25**	-10	01	07	13	00	72**	-																							
LIPERS	-06	-07	-03	02	-04	-01	19*	15	-																						
LIREAS	12	18*	-04	08	-13	03	-11	-08	-02	-																					
LDRINF2	-04	-06	03	17	-16	-05	07	01	06	-08	-																				
LDRINF4	-19*	-15	-13	-09	10	-01	13	12	03	-03	-08	-																			
LDRINF5	-02	-20*	08	00	02	-11	03	-02	-06	-21*	16	-01	-																		
CONDUCT1	06	03	-06	-01	-25**	04	-17	-04	01	03	09	-13	-02	-																	
MORALS1	03	-02	-10	-08	-17	00	-15	-08	04	-10	04	-11	00	08	-																
MORALS2	-21*	-01	-26**	-11	-28**	-16	28**	-24**	15	-01	02	06	01	09	-04	-															
WPACAD	46**	07	25**	12	12	-06	-14	-24**	-09	10	15	-29**	06	-09	02	22**	-														
WPPT	17*	-13	04	05	06	03	-16	-11	-14	-03	04	-05	09	-04	04	18*	30**	-													
WPSOCIAL	29**	06	22**	20*	08	13	-07	-11	-03	-02	15	-15	-09	-04	01	26**	45**	36**	-												
WPPERS	31*	10	12	19	-03	06	-19*	-18	-03	00	12	-18*	-12	-07	04	16	53**	44**	51	-											
WPWORK	40**	12	23**	28**	-08	02	-19*	-22*	-15	05	13	-23**	11	02	05	23**	54**	29**	38**	53**	-										
MILDEV1	16	-10	06	02	15	-03	00	04	09	12	04	-09	06	04	-07	-05	07	09	03	05	06	-									
MILDEV2	25**	08	19*	14	15	07	02	-03	-01	-03	-04	-09	11	-09	02	-12	27**	39**	23**	10	21*	25**	-								
MILDEV3	09	-03	04	13	-07	09	15	-08	01	07	09	-06	-05	10	01	-19*	26**	14	25**	17	12	20*	16	-							
MILDEV4	19*	-11	05	03	01	14	15	-12	-10	06	05	06	-03	03	16	-06	19*	29**	17	21	13	22*	02	20*	-						
MTCONFID	30**	-09	-01	07	03	07	-10	-11	-14	-02	02	-15	-05	08	-10	-13	28**	14	07	14	27**	11	00	14	24	-					
MTCARFAM	25**	05	05	17	03	-01	-21*	-19	-09	-10	01	-12	-10	-01	06	-16	22*	12	19*	26**	17	-11	10	25**	01	20*	-				
MTPREE	08	08	03	12	-05	-05	-24**	-23*	10	-05	00	-24**	-10	18*	15	-15	15	06	21**	23**	17	-09	09	08	00	02	07	-			
TRANS4	10	-10	21*	05	10	05	01	-06	-13	-04	21*	-10	08	08	-19*	-11	17*	08	14	10	07	06	09	15	07	21	20*	13	-		

NOTE: DECIMAL POINTS HAVE BEEN REMOVED

Table 20 (Part II)

Correlation for all Scores for Class of 1981

LDR EFF	20	01	06	48**	01	-05	24**	25**	07	38**	25*	22*	27**	15	10	03	13	20*	24**	55**	21*	14	27*	13	04	08	25**	16	-03
UN EFF	19*	21*	08	29**	30**	-01	20*	04	06	07	02	25**	-15	07	-10	-12	15	02	08	13	03	-04	00	25**	-03	05	01	07	-05
UN PERF1	29**	16	-11	23**	13	07	02	-01	-08	16	-07	07	01	06	03	-03	05	03	06	13	-03	-16	-11	10	-08	16	00	-06	-09
UN PERF2	20*	-27*	-10	13	-06	-14	13	29**	08	22**	10	27**	17	11	18*	19	27**	27**	21*	22**	27**	02	17	02	-15	25**	10	11	06
UN PERF3	29**	21	02	06	21*	-05	05	-12	-17	09	-07	-06	-16	02	-07	-13	03	07	01	04	-02	-24**	-29*	-11	-01	08	-02	-04	-11
UN PERF4	03	-13	-09	08	-06	06	01	07	04	04	05	08	10	22*	00	07	05	05	09	12	07	08	07	15	13	03	13	00	10
UN PERF5	05	05	10	-03	02	-02	-05	-21*	-21*	-22*	-32**	-05	-24*	-14	-17*	-07	05	-12	-01	21*	-08	01	03	-03	09	-11	-13	-11	-09
UN PERF6	-19	03	05	13	-05	18*	-12	-26**	-26**	-31**	-33**	-16	-17	-11	-30**	-07	-04	-06	-05	-20*	-03	-22*	-23*	-11	23*	-04	-18	-10	-06
LI PERS	-13	01	-16	-10	-16	27**	-12	02	-06	-08	-15	-03	04	-03	-08	08	05	-17	-09	-07	07	-09	11	00	04	02	10	-05	-10
LI REAS	02	-06	10	08	-07	-07	06	03	22*	14	26*	18	00	01	30**	16	20*	12	02	14	02	09	18*	05	01	25**	21*	11	11
LDR INF2	07	-10	-04	04	-11	-11	02	12	-03	-08	-03	-04	19*	03	13	02	05	03	18*	-06	02	10	24*	15	-16	-10	-02	-03	-03
LDR INF4	-02	02	04	-18*	10	-09	06	-23**	-18*	-04	-17	-03	-08	-14	-07	-13	06	-08	-02	19*	-14	07	00	-12	02	-09	-09	-11	05
LDR INF5	07	-02	-02	-02	00	08	-08	-01	-05	-04	-10	-18*	00	-12	06	04	02	02	07	03	-09	04	00	-15	-07	03	-10	09	05
CONDUCT1	-13	18*	01	-03	-21*	20*	-03	01	04	-09	01	10	08	02	02	-01	07	-04	02	19*	06	00	-10	14	24	09	11	04	-13
MORALS1	-08	03	-11	-07	-08	06	07	19*	09	-09	05	-11	21*	16	-03	14	-08	04	05	-03	-11	44**	35**	37**	-04	04	17*	04	10
MORALS2	-15	-28**	03	-14	-08	-07	-07	-23**	-17	-20*	-29*	-04	-15	-16	-15	-07	08	-21*	-08	-16	-12	00	-14	00	-11	-21*	-18*	01	11
WP ACAD	22*	11	-06	36**	02	00	08	27**	16	28**	26**	22**	21*	06	21*	08	08	20*	25**	30**	18*	00	28**	11	-03	14	17*	12	-01
WP PT	01	07	16	20*	10	-11	05	06	09	17*	18	08	18*	10	19*	10	-02	15	03	02	13	16	35**	19*	06	07	08	34**	13
WP SOCIAL	24**	13	01	36**	17*	-06	-14	26**	36**	38**	47**	31**	21*	26**	28**	27**	20*	29**	19*	18*	32**	10	29**	13	-02	06	23**	08	14
WP PERS	09	17	05	34**	11	-03	07	25**	17	29**	28**	23**	34**	14	15	12	06	13	12	14	24**	02	22*	14	-01	03	01	09	10
WP WORK	19*	09	-16	35**	07	-09	23**	38**	26**	42**	37**	21*	30**	11	10	15	19*	29**	17*	41**	28**	21*	31**	26**	06	13	05	07	05
MIL DEV1	-04	02	-08	13	11	-01	02	11	11	04	13	11	-05	-06	07	05	21*	10	-05	05	-10	05	02	01	35**	07	00	00	-06
MIL DEV2	14	20*	09	21*	20*	-01	12	07	18*	17*	21*	07	08	00	14	09	20*	09	14	14	01	07	17	06	08	15	19*	22**	07
MIL DEV3	-15	-04	-10	03	-13	16	-07	15	44**	12	41**	16	14	-15	05	02	07	13	17*	11	04	-05	10	12	21*	13	11	03	-09
MIL DEV4	-16	-09	-01	11	-16	-09	03	10	11	13	25*	10	31**	-01	04	09	05	12	06	13	06	16	-01	04	03	05	06	10	03
MT CONFID	00	-08	00	18*	-15	03	05	28**	14	19*	09	10	16	05	01	00	-01	18*	25**	28**	13	01	21*	04	11	11	11	05	-12
MT CARFAM	21*	05	15	21*	12	-19	28	38**	31**	39**	44**	22**	24**	16	26**	21*	10	22*	37**	38**	19*	-03	22*	25**	40**	12	13	01	-10
MT FREE	20*	07	09	24**	12	-08	03	13	16	13	18	20*	19*	04	31**	01	03	02	12	16	16	14	09	33**	-14	19	14	15	07
TEAMS4	13	07	-01	17*	01	-02	12	16	16	17*	22*	04	-05	-04	17*	09	14	27**	19*	16	18*	05	18*	-09	01	08	09	09	-11

NOTE: DECIMAL POINTS HAVE BEEN REMOVED

Table 20 (Part III)

Correlation for all Scores for Class of 1981

DY RELS	-																												
DY TKST	35**	-																											
DY TKCH	23**	17	-																										
DY WKATM	48**	30**	20*	-																									
DUTY 6	51**	49**	32**	24**	-																								
DUTY 21	33*	09	-11	-20*	-26**	-																							
DUTY 26	47**	20*	23**	42**	26**	38**	-																						
SS SOCIAL	09	-06	-17	24**	-04	-09	29**	-																					
SS POLICY	24**	01	10	25**	13	-11	37**	54**	-																				
SS M DEV	44**	17*	07	53**	19*	-29**	62**	50**	51**	-																			
SS M LIF	35**	05	18*	64**	18*	-28**	57**	60**	88**	86**	-																		
SS WK REL	28**	15	10	48**	16	-07	24**	13	27**	44**	39**	-																	
SS X SEX	-07	-01	08	20*	17	12	04	47**	03	26**	18*	08	-																
SOC SAT7	11	-04	01	15	06	-04	13	35**	28**	22*	37**	13	30**	-															
SOC SAT13	34**	16	15	14	16	-15	19	23*	37**	30**	38**	24**	17*	14	-														
SOC SAT15	00	-13	-15	19*	-14	-19	06	33**	33**	20*	35**	09	14	23*	23*	-													
SOC SAT21	28**	14	02	27**	18*	03	13	16	36**	29*	38**	65**	10	17	23*	22*	-												
INVOLV	11	09	-05	23**	07	-13	41**	40**	29*	55**	48**	34**	14	05	13	06	21*	-											
INTENT	27**	03	02	28**	00	-05	34**	42**	20*	45	37**	26**	13	06	20*	13	16	56**	-										
ROLE	27**	01	-03	44**	-07	07	34**	36**	20*	55	43**	30**	30**	14	15	14	17*	49**	49**	-									
STYLE	08	00	00	29**	-04	-13	17*	37**	22*	41	36**	29**	19*	11	07	22*	11	51**	46**	55**	-								
SPOUSE1	16	13	01	05	11	35**	23*	16	21*	17*	18*	19*	19*	27**	18*	-03	20*	16	14	05	05	-							
SPOUSE2	27**	30**	02	27**	28**	-12	38**	25**	25**	35**	32**	46**	42**	17*	31**	-03	48**	36**	33**	19	09	59**	-						
SPOUSE3	22*	11	-07	10	-10	08	10	00	26**	05	21*	16	26**	12	02	32**	16	12	05	15	09	49**	49**	-					
CHILD	14	18*	00	-06	-09	22	-28*	09	17*	-12	-03	-10	-03	24**	-01	01	03	-18*	-06	-14	04	03	-20*	00	-				
AC STAND	10	07	00	21*	-03	10	15	34**	34**	26**	31**	10	14	-02	18*	19*	08	20*	25**	26**	20*	-12	-13	-16	[illegible]	-			
MIL STAND	06	-08	-04	20*	08	00	14	29**	20*	[illegible]	28**	01	17	14	18	27**	06	19*	23**	31**	18*	03	10	01	-03	64**	-		
PT STAND	02	09	10	16	01	05	02	-02	19	12	-17	05	05	-02	11	-04	-06	02	02	05	00	16	09	15	15	08	31**	-	
SEX	04	-04	15	11	16	-22*	00	18*	11	00	04	-05	-06	11	30**	-02	03	-02	-06	-14	04	52**	12	07	-10	-12	-11	00	-

NOTE: DECIMAL POINTS HAVE BEEN REMOVED

Appendix A

Data of Summary of the Postgraduation Questionnaire

and a Key to Table 20

The overall goal of Technical Reports 3 and 4 dealing with the 1982 data collection from the Class of 1981 was to prepare the data set for further analyses. With these descriptive and psychometric analyses complete, a summary of the data can be presented. The following 66 items represent the entire 138-item questionnaire. (The computer name of each variable will be listed as well as a brief description of the variables. The abbreviation "R" stands for respondent).

Variable	Description
LDREFF	R's* self-perceived leadership effectiveness
UNEDD	R's perception of his or her unit's effectiveness
UNPERF1	the degree to which the skill of the leader contributes to unit performance
UNPERF2	the degree to which the skill of subordinates contributes to unit performance
UNPERF3	the degree to which the hard work of the leader contributes to unit performance
UNPERF4	the degree to which the hard work of subordinates contributes to unit performance
UNPERF5	the degree to which good luck contributes to the unit performance
UNPERF6	the degree to which bad luck contributes to unit performance
LIPERS	leader uses personal influence
LIREAS	leader explains reasons for directives
LDRINF2	skill as an influence strategy
LDRINF4	hints as an influence strategy
LDRINF5	threats as an influence strategy

R denotes respondent

Variable	Description
CONDUCT1	personal conduct of others
CONDUCT2	psychological effects
REACT	reaction to incident
MORALS1	change in moral concerns
MORALS2	change in moral values
WPACAD	academic training at West Point
WPPT	physical training at West Point
WPSOCIAL	social training at West Point
WPPERS	personal training at West Point
WPWORK	work training at West Point
MILDEV1	military development--CTLT experience
MILDEV2	military development--Summer Leadership Cadre
MILDEV3	military development--Branch and Speciality
MILDEV4	military development--Military Training Speciality
MTCONFID	military transition--confidence
MTCARFAM	military transition--career and family lives
MTFREE	military transition--new freedoms
TRANS4	well-informed about first assignment
DYRELS	relationship of R with superior
DYTKST	task structure of R's present assignment
DYTKCH	task characteristics of R's present assignment
DYWKATM	work atmosphere of R's present assignment
DUTY6	administrative effectiveness of superior
DUTY21	interference by others in R's job
DUTY 26	feelings of contentment in work
DUTY	overall rating of present duty assignment
SSSOCIAL	satisfaction with R's social life
SSPOLICY	satisfaction with military policies
SSMDEV	satisfaction with R's military development
SSMLIFE	satisfaction with military life (SSMDEV + SSPOLICY)
SSWKREL	satisfaction with R's work relations, including career support from family
SSXSEX	satisfaction with social relations with other sex
SOCSAT7	satisfaction with quarters
SOCSAT13	satisfaction with work relations with other sex
SOCSAT15	satisfaction with fraternization policy
SOCSAT	overall satisfaction
INVOLVE	an index of job involvement
INTENT	intent to stay in the Army
ROLE	adjustment to the role of Army officer
STYLE	adjustment to the life-style of the Army

Variable	Description
MARSTAT	R's marital status
SPOUSE1	commitment of R's spouse to ARmy life
SPOUSE2	support of spouse for R's career
SPOUSE3	compatibility of R's career with spouse's
SPOUSE4	combining career with family
CHILD	presence of child(ren)
SEX	0 = male; 1 = female
HEAD	major command headquarters
ASSIGM	present duty assignment
ACSTAND	academic standing at the Academy
MILSTAND	military development standing at the Academy
PTSTAND	physical standing at the Academy
SQUAD	member of corps squad at the Academy

INFERENTIAL ANALYSES OF THE 1982 POSTGRADUATION QUESTIONNAIRE FOR THE CLASSES OF 1980 AND 1981

Technical Report 83-5

JEROME ADAMS

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Technical Report 5

INFERENTIAL ANALYSES OF THE 1982 POSTGRADUATION QUESTIONNAIRE FOR THE CLASSES OF 1980 AND 1981

Abstract

This report is the fifth in a series analyzing information collected from 148 graduates in the Class of 1980 and 144 new officers from the Class of 1981. These surveys involved their postgraduate lives in the regular Army. The purposes of the present report are (1) to summarize and update the two data files, (2) to explore class differences, (3) to document gender similarities and differences, (4) to examine the predictors of leadership success, and (5) to describe the correlates of officers' intentions to remain in the Army beyond the five-year obligation. The findings suggest further work to understand possible role conflict and tokenism for women, men's stereotypes in working with women, and self-efficacy as it enhances leadership success.

NOTE: Any conclusions in this report are not to be construed as official U. S. Military Academy or Department of the Army positions unless so designated by other authorized documents.

Technical Report 5

Inferential Analyses of the 1982 Postgraduation Questionnaires for the Classes of 1980 and 1981

The purposes of the present report are:

(1) to summarize the revised and updated 1980 and 1981 data sets based on the work of the four previous technical reports;

(2) to report analyses of class differences for those variables that overlap the two data collections;

(3) to explore gender difference both within classes and overall;

(4) to examine the predictors of leadership success for the new officers; and

(5) to look at the predictors of new officers' intent to remain in the Army.

Method

Respondents

In the summer of 1982, postgraduation questionnaires were sent to all women and a select group of men who graduated in the Classes of 1980 and 1981 from the United States Military Academy at West Point. The samples of men were selected to represent their class on two characteristics: branch speciality and geographic location. All respondents were assigned as new officers in the regular Army. The Class of 1980 graduates were in the second year of their assignment and members of the 1981 class were completing their first year.

Thirty-five women and 113 men from the Class of 1980 responded (n = 148); and 30 women and 114 men from the Class of 1981 completed the survey (n = 144 For a more detailed examination of the demographic characteristics of these respondents, refer to Report 1 for the Class of 1980 and Report 3 for

the 1981 data. The most prominent difference between the two clases in terms of demographics is that the younger officers are less likely to be married, but among those who are married, the younger officers are more likely to have at least one child. A more detailed comparison of the two classes is documented in Report 3.

The Questionnaires

Two somewhat different version sof the postgraduation questionnaire were mailed to the members of the two classes. For this reason, separate data sets were maintained for each. However, using those items which were repeated in both survey instruments, a third file was created in order to facilitate comparisons between classes.

For a full description of the separate data sets for each class, see Reports 1 and 2 for the Class of 1980 and Reports 3 and 4 for the Class of 1981. These prior reports outline the psychometric properties accommodate both data sets will be used throughout this report. Let us begin this report by reviewing and updating the three data sets we will use to explore the hypotheses dealing wit the substance of these surveys.

The Data Sets

Since the Class of 1980 is one year aead of their yonger counterparts in the Class of 1981, some different questions were asked of the two classes. In order to retain the richness of the experiences of each class, separate data sets will be maintained for each of these two questionnaires. Additionally, a third file of overlapping information was created to allow durect cinoarusibs if the classes. Each of these files incorporates the transformations suggested in the earlier reports and summarized in Report 4.

A complete listing of the 51 variables that compose the data set for the Class of 1980 can be found in Appendix A. This taxonomy is revised from

Report 2 to include those changes in creating factors suggested by later work with the 1981 data set. It is from this complete list that suggestions for future hypothesis testing can be made.

A parallel listing of data for the Class of 1981 can be found in Appendix B. These variables are copied from Appendix A of Report 4, with the exception of the added variables on attributions of unit performance.

The third data set combines those 48 variables of the former data sets that overlap. The sample size for this data set is 292 which enhances the power of inferential tests conducted with this enlarged sample. The variable, class year is used to differentiate between data from the two classes.

The combined data set includes those variables that are represented by the following categories of information:

(1) attributions of unit performance,

(2) leader's influence strategies,

(3) characteristics of the present duty assignment,

(4) early career satisfactions,

(5) involvement, intent to re-enlist, adjustment of self and spouse

(6) demographics

Missing values. Beginning analyses showed that the presence of many missing values caused the sample size to shrink significantly when listwise deletion of missing cases was used. In particular, significant numbers of numbers of respondents (between 30 and 40) failed to respond to those items concerning satisfaction with military policy. In other words, a respondent may have omitted one item in a twenty item present duty assignment scale rendering the response as significantly small in a listwise deletion format.

To compensate for this loss of statistical power, all non-demographics variables were recoded to substitute the group mean for missing values.

Attribution measures. The six items dealing with unit performance in all three files were designed to measure three foci of attributions: internal person, external other, and situational. Internal, person attributions of the cause of unit performance implicate the leader's own skill and hard work. Indeed, these two variables are significantly correlated in both data sets (1980: $r = .50$; 1981: $r = .48$). These two variables then were averaged to produce a measure of the respondent's use of person attributions to explain unit performance.

Similar logic was used to calculate measures of external attriutions focusing on other people and the surrounding circumstances (see McArthur (1972) for the theoretical basis for these variables). Combining attributions concerning the skill and hard work of subordinates (1980: $r = .48$; 1981 $r = .49$) produced an overall measure of the officer's use of external attributions for unit performance that focus on other people. External attributions dealing with circumstances of good and bad luck (1980: $r = .70$; 1981: $r = .72$) were averaged to give a third overall measure. These three measures will be useful in testing hypotheses generated by attribution theory (e.g., Jones & Nisbett, 1972).

Data Analyses

These are the first tests of hypotheses to be reported with these data as the prior reports were descriptive and dealt with the psychometric properties of the survey instrument. The overriding goal of these surveys is to understand the experiences of the graduates from West Point. This is the first systematic program to assess the effects of coeducation by using as

criteria early career adjustments of men and women graduates by studying these men and women over a three year time interval.

As a start, it would be worthwhile to examine the differences between classes that may or may not exist. Often, the Class of 1980 and, in particular, the pioneering women in this class, are regarded as unique. For this reason, we will begin by exploring class similarities and differences.

Statistical Procedure

A pattern of statistical exploration was followed for both class and gender similarities and differences. As a first step, a regression analysis was done using sex or class year as the dummy-coded dependent variable. Given the distributions of subjects on the dependent variables (sex and class year), a simple least-squares regression has been shown to give the same results and be more informative than other analysis; Goodman, 1976).

The purpose of these regressions was to identify those independent variables that may be best predictive of group differences without inflating the overall alpha level. This was accomplished by conducting a regression analysis in which all variables were entered simultaneously, then identifying those specific variables which have significant beta weights ($p < .05$). It is recognized that only the main effects of all variables were tested with this exploratory technique and that the results may be influenced by unidentifiable suppression effects.

One exception to the preceding procedure occurred when large numbers of responses from the small groups of women were tested. A large regression analysis with these data is not insightful as the sample size is inadequate to allow a powerful test using so many predictor variables. For this reason, simple, independent correlations of all the predictor variables with the

criterion were computed in place of the more sophisticated regression analysis.

The next step was to do analyses of variance for those predictors identified by the regression analysis. These tests allowed us to verify significant group differences as well as identify the direction of the difference by an examination of the group means. It also permitted simple tests of class by sex interactions.

Class Differences

In Report 3, we explored the similarities and differences between the Classes of 1980 and 1981 using the demographic variables. The most prominent differences between the two classes were the greater likelihood of the older respondents being married and, surprisingly, the lower proportion of childless couples among the married officers in the Class of 1980. In other words, although the older graduates were married in greater numbers, they were less likely to have children than their married counterparts in the younger class. The sustained multi-year data collection with these same officers will tell whether or not this basic demographic difference persists.

In addition to this class comparison on the demographic variables, we wanted to probe potential class differences using the other variables of the data set. A regression analysis involving all the overlapping, non-demographic variables of the two data sets uncovered five potentially significant predictors: the overall rating of the present duty assignment, job involvement, adjustment to the role of officer, satisfaction with military life, and leadership effectiveness.

Two-way analyses of variance with sex and class as the independent variables were computed for each of these five potential effects. Sex was

added to check for any sex by class interactions; none of these was significant. However, the main effects for class were significant for three of the dependent variables: duty, involvement, and role.

Officers who graduated in the Class of 1980 ($\bar{X}$ = 3.51) rated their present duty assignment more positively than did the younger respondents ($\bar{X}$ = 3.26, F (1,288) = 18.56, $p<.01$). Additionally, the older officers ($\bar{X}$ = 3.66; $\bar{X}$ = 4.44) reported greater involvement with their jobs and better adjustment to their role of Army officer tan did the members of the Class of 1981 ($\bar{X}$ = 3.38, F(1,288) = 9.75, $p<.01$; $\bar{X}$ = 4.17, F(1,288) = 10.51, $p<.01$, respectively). There were no class differences in satisfaction with military life or with leadership effectivenss.

As we noted in Report 3, class differences must be regarded cautiously at this time. The above differences may be the result of the greater experience and adjustment afforded the Class of 1980 which has been in the field one year longer thant he members of the next year's graduating class. If this is the case, then data from the Class of 1981 should resemble those of the older officers when the former are tested again in 1982--their second year as officers. Until the longitudinal data becomes available, explanations for these class differences remain spectulative.

Class comparisons of women. The women in the Class of 1980 often are regarded as an unique group because of the roles they played as the first women ever at the Academy. Even the women themselves believe that they were a special group at the Academy and that their experiences could not be directly related to those of women in later classes (see Yoder, Adams, Grove, & Priest, in press). To explore this hypthetical difference between classes of women, we did an exploratory regression analysis selecting only the women and designating class year as the criterion variable.

Only two predictors produced significant betas: the single-item rating of their superior's administrative effectiveness and satisfaction with their work relations. T-tests comparing the two groups of women on both these variables were insignificant. There is no evidence then that the women in these two classes are handling their assignments as officers any differently. The more interesting comparisons seem to focus on gender similarities and differences rather than on class contrasts. It is to these comparisons that we now will turn.

Gender Differences

As noted earlier, the small numbers of women reduce the power of tests which separate the sexes into groups and in which large numbers of variables are entered. To minimize this problem, the women in both classes can be combined and compared with the total set of men. This combinging of classes, of course, ignores class differences, however, we found these to be minimal. Still, to be true to each class, we will begin by doing separate analyses for each class, then we will combine them for an overall look at gender differences.

Class of 1980. A regression with sex as the dummy-coded dependent variable and all variables in the data set as predictors pointed to four potential effectis involving the impact of the skill of the leader on unit performance, the use of reasons as an influence strategy, ratings of the respondent's relationship with his or her supervisor, and satisfaction with living conditions.

Women ($\overline{X}$ = 4.63) report using reason as in influence strategy more frequently than do men ($\overline{X}$ = 4.31, $F(1,146) = 5.99$, $p<.05$). Most interestingly, women ($\overline{X}$ = 3.29) feel less positively about their relationship with their superior than do men (X = 3.61, $F(1,146) = 4.54$, $p<.05$). This is

particularly significant given the configuration of variables related to satisfaction with this central work relationship (see Report 4). Finally, women ($\bar{X}$ = 4.23) are happier with their living quarters than are the men ($\bar{X}$ = 3.62, $F(1,146) = 24.46$, $p<.01$).

Of these gender differences, the most important is the difference in reported satisfaction with the officer's relationship with his or her superior. However, this one major difference needs to be kept in its proper perspective--it represents only one of 34 variables entered in the original regression analysis. There appear to be no gender differences in other important factors such as leadership effectiveness, social and job satisfaction, and job involvement.

One warning in the sex-role literature focuses on the practice of social science journals to ignore statistically insignificant data (Sherif, 1979). This leads to exaggerations of gender differences as similarities often are not reported. Such could be the case here as the evidence strongly points to few differences and many similarities between the sexes. With this caution in mind, let us digress for a moment to further explore the finding that women are less satisfied with their relationships with their superior than are the men.

In Report 2, we found this aspect of officers' early career satisfactions to be central to other aspects of their military careers. For example, a good working relationship with one's superior is related to high job satisfaction, optimism about one's own career development, greater job involvement, and positive descriptions of both task structure and characteristics.

Class of 1981 . A parallel set of analyses were run to test for gender differences within the Class of 1981. The initial regression analysis

highlighted four variables: interference from others in areas of the respondent's responsibility, satisfaction with military policies, satisfaction with military life, and satisfaction iwth work relations with members of the other sex.

Of these, only two variables produced significant differences between men and women. Interestingly, men ($\overline{X}$ = 3.11) reported greater interference from others at work than did women ($\overline{X}$ = 2.6, $F(1,142) = 6.92$, $p<.01$). Women ($\overline{X}$ = 3.78) are more satisfied with their work relations with men than men say they are working with women ($\overline{X}$ = 3.32, $F(1,141) = 11.64$, $p<.01$). The analyses of variance uncovered no significant differences between men and women for the remaining variables--satisfaction with military policies and with military life.

Perhaps there is an influence of sex-role stereotypes as some men find it somewhat difficult to work with women. This is a preconception fostered by societal stereotypes that can be detrimental for both male and female group members (O'Leary, 1974). Role models and re-education showing successful male-female teams may save both parties much time and energy in working through this stereotype thereby improving the overall work atmosphere and efficiency.

Overall gender differences. As discussed earlier, more powerful tests of gender differences are possible by combining the data from both classes and thus doubling the sample size for women as well as men. These analyses point to gender differences that go beyond whatever class differences do exist, and they hint at differences do exist, and they hint at differences that may be more consistently found in comparisons of women and men.

The regression analysis pointed to seven potential effects. These involved: reason as leadership strategy, ratings of the work atmosphere at

the present duty assignment, satisfaction with one's social life, satisfaction with living quarters, satisfaction with work relationships with the opposite sex, adjustment to the role of officer, and adjustment to the Army lifestyle.

Of these seven variables, all but style were significant. As we found for the Class of 1980, women ($\bar{X}$ = 4.56) were more likely to use reason as an influence strategy than were men (($\bar{X}$ = 4.3, $F(1,290) = 7.34$, $p<.01$). Women ($\bar{X}$=3.44; $\bar{X}$ = 2.97) were less positive about the work atmosphere at their duty assignment and less satisfied with their social lives than were the men (X = 3.66, $F(1,290) = 10.30$, $p<.01$; $\bar{X}$ = 3.24 $F(1,290) = 5.65$, $p<.02$, respectively). Women ($\bar{X}$ = 4.08) also felt less well adjusted to their role as officer than did men ($\bar{X}$ = 4.37, $F(1,290) = 8.43$, $p<.01$).

The results for the remaining two variables are consistent with the within-class findings. Overall, women ($\bar{X}$ = 4.2; $\bar{X}$ = 4.02) were more satisfied with their living quarters and with their work relations with members of the opposite sex than were men ($\bar{X}$ = 3.74, $F(1,290) = 12.54$, $p<.01$; $\bar{X}$ = 3.47, $F(1,290) = 34.79$, $p<.01$, respectively).

The overall comparisons are quite powerful with the enlarged data set and do produce some intriguing gender differences. Men seem to have some difficulties working with women and some women may have some trouble adapting to the role of Army officer.

Predictors of Leadership Success

One of the central aspects of each officer's work life is the role he or she plays as the leader of an unit. Given that these recent graduates are trained to be effective leaders and are novices in that role in the field, it will be interesting to see how effective these officers feel they are. To

measure leadership effectiveness, officers feel they are. To measure leadership effectiveness, officers rated how effective they felt as leaders and how effectively their unit performed. These items were converted to z-scores and were averaged to give two ratings of leadership success: leadership effectiveness and unit effectiveness (see Report 1).

Additionally, respondents were asked to name the cause of their unit's performance. Two items concerning the skill and hard work of the leader him or herself assessed the respondent's use of person attributions, that is, something internal to a person, such as his or her skill, caused the unit to perform well. Two other items assessed the contributions of other people's hard work and skill, and the remaining two items rated the degree to which circumstantial events (good and bad luck) influenced unit performance.

Prior work with attribution theory suggests that women attribute their successes to factors outside themselves (luck), while men see their own skill and hard work as the reasons for their own success (Deaux & Emswiller, 1974). There is no evidence that officers conformed to this pattern of attributions. Regression analyses using sex as the dummy-coded criterion and the three atrribution measures as predictors were insignificant for both classes (the adjusted R square for both analyses was .02 or less). In other words, men and women made similar attributions to explain their unit's performance.

Comaparisons of women and men on leader and unit effectiveness did show a significant effect for leader effectiveness. Combining the data from both classes, women ($\bar{X}$ = -.19) describe themselves as less effective leaders than do men ($\bar{X}$ = .03, $F(1,290) = 4.17$, $p<.05$). Are women less effective as leaders or do they simply evaluate themselves more modestly? Data scheduled to be obtained from other sources will help answer this question and would

suggest follow-up studies to understand why this difference exists. Because of this gender difference in perceived leadership effectiveness, let us explore the correlates of effective leadership separately for men and women.

Successful leadership for women. Because of the limited number of women in this study, all predictor variables were simply correlated with both leader and unit effectiveness. In the Class of 1980, three variables correlated significantly with elader effectiveness: person attributions (r = .46), job involvement (r = .42), and adjustment to the officer's role (r =.64

For women in the Class of 1981, academic training at West Point (r = .58), work-related experiences at the Academy (r = .63), job involvement (r = .41), and adjustment to the role of officer (r = .63) were significantly associated with effective leadership. Also, overall social satisfaction was negatively related to unit effectiveness (r = -.37).

Successful leadership for men. A multivariate regression analysis using leader and unit effectiveness as the dependent variables and the remaining variables as independent variables was conducted for both classes of men separately. Both produced significant multivariate effects (Hotellings $F(30,190) = 1.77$, $p=.012$ for 1980; $F(42,180 = 3.28$, $p<.01$ for 1981).

For men in the Class of 1980, only the univariate effect for leader effectiveness was significant ($F(15,97) = 2.21$, $p=.01$, adjusted R square = .14). Exploring this univariate effect further, the significant variables are adjustment to the role of officer ($t = 2.58$, $p=.01$) and self-made career planning ($t = 3.07$, $p<.01$). In other words, men in the Class of 1980 who do their own career planning and who are adapting well to their role as an officer also regard themselves to be effective as leaders.

A more complicated picture is painted by men in the Class of 1981. Here, both univariate effects were significant (leader--$F(21,92) = 4.61$, $p<.01$,

adjusted R square = .18). Person attributions ($t = 3.07$, $p<.01$), confidence in the transition from cadet to officer ($t = .272$, $p<.01$), adjustment to the role of officer ($t = 5.01$, $p<.01$), and academic standing at the Academy ($t = -2.42$, $p<,01$) are related to effective leadership. Not using threats as a form of influence ($t = -2.00$, $p<.05$), physical training at West Point ($t = -2.69$), and positive feeling about the present duty assignment ($t = 3.66$) are associated with unit effectiveness.

In sum, a profile of a man in the Class of 1981 who sees himself as an effective leader is one who makes person attributions, is confident, adjusted well to the role of officer, and was not at the top of his class academically at the Academy. The hypothetical male leader of an effective unit is one who does notuse threats, did not highly value his physical ability at West Point, and who enjoys his current duty assignment.

Conclusion. The key predictor of leadership effectiveness across all groups is the adjustment of the officer to his or her role as an Army officer. Well-adjusted officers make effective leaders. Additionally, making person attributions is significant for two groups (the women of 1980 and the men of 1981). These types of attributions may reflect feelings of self-control as does self-made career planning for the men in the Class of 1980 and confidence displayed by men in the younger class. Finally, involvement is important to effective leadership for both groups of women.

Predictors of Intent to Stay in Army

Leadership success is one of the most important aspects of the new officer's functioning in the field. Another central component of the new officer's career is his or her overall satisfaction with military life. The most telling sign of satisfaction is each officer's plans to remain in the

Army at the end of the required time period. Each respondent noted his or her intentions regarding staying in the military beyond the five-year obligation. Let us look at the predictors of intent to remain in the Army as a sign of each officer's general satisfaction.

In Report 3, we found that the younger class was more undecided about their future career plans than were their counterparts in the Class of 1980. This is to be expected. They have less actual experience upon which to base expectations at this point in their careers. Given the greater decisiveness of the more experienced officer, we will look at the two classes separately. Also, since this is an important factor for the new women officers, we will examine the sexes separately.

Intent in the Class of 1980. Using the whole class, a large regression analysis pointed to three significant correlates of intent to remain in the Army: self-made career planning, long range planning, and job involvement. Not surprisingly, those who plan to stay in the Army are more likely to do long-range planning on their own and are involved with their work.

Simple correlations of variables with intent are shown for women and men in Tables 1 and 2, respectively. In addition to those correlates noted above, both married men and women are more likely to plan on staying in the Army if their spouse is committed to and supportive of the respondent's careers. Comparisons of these tables also reveal some differences in what influences intent for women and men.

For women in the Class of 1980, satisfaction with military life is significant predictor of intent. Furthermore, women who make circumstantial attributions about unit performance are less likely to want to stay in the Army. The most noteworthy aspect of these correlations for these women is the paucity of significant effects unlike the large number of correlates

found for all other groups. This leads us to conclude that there are few general trends for this pioneering group of women unlike the more consistent patterns found with data from the other members of both classes.

As can be seen in Table 2, many variables correlate significantly with intent to remain int he Army for men in the Class of 1980. For example, the men who report intentions of remaining report high job satisfaction, are satisfied with both their military development and work relations, and rate their present duty assignment positively. They are adjusting well to their role as officers and to the Army's lifestyle and for those who are married, their spouse's career is compatible with the respondents'. A clearer profile of those men who are most likely to remain can be extracted from these data.

Intent in the Class of 1981. An overall regression analysis for the Class of 1981 pointed to four correlates of intent: satisfaction with military policies, job involvement, adhustment to the Army's lifestyle, and feelings that Branch and Speciality orientations at the Academy were valuable. Involvement is an important correlate in both data sets and across both sexes.

Correlates for the women in the Class of 1981 are shown in Table 3. Like the older women, married women in the Class of 1981 are more likely to plan to remain in the Army if their spouse is supportive of their career. This is the only similarilty of women across classes. Otherwise, the women in the younger class more closely overlap their male counterparts than other women. Here is an instance where the women in the Class of 1980 do stand alone.

For example, both men and women in the Class of 1981 who plan to remain want a balance between career and familial demands are satisfied with both their own military development and their social lives, scored high in

academic work and valued their academic training, are involved with their work, and are well adjusted to both their role as an officer and to the Army's lifestyle. In addition, for the women, confidence correlated with intent.

A quick glance at Table 4 shows even greater desctiptive detail for men in the Class of 1981. Men who report intentions of remaining int he Army beyond their obligation view themselves as effective leaders, have a positive relationship with their superior, enjoy their present duty assignment and are satisfied overall. Interesting, overall satisfaction correlated with intent only for this group of respondents.

Conclusions. Of course, all of the above deals solely with intent to remain measured two to three years before the actual decision to do so occurs. However, as a general overriding measure of satisfaction, it is a solid, behaviorally based measure. Additionally, it is a key question of interest to policymakers.

The finding that there are few group trends for women in the Class of 1980 argues that their decisions to remain inthe Army are idiosyncratic at this time. The interviews and follow-up questionnaires may show some trends that cut across these women that may help planners enhance their rates of commitment. As these women continue to be the test case, the eyes of future officers will be upon them as they reach this decision point in their careers,

A more consistent pattern emerges from the other three groups. For all men and the younger women, intent is related to satisfaction with military development, job involvement, and adjustment to the role of officer and the the Army's lifestyle. These all are areas where field ofticers may help newcomers. For example, knowing that a smooth adjustment to the role of

officer is central to the novice's overall satisfaction and career intentions may help superiors to focus thei attention onto this aspect of their subordinates' career development.

Suggestions for Future Hypothesis Testing

To conclude this report, let us consider some hypotheses that may be tested at a future time and that are suggested by the work reported here. These suggestions fall into two categories: work that can be done within the present data sets and tests that can be planned when these data are expanded with the information from later surveys and interviews.

Within These Data Sets

Further exploration into the gender differences reported here would be informative. The analyses conducted here were exploratory. The vast literature on sex roles readily will suggest more specific hypothese related to these initial findings. Immediate suggestions focus on role conflict, tokenism, men's stereotypes, and self-efficacy.

The data reported here suggest that women are experiencing some role conflict, especially in their adjustment to the role of Army officer. What differentiates those women with few adjustment problems from the others? What changes in perceptions of this role might facilitate this process? These and other questions arise from the literature on role conflict and adaptation (Goode, 1960; Hall, 1972). They will be the focus of more close scrutiny in follow-up structured group interviews with these same graduates.

Are token numbers of women feeling isolated outside duty assignments? Both our own work at the Academy (Yoder, Adams, Prince, 1983) and that of Kanter (1977) in the corporate world showed that numerically underrepresented groups of women often are isolated by their colleagues. Half of the women in

each class are overseas in Europe where they face removal from support networks and face cultural and language differences.

Finally, one trend in examining leadership success was for officers who felt greater self-control to report higher leadership effectiveness. According to Bandura (1977), feelings of self-efficacy are important to personality development and growth. Tests relating self-control, defined by variables such as self-initiated career planning, person attribution, and confidence in making the transition from cadet to officer, to successful leadership and unit performance would suggest areas of training for future officers.

With Future Resources

These two data sets represent only a portion of the data collected and b ing collected from the graduates of the Academy. As these data are added to our analyses, other questions can be broached. The current analyses suggest two areas for expanded work: leadership effectiveness and intention to remain in the Army.

The conclusions reported here with officers' scores on leader and unit effectiveness are based on each repondent's self-perceptions of these two factos. The most obvious question to be answered concerns whether these self-report measures correlate with evaluations of effectiveness that originate from other sources. A capstone portion of this study is to actually observe leaders in actual field traning on exercises to establish more insight to leader ettectiveness.

A similarly obvious questions arises from the data on intent to remain in the Army after the completion of the five-years of obligatory service. Are intentions reported early in one's career related to later actual rates

of attrition? And, more importantly for policymakers, what characteristics differentiate those who stay from those who leave? These are key questions to be answered in future data collections.

Before we leave the current data on intentinos, let us reiterate that our work with this variable to date is unaffected by the outcomes from these projected analyses. Indeed, intentions need not predict actual behavior, however, they do reflect current overall satisfaction in an indirect, but concrete and behaviorally based manner. As a measure of current satisfaction, intentions are a good measure that is worthy of the attention paid to it here.

As with all social science research, every answered question seems to generate two more queries. This report is no exception. Although some provocative data are presented and discussed, work with these data is only beginning. The promise they hold is encouraging.

Table 1

Significant Correlates of Intentions for Women in the Class of 1980.

Variable	Correlation
INVOLVE	.59
AHEAD	.50
SPOUSE 2	.45
SPOUSE 1	.40
SSMLIFE	.35
UNPERF5	-.44
UNPERF6	-.49
ATCIRCUM	-.50

Note. - See Appendix A for a key to each variable name.

Table 2

Significant Correlates of Intention for Men in the Class of 1980.

Variable	Correlation
INVOLVE	.60
SPOUSE1	.59
AHEAD	.42
SPOUSE2	.41
JOBSAT	.40
STYLE	.33
SSMDEV	.30
SPOUSE3	.27
DUTY26	.26
SSWKREL	.25
ROLE	.23
DUTY	.22
UNPERF3	.19

Note. - See Appendix A for a key to each variable name.

Table 3

Significant Correlates of Intention for the Women in the Class of 1981.

Variable	Correlation
INVOLVE	.77
SPOUSE2	.72
ROLE	.57
STYLE	.56
MTCARFAM	.52
SSSOCIAL	.51
SSMDEV	.51
MILDEV3	.45
MTCONFID	.45
WPACAD	.40
ACSTAND	.38
DUTY26	.37

Note. - See Appendix B for a key to each variable name.

Table 4

Significant Correlates of Intention for Men in the Class of 1981.

Variable	Correlation
INVOLVE	.46
ROLE	.45
STYLE	.42
SSMDEV	.42
SSSOCIAL	.35
DUTY26	.32
DYRELS	.30
SOCSAT	.29
SSWKREL	.27
MTCARFAM	.26
DYWKATM	.24
LDREFF	.23
SSMLIFE	.23
SOCSATI3	.23
WPSOCIAL	.22
MILSTAND	.22
DUTY	.21
WPACAD	.20
UNPERF2	.19
ACSTAND	.19

Note. - See Appendix B for a key to each variable name.

Appendix A

Revised List of Variable in 1980 Data Set

Variable	Description
LDREFF	R's* self-perceived leadership effectiveness
UNEDD	R's perception of his or her unit's effectiveness
UNPERF1	the degree to which the skill of the leader contributes to unit performance
UNPERF2	the degree to which the skill of subordinates contributes to unit performance
UNPERF3	the degree to which the hard work of the leader contributes to unit performance
UNPERF4	the degree to which the hard work of subordinates contributes to unit performance
UNPERF5	the degree to which good luck contributes to the unit performance
UNPERF6	the degree to which bad luck contributes to unit performance
ATPERSON	person attributions (UNPERF1 + UNPERF3)
ATOTHER	other attributions (UNPERF2 + UNPERF4)
ATCIRCUM	circumstantial attributions (UNPERF5 + UNPERF6)
LIPERS	leader uses personal influence
LIREAS	leader explains reasons for directives
LDRINF2	skill as an influence strategy
LDRINF4	hints as an influence strategy
LDRINF5	threats as an influence strategy
DYRELS	relationship of R with superior
DYTKST	task structure of R's present assignment
DYTKCH	task characteristics of R's present assignment
DYWKATM	work atmosphere of R's present assignment
DUTY6	administrative effectiveness of superior
DUTY21	interference by others in R's job
DUTY 26	feelings of contentment in work
DUTY	overall rating of present duty assignment
JOBSAT	overall measure of job satisfaction

R* denotes respondent

Variable	Description
SSSOCIAL	satisfaction with R's social life
SSPOLICY	satisfaction with military policies
SSMDEV	satisfaction with R's military development
SSMLIFE	satisfaction with military life (SSMDEV + SSPOLICY)
SSWKREL	satisfaction with R's work relations, including career support from family
SXSEX	satisfaction with social relations with other sex
SOCSAT7	satisfaction with quarters
SOCSAT13	satisfaction with work relations with other sex
SOCSAT15	satisfaction with fraternization policy
SOCSAT	overall satisfaction
INVOLVE	an index of job involvement
INTENT	intent to stay in the Army
ROLE	adjustment to the role of Army officer
STYLE	adjustment to the life-style of the Army
MARSTAT	R's marital status
SPOUSE1	commitment of R's spouse to ARmy life
SPOUSE2	support of spouse for R's career
SPOUSE3	compatibility of R's career with spouse's
SPOUSE4	combining career with family
CHILD	presence of child(ren)
SEX	0 = male; 1 = female
HEAD	major command headquarters
ASSIGM	present duty assignment

Appendix B

Updated List of Variables in 1981 Data Set

Variable	Description
LDREFF	R's* self-perceived leadership effectiveness
UNEDD	R's perception of his or her unit's effectiveness
UNPERF1	the degree to which the skill of the leader contributes to unit performance
UNPERF2	the degree to which the skill of subordinates contributes to unit performance
UNPERF3	the degree to which the hard work of the leader contributes to unit performance
UNPERF4	the degree to which the hard work of subordinates contributes to unit performance
UNPERF5	the degree to which good luck contributes to the unit performance
UNPERF6	the degree to which bad luck contributes to unit performance
ATPERSON	person attributions (UNPERF1 + UNPERF3)
ATOTHER	other attributions (UNPERF2 + UNPERF4)
ATCIRCUM	circumstantial attributions (UNPERF5 + UNPERF6)
LIPERS	leader uses personal influence
LIREAS	leader explains reasons for directives
LDRINF2	skill as an influence strategy
LDRINF4	hints as an influence strategy
LDRINF5	threats as an influence strategy
CONDUCT1	personal conduct of others
CONDUCT2	psychological effects
REACT	reaction to incident
MORALS1	change in moral concerns
MORALS2	change in moral values
WPACAD	academic training at West Point
WPPT	physical training at West Point
WPSOCIAL	social training at West Point
WPPERS	personal training at West Point
WPWORK	work training at West Point
MILDEV1	military development--CTLT experience
MILDEV2	military development--Summer Leadership Cadre
MILDEV3	military development--Branch and Speciality
MILDEV4	military development--Military Training Speciality

R* denotes symbol for respondents

Variable	Description
MTCONFID	military transition--confidence
MTCARFAM	military transition--career and family lives
MTFREE	military transition--new freedoms
TRANS4	well-informed about first assignment
DYRELS	relationship of R with superior
DYTKST	task structure of R's present assignment
DYTKCH	task characteristics of R's present assignment
DYWKATM	work atmosphere of R's present assignment
DUTY6	administrative effectiveness of superior
DUTY21	interference by others in R's job
DUTY 26	feelings of contentment in work
DUTY	overall rating of present duty assignment
SSSOCIAL	satisfaction with R's social life
SSPOLICY	satisfaction with military policies
SSMDEV	satisfaction with R's military development
SSMLIFE	satisfaction with military life (SSMDEV + SSPOLICY)
SSWKREL	satisfaction with R's work relations, including career support from family
SSXSEX	satisfaction with social relations with other sex
SOCSAT7	satisfaction with quarters
SOCSAT13	satisfaction with work relations with other sex
SOCSAT15	satisfaction with fraternization policy
SOCSAT	overall satisfaction
INVOLVE	an index of job involvement
INTENT	intent to stay in the Army
ROLE	adjustment to the role of Army officer
STYLE	adjustment to the life-style of the Army
MARSTAT	R's marital status
SPOUSE1	commitment of R's spouse to ARmy life
SPOUSE2	support of spouse for R's career
SPOUSE3	compatibility of R's career with spouse's
SPOUSE4	combining career with family
CHILD	presence of child(ren)
SEX	0 = male; 1 = female
HEAD	major command headquarters
ASSIGM	present duty assignment
ACSTAND	academic standing at the Academy
MILSTAND	military development standing at the Academy
PTSTAND	physical standing at the Academy
SQUAD	member of corps squad at the Academy