COVER SHEET

Vocational Interest a nd Army ROTC Success

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VOCATIONAL INTERESTS AND ARMY ROTC SUCCESS

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ABSTRACT

VOCATIONAL INTERESTS AND ARMY ROTC SUCCESS

by Eric Charles Brown

In this study, interest is used in an effort to
predict whether students entering an Army ROTC program will
successfully complete the program or drop out. The Strong-
Campbell Interest Inventory was administered to 108 students
in 5 classifications at Middle Tennessee State University
during the spring of 1980. The classifications were First
Year ROTC, First Year Non-ROTC, Upperclass RCTC, Upperclass
ROTC Dropout, and Upperclass Non-ROTC.

Four statistical analyses were made using a discrimi-
nant analysis program. The results indicate that statisti-
cally different interest scores were observed in the ROTC
and Non-ROTC students and suggest that interest measures can
be used to identify the students most likely to remain in the
ROTC program. A regression equation was developed in an
effort to predict these "successes" on the basis of interest
measurement. However, to determine the real success of
this equation and the predictions resulting from its use, a
longitudinal follow-up must be conducted of the present
First Year ROTC class.

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VOCATIONAL INTERESTS AND ARMY ROTC SUCCESS

Eric Charles Brown

A thesis presented to the
Graduate Faculty of Middle Tennessee State University
in partial fulfillment of the requirements
for the degree Master of Arts

August, 1980

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Chapter I

INTRODUCTION

Numerous attempts have been made to use the interest patterns of individuals as an aid in selecting fields of study or occupations (Berdie, 1960; Berdie, 1965; Carter, 1944; England & Paterson, 1958; Feifel, Steenberg, Brogden, & Kleiger, 1952; Ferguson, 1958; Hannum & Thrall, 1955; Martin, 1964; Matarazzo, Allen, Saslow, & Wiens, 1964; Perry & Cannon, 1965; Strong & Tucker, 1952. One criterion for the effectiveness of this approach is longevity, tenure, or retention. If tenure in an occupation or educational field can be predicted by interest measures, they have the potential to provide a great return for the individual or organization investing time and money in measuring them. In the present study, a measure of interest will be used in an effort to predict longevity in an academic Army ROTC program.

Educational Use of Interests

CoBabe (1967) did a study using the Strong Vocational Interest Blank as a potential predictor of success of students in engineering programs at Purdue University. All subjects were first divided into an initial study group and a cross validation group. A multiple discriminant function analysis within each group attempted to

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differentiate three groups: Degree/engineers, Degree/
nonengineers, and Nondegree students. It was concluded
that a combination of interest and ability measures
produced statistically significant discrimination among the
criterion groups. Although the three sub-groups did not
differ statistically with respect to job description, there
were significant differences with respect to occupational
level. Degree/engineers preferred occupations requiring
more quantitative skill while the other two sub-groups
preferred occupations involving aesthetic-creative com-
ponents.

In another study, Mowbray and Taylor (1967) investi-
gated interest as a predictor of success in nursing school.
The Kuder Preference Record and the Strong Vocational
Interest Blank were the two main inventories used. The
instruments were administered to three classes enrolled in
a school of nursing. The students were divided into four
groups: Sample 1 consisted of students who withdrew from
the classes; Sample 2 were students who made normal adjust-
ment to nursing school; Sample 3 made outstanding adjustment;
Sample 4 was drawn at random from all members of the classes
without respect to adjustment. They concluded that a high
score on the Social Service Scale of the Kuder Preference
Record, an interest measure, was statistically significant
in predicting adjustment to nursing school.

More recently, Kim (1971) used intellectual interest as a predictor of college academic success. First year students entering Michigan State University were administered the Academic Interest Scale and the M. S. U. Student Survey. The composite score of the Academic Interest Scale was used as a measure of intellectual interest. A significant positive correlation was found between this score and grade point average. The conclusion was that intellectual interest is useful as a predictor of college success as measured by academic grade point average.

Occupational Tenure

Schuh (1967) reviewed literature on the predictability of employee tenure in which numerous tests and inventories were considered. Four of the studies cited used the Kuder Preference record. The Persuasive Scale on the Kuder was found to relate to length of service in three out of the four studies.

According to Schuh's review, the Strong Vocational Interest Blank has not been used as frequently as the Kuder. However, in some studies where the SVIB was used, MacKinney and Wolins (1960) and Boyd (1961) found the Occupational Level scale related significantly to tenure. This led Schuh to state, "It appears reasonable to conclude that some interest inventories are better predictors of tenure than are intelligence or aptitude tests" (p. 144).

In a study of prediction of occupational tenure for women, Stone and Athelstan (1969) employed the SVIB and eight demographic variables. Although the results of the study suggested the demographic variables were better predictors of occupational tenure, "a preliminary step-wise regression analysis suggested that several SVIB scales were significantly related to occupational tenure" (p. 411).

A study by Cannedy (1969) was done to identify predictors of tenure for female sewing machine operators. Along with other instruments, an interest inventory was given. Item analysis of the Personal History form and the Interest Inventory followe: a double cross-validation procedure. Using a triserial correlation, the Interest Inventory had a validity of .269 which was statistically significant at the $p \leq .01$ level.

Neumann and Abrahams (1972) of the Naval Personnel and Training Research Laboratory investigated the selection of career motivated United States Navy officers in the National Oceanic and Atmospheric Administration through the use of the SVIB. A background questionnaire was administered to identify low tenure active duty subjects. The results received from both inventories indicated that a number of the SVIB scales discriminated between high and low tenure subjects. The cross-validation correlations ranged from .50-.65.

Purpose

The preceding sampling of past research has indi-
cated that interests successfully predict tenure in some
situations. The primary purpose of the current research is
to determine whether interests can be useful in predicting
successful completion of an Army ROTC program.

A second goal is to develop a classification
equation for an interest measure which will assist in
identifying, early in their first year, the students who
have a high probability of successfully completing the
Army ROTC program.

A third goal is to accumulate the necessary data
base for a longitudinal validation study of this classifi-
cation equation. This equation will be used to predict,
from the results of the interest measure taken in the first
year, the group (success vs. dropout) in which the student
is expected to eventually reside. Analysis of actual group
membership in three years will provide the necessary data
to determine the predictive validity of this classification
equation.

Chapter II

METHODOLOGY

Subjects

All the subjects in the five groups evaluated were students enrolled at Middle Tennessee State University during the spring semester of 1980. Group A consisted of 23 students enrolled in the advanced (third and fourth year) Army ROTC program and was designated Advanced. Group B (Dropouts) consisted of 16 third and fourth year students who dropped out of the ROTC program after participating for one-half to one year. The 21 subjects of Group C (Seniors) were solicited from an Industrial Psychology class. They were third and fourth year students who never enrolled in the ROTC program. Group D (Beginners) consisted of 25 first year ROTC enrollees and Group E (Freshmen) consisted of 23 first year non-ROTC enrollees solicited from a General Psychology class. Each subject was administered the same interest inventory. All participation was voluntary.

Instrument

The vocational interest inventory used was the Strong-Campbell Interest Inventory, a 1974 revision of the Strong Vocational Interest Blank. The inventory consists of 325 items grouped into seven parts. The first five parts

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require the examinee to indicate interest preferences by marking L, I, or D to indicate Like, Indifferent, or Dislike on the answer sheet. Items in the first five parts fall into such categories as occupations, school subjects, activities, amusements, and day-to-day contact with various types of people. The remaining two parts require the examinee to indicate preferences between pairs of items by marking the statements Yes, No, or ?.

The SCII can be computer scored, producing a two page profile of the examinee. The 325 items are scored on 124 Occupational Scales which constitute the main body of the SCII. These scores enable the examinees to see how their responses compare with responses given by people in the various occupations indicated in the inventory.

These 124 Occupational Scales are then further grouped into 23 Basic Interest Scales. These scales consist of clusters of substantially intercorrelated items.

> The Basic Interest Scales are more homogeneous in content than the Occupational Scales and can therefore help in understanding why an individual scores high on a particular Occupational Scale. (Anastasi, 1976, p. 531)

The 23 Basic Interest Scales are then placed into six General Occupational Themes, the broadest scales of the SCII.

> Each theme characterizes not only a type of person but also the type of working environment that such a person would find most congenial. Scores on all parts of the inventory are expressed as standard scores ($M=50$, $SD=10$). (Anastasi, 1976, p. 530)

The normative group in the general reference sample of the SCII consists of both male and female representatives of all occupations covered by the inventory. The profile of the examinee, however, is only plotted against same sex norms. The two broader scales, Basic Interest and General Occupational Theme, use people in general as the reference group. As indicated above, however, "Occupation standard scores are derived from the appropriate occupational criterion groups, not from the general reference samples" (p. 531).

Procedure

In the Spring, 1980, semester, the students in each of the five groups were administered the SCII. Groups C and E filled out the inventory during their regular class period. Groups A and D were talked to separately during their class periods where they were asked to come back at a mutually agreed upon time to complete the inventory at a group meeting.

A search was made of university records to determine how many students, who would fall into Group B, were still enrolled at the university. Of the students still enrolled, 16 were contacted by telephone, and all agreed to meet with the experimenter in a group meeting and to complete the inventory.

Statistical Analysis

All the inventories were completed and machine scored by a test-scoring center in Minnesota. This scoring procedure resulted in a 163 score profile for each subject. The profile is composed of 124 Occupational Scales which are then grouped into 23 Basic Interest Scales. These are then grouped into 6 General Occupational Themes. The other 10 scores provide administrative indexes such as the number of infrequent responses.

Due to limitations in the computer's core space, the statistical analysis was limited to 50 variables. The variables utilized were 6 General Occupational Themes scores, 10 Basic Interest Scales scores, and 34 Occupational Scales. Of the last two groups, the scores were those most related to the Realistic Theme. Since the SCII Manual indicated that Army officers had interests corresponding to this Theme category, it seemed reasonable to the experimenter that ROTC students would also have interests related to this Theme.

Four statistical analyses were made. Groups A and B were compared to determine how vocational interests differentiate ROTC successes from dropouts. Groups A and C were compared to determine how ROTC successes differ from non-ROTC advanced students. Groups D and E were compared to determine how ROTC enrollees differ from non-ROTC enrollees

at the first year level. The fourth analysis was an effort
to simultaneously differentiate Groups A, B, and C. Since
Group D probably includes both future successes and future
dropouts, it cannot be meaningfully compared with Group A.
Although not a part of this research, the data from Group A
will be used to predict among persons in Group D those who
will continue and those who will drop out. These predictions
will be compared with actual successes and dropouts three
years hence.

The analyses were made by computer using the
discriminant analysis subprogram (DISCRIMINANT) of the
SPSS (Statistical Package for the Social Sciences). The
three analyses involving two groups each used a stepwise
selection criterion (WILKS) which maximizes the overall
multivariate F ratio for the test of differences among the
group centroids. The other analysis used another stepwise
selection criterion (MAHAL) which maximizes the distance
between the closest groups.

Chapter III

RESULTS

First Analysis

The first analysis identified the interest variables which discriminated between the Advanced Army ROTC Students (Advanced) and those who had enrolled in Army ROTC in the first year, as did the advanced group, but had dropped out prior to reaching advanced status (Dropouts). Table 1 summarizes some of the relevant program results. It indicates that five significant variables (5--Enterprising Theme, 10--Military Activities, 29--Army Officer, 32--Dietician, 39--Physical Scientist) were identified. These variables, when appropriately weighted, correctly classified 82.6% of the Advanced Students and 87.5% of the Dropouts.

Looking at the standardized discriminant function coefficients, it can be seen that variable 5 (Enterprising Theme) and variable 29 (Army Officer) are the most important in differentiating the groups. Advanced Students tend to score high on variable 10 (Military Officer), variable 29 (Army Officer), and variable 32 (Dietician). As expected, this group especially showed the interests typical of Army Officers (variable 29). Dropouts, on the other hand, tended to score high on variable 5 (Enterprising Theme) and, to a

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Table 1

Partial Results of Multiple Discriminant Analysis Program to Differentiate Between Advanced Students and Dropouts

Variables	Standardized Discriminant Function Coefficients	Unstandardized Discriminant Function Coefficients
5--Enterprising Theme	0.91744	0.09535
10--Military Activities Basic Interest	-0.44995	-0.04575
29--Army Officer Scale	-0.82098	-0.06667
32--Dietician Scale	-0.39878	-0.04223
39--Physical Scientist Scale	0.34541	0.02629
Constant	-	2.17097

Note. A positive sign indicates a positive relationship that variable and the Dropout group. A negative sign indicates a negative relationship with Dropout status and a positive relationship with Advanced status.

lesser degree, variable 39 (Physical Scientist). The SCII Manual (1977) describes a high scorer on the Enterprising Theme, the dominant variable for identification of the Dropout group, as preferring a sales or executive career and a dominating or leadership role. Also, they are described as tending to avoid intellectual and scientific activities.

Finally, it is noted that the centroids (mean standard scores) were -0.49975 for the Advanced Students and 0.71839 for the Dropouts. The canonical correlation was 0.607, and the chi square of 15.856 was significant beyond the p = .01 level. This means the analysis resulted in a statistically significant classification of these subjects.

Second Analysis

The second computer analysis identified the interest variables which could discriminate between the Advanced Army ROTC Students and those third and fourth year students who have never enrolled in ROTC (Seniors). Table 2 summarizes some of the relevant program results. It indicates that 25 significant variables (5--Enterprising Theme, 6--Conventional Theme, 7--Agriculture, 8--Nature, 9--Adventure, 10--Military Activities, 11--Mechanical Activities, 14--Medical Science', 15--Medical Science, 16--Office Practices, 18--Air Force Officer, 19--Army Officer,

Table 2

Partial Results of Multiple Discriminant
Analysis Program to Differentiate Between
Advanced Students and Seniors

Variables	Standardized Discriminant Function Coefficients	Unstandardized Discriminant Function Coefficients
5--Enterprising Theme	0.42254	0.04940
6--Conventional Theme	-0.55639	-0.07072
7--Agriculture Basic Interest	-1.09183	-0.11120
8--Nature Basic Interest	0.76478	0.06926
9--Adventure Basic Interest	0.26140	0.02324
10--Military Activities Basic Interest	1.10844	0.08458
11--Mechanical Activities Basic Interest	-0.24416	-0.02138
14--Medical Science Basic Interest	-0.98336	-0.09280
15--Medical Service Basic Interest	-0.21274	-0.02421
16--Office Practices Basic Interest	0.35793	0.04050
18--Air Force Officer Scale	-3.59819	-0.28383
19--Army Officer Scale	1.12254	0.10272

Table 2 (continued)

Variables	Standardized Discriminant Function Coefficients	Unstandardized Discriminant Function Coefficients
22--Nurse, Registered Scale	0.36431	0.03415
23--Navy Officer Scale	-0.76044	-0.05812
25--Radiation Technician Scale	0.25135	0.02071
26--Forester Scale	0.49376	0.03698
29--Army Officer Scale	-0.12531	-0.01192
30--Highway Patrol Officer Scale	0.58710	0.03668
37--Engineer Scale	2.30971	0.17139
42--Dentist Scale	0.29078	0.02031
43--Dentist Scale	-0.44363	-0.03769
46--Nurse, Licensed Practical Scale	0.25475	0.02205
47--Medical Technician Scale	0.31875	0.02121
48--Optometrist Scale	0.26017	0.02112

Table 2 (continued)

Variables	Standardized Discriminant Function Coefficients	Unstandardized Discriminant Function Coefficients
49--Computer Programmer Scale	1.13171	0.08224
Constant	-	-3.61031

Note. A positive sign indicates a positive relationship with Advanced status and a negative relationship with Senior status.

22--Registered Nurse, 23--Navy Officer, 25--Radiation
Technician (X-ray), 26--Forester, 29--Army Officer,
30--Highway Patrol Officer, 37--Engineer, 42--Dentist,
43--Dentist, 46--Licensed Practical Nurse, 47--Medical
Technician, 48--Optometrist, 49--Computer Programmer) were
identified. When appropriately weighted, these variables
correctly classified 100% of the Advanced Students and
100% of the Seniors.

The standardized discriminant function coefficients
indicate that variable 37 (Engineer) and variable 18 (Air
Force Officer) are the most important in differentiating
the groups. In order of importance, the variables helping
to identify the Advanced group were 37 (Engineer), 49
(Computer Programmer), 19 (Army Officer), and 10 (Military
Activities). The significant variables helping in iden-
tifying the Senior group members, in order of importance,
were 18 (Air Force Officer), 7 (Agriculture Interests), and
14 (Medical Science).

The centroids were 0.93134 for the Advanced group
and -1.02004 for the Seniors. The canonical correlation
was 0.986, and the chi square of 105.580 was significant
beyond the $p = .01$ level which indicates a significant
relationship between interest scores and group membership.

Third Analysis

The third computer analysis identified the interest variables which would discriminate between first year students enrolled in Army ROTC (Beginners) and first year students not enrolled in Army ROTC (Freshmen). Table 3 summarizes some of the relevant program results. It indicates that 17 significant variables (3--Artistic Theme, 6--Clerical Theme, 9--Adventure, 10--Military Activities, 4--Medical Science, 16--Office Practices, 18--Air Force Officer, 22--Nurse, Registered, 23--Navy Officer, 25-- Forester, 34--Instrument Assembly, 35--Farmer, 41--Pharmacist, 45--Dental Assistant, 48--Optometrist, 49--Computer Programmer) were identified. These variables, when appropriately weighted, correctly classified 96% of the Beginners and 100% of the Freshmen.

Looking at the Standardized discriminant function coefficients, it can be seen that variable 18 (Air Force Officer) and variable 22 (Registered Nurse) were the most important in differentiating the groups. Other variables identifying the Beginners, in addition to 18 (Air Force Officer), were 16 (Office Practices Interest) and 25 (Radiation Technicians). In addition to 22 (Registered Nurse), other variables most useful in identifying Freshmen were 45 (Dental Assistant) and 49 (Computer Programmer).

Table 3

Partial Results of Multiple Discriminant Analysis Program to Differentiate Between Beginners and Freshmen

Variables	Standardized Discriminant Function Coefficients	Unstandardized Discriminant Function Coefficients
3--Artistic Theme	0.33848	0.03007
6--Conventional Theme	-0.65715	-0.06932
9--Adventure Basic Interest	-0.23932	0.02233
10--Military Activities Basic Interest	0.47806	0.03824
14--Medical Service Basic Interest	-0.43829	-0.03682
15--Medical Service Basic Interest	0.82288	0.07151
16--Office Practices Basic Interest	1.14848	0.11407
18--Air Force Officer Scale	1.21586	0.09866
22--Nurse, Registered Scale	-1.43886	-0.09824
23--Navy Officer Scale	-0.45051	-0.03332
25--Radiation Technician Scale	1.08605	0.08276

Table 3 (continued)

Variables	Standardized Discriminant Function Coefficients	Unstandardized Discriminant Function Coefficients
34--Instrument Assembly Scale	0.81610	0.06742
41--Pharmacist Scale	0.88992	0.07885
45--Dental Assistant Scale	-1.05647	-0.09605
48--Optometrist Scale	-0.57472	-0.04844
49--Computer Programmer Scale	-0.90669	-0.07517
Constant	-	-8.04335

Note. A positive sign indicates a positive relationship with Beginner status and a negative relationship with Freshman status.

The centroids were .88346 for the Beginners and
-.96028 for the Freshmen. The canonical correlation was
.931 and the chi square of 75.489 was significant beyond
the p = .01 level which indicates a significant relation-
ship between interest scores and group membership.

Fourth Analysis

The last analysis identified the variables which
would discriminate between Groups 1, 2, and 3 (Advanced,
Dropouts, and Seniors). In discriminant analysis, each
group, as measured by its centroid, is treated as a point.
Since three points define a plane (or two dimensional
space), it normally requires two dimensions (or discrimi-
nant functions) to describe the data. Tables 4 through 7
summarize some of the relevant program results.

Table 4 and Figure 1 describe the centroids of the
three groups. As can be seen, the members of Group 1 tend
to be the most positive on Function 1 while Group 3 tends
to be the most negative on Function 1. Group 2 tends to
be close to neutral on Function 1 but definitely positive
on Function 2. Groups 1 and 3 are both negative, to some
degree, on Function 2. In other words, Function 1
primarily differentiates Groups 1 (Advanced) and 3 (Seniors)
while Function 2 primarily differentiates Group 2 (Dropouts)
from the others.

Table 4

Centroids of Groups 1, 2, and 3
for Function 1 and Function 2

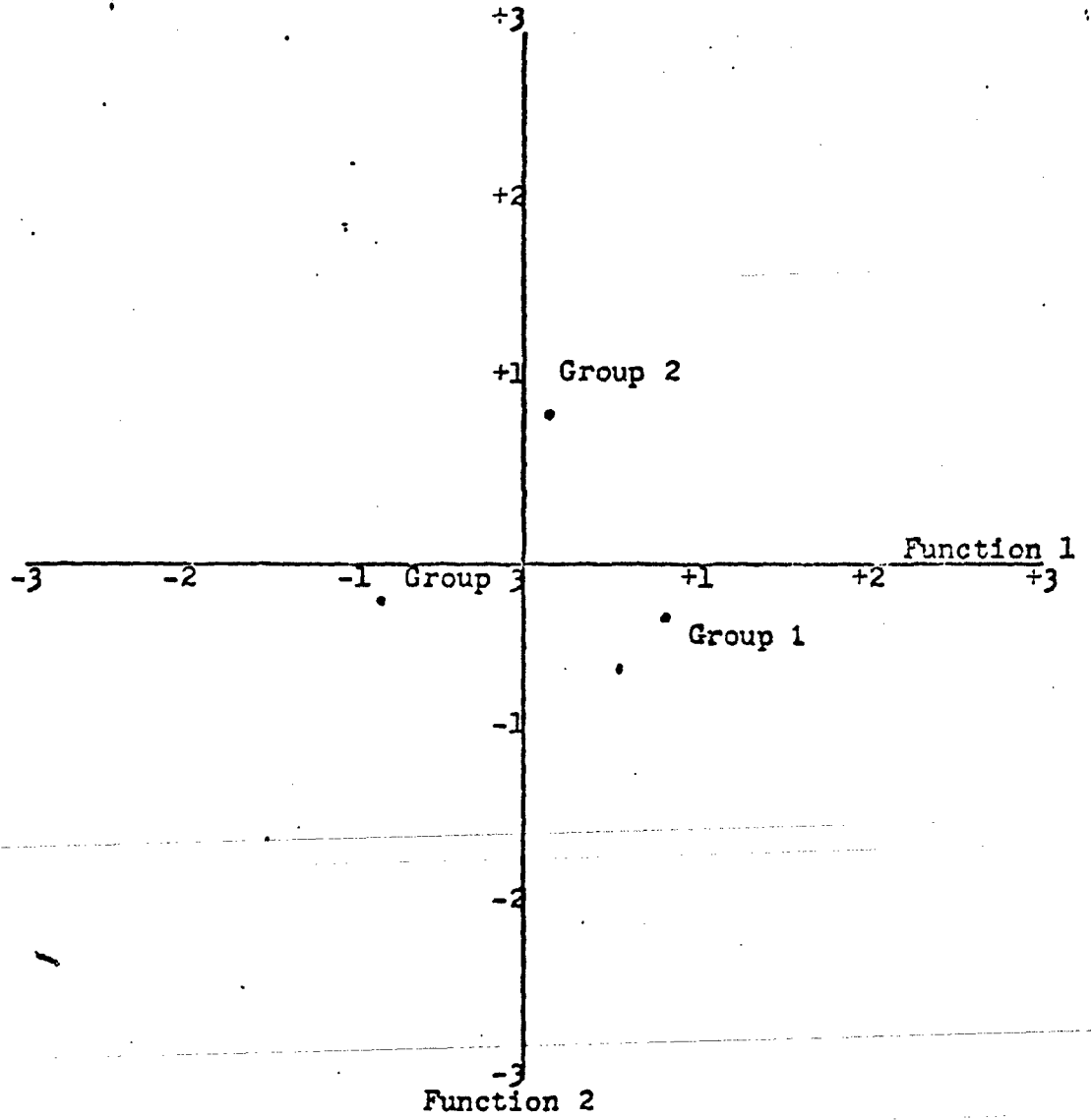|	Function 1	Function 2
Group 1	0.80179	-0.33629
Group 2	0.08816	0.81722
Group 3	-0.94533	-0.25432

Figure 1

Graphic Representation of the Centroids
of Groups 1, 2, and 3

Table 5 describes the relative importance of the discriminant functions. It reveals that 80.11% of the variance in the discriminating variables is identified in Function 1, clearly making it the more potent function. Together the two functions correctly classify 68.33% of the members of the three groups, as summarized in Table 6.

Table 7 identifies the significant discriminating variables and their relative coefficients. It can be seen that variable 10 (Military Activities Interest) is the dominant variable in Function 1 while variables 35 (Farmer), 29 (Army Officer), 16 (Office Practices), and 34 (Instrument Assembly) are the most influential in Function 2. It appears, therefore, that Function 1 primarily measures interests in military activities while Function 2 is measuring a much more complex set of interests which are not describable with one label. However, it appears a general interest in practical, physical or applied activities rather than theoretical, creative, or intellectual activities is an acceptable description of what this function measures.

Table 5

Relative Importance of the
Discriminant Function

Discriminant Functions	Relative Percentage of Variance in Discriminating Variables	Canonical Correlation
1	80.11	0.756
2	19.89	0.498

Table 6

Prediction Results

Actual Groups	Prediction Group 1	Prediction Group 2	Prediction Group 3
1	69.60%	17.40%	13.00%
2	31.30%	50.00%	18.80%
3	4.80%	14.30%	81.00%

Table 7

Partial Results of Multiple Discriminant Analysis Program to Differentiate Between Groups 1, 2, and 3

Standardized Discriminant Function Coefficients

Variable	Function 1	Function 2
5--Enterprising Theme	-0.25250	0.54239
9--Adventure Basic Interest	0.24642	0.44060
10--Military Activities Basic Interest	0.85705	0.03725
16--Office Practices Basic Interest	0.18740	-1.02150
29--Army Officer Scale	-0.16916	-1.13390
34--Instrument Assembly Scale	-0.35853	0.96411
35--Farmer Scale	0.26974	-1.24055

Unstandardized Discriminant Function Coefficients

Variable	Function 1	Function 2
5--Enterprising Theme	-0.02776	0.05964
9--Adventure Basic Interest	0.02397	0.04286
10--Military Activities Basic Interest	0.06799	0.00294
16--Office Practices Basic Interest	0.02111	-0.11509
29--Army Officer Scale	-0.01420	-0.09518
34--Instrument Assembly Scale	-0.03493	0.09394

Table 7 (continued)

Unstandardized Discriminant Function Coefficients		
Variable	Function 1	Function 2
35--Farmer Scale	0.02242	-0.10310
Constant	-3.83583	3.66572

Chapter IV

DISCUSSION

The purpose of this research was threefold. First and foremost, it was to determine whether interests can be useful in predicting successful completion of an Army ROTC program. Second, it was to develop a classification equation to assist in identifying students who will successfully complete the ROTC program. And finally, it was to accumulate data necessary to conduct a longitudinal validation study of the classification equation.

The results of this study indicate that it is very likely that successful completion of the Army ROTC program can be predicted. The data analyses give support for this claim. In each analysis, the correct predictability rate is not less than 68%, and in three cases it is 100%. With the level of significance for the chi-square analysis of the goodness of fit of the classifications consistently less than $p = .01$, there is strong evidence that interest is valuable in prediction of continued participation in ROTC.

Even though this study gives basis for optimism, there are some reasons for caution which must be examined. The ages of all the subjects were not the same. In fact, some members of the Senior group may be as much as 15 years older than the rest. While interests do not seem to change

dramatically after college age, and separate age norms for the SCII are not used, it is possible this age difference is a contaminating factor in this study.

The validity of the operational definition used for non-ROTC subjects may be somewhat in question. For example, two of the subjects, although never enrolled in ROTC of any kind, had prior military experience. Also, a number of the subjects may be from families with military background. (Of course, this could be true of non-ROTC students and ROTC students alike.) Having exposure to military could very well have an effect on occupational interest, either in a positive way or in a way which leads to a negative reaction toward the military or interests associated with it.

Another factor which must be considered is the type of study performed. The ideal method may very well be a longitudinal study. To actually find out how accurate the predictions will be is to see how many first year ROTC students (Group D) actually remain in ROTC programs. This is precisely why data was accumulated to conduct a longitudinal validation study of the classification equation. In two or three years, a follow up study will be conducted and a comparison of data shown.

The above procedure will also provide the data to cross-validate the classification equation developed by this research. As it now stands, lack of cross-validation

data requires that all results and conclusions be con-
sidered tentative. It may be that some of the "unexpected"
results may be clarified by this further analysis. For
example, the author was surprised when the data suggested
that a high score on the Air Force Officer Occupation Scale
is more associated with Seniors, never in ROTC, than it is
with the Advanced ROTC students.

Finally, the regression equation to be applied to
the current first year ROTC students and evaluated by the
long-term follow-up is: $Y_{Pred} = 2.17097 + .09535\ V_5 -$
$.04575\ V_{10} - .06667\ V_{29} - .04223\ V_{32} + .02629\ V_{39}$.
If Y_{pred} is .10932 or more, the prediction is Dropout.
Less than that value leads to a prediction of success.

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