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Life Path as a Predictor of Performance in the Navy:

Phase II Research

WILLIAM E. GAYMON

Prepared for the
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A Life Path Questionnaire (LPQ) was administered to 1555 male, Navy recruits during their first week of active duty. The LPQ, which has been adequately described elsewhere (Gaymon & West, 1976), consisted of six scales designed to assess the quality of interactions which an individual has had with the various socializing institutions prior to his/~~her~~ entry into the Navy. The LPQ scales were: (1) Adaptability, (2) Authority Figures, (3) Early Maturity, (4) Family Relationships, (5) Personal Competence, and (6) Vocational Maturity.

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20. Abstract, (continued from p 1473A.)

Three criterion measures were developed, two of which were derived from a checklist completed on each recruit by the company commander. The checklist yielded two measures which were labelled SCORE and RATING. A third criterion measure resulted from categorizing each surveyed recruit into the following classes: (1) graduated with original training group, (2) set back in training but eventually graduated, and (3) discharged early.

The data were analyzed for relationships between the LPQ scores and the criterion measures. The Authority scale showed the highest degree of relationship followed by the Vocational Maturity scale. The LPQ scale distributions were partitioned into "high" and "low" scores and significant tests were conducted. An interesting pattern of differences was found. The data were also analyzed to determine the effect of demographic variables such as age, educational level, and race. Of these demographic variables, race showed the strongest differences.

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LIFE PATH AS A PREDICTOR OF PERFORMANCE IN THE NAVY: PHASE II RESEARCH

Prepared by:

William E. Gaymon

Prepared for:

Organizational Effectiveness Research Program
Office of Naval Research (Code 452)
Arlington, Virginia 22217

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LIFE PATH AS A PREDICTOR OF PERFORMANCE IN THE NAVY:

PHASE II RESEARCH

INTRODUCTION

The research to be described in this report represents the second phase in a longitudinal research program designed to examine hypothesized relationships between an historical construct labelled "life path" and the quality of performance in the Navy. The basic concepts underlying the research project have been described elsewhere (Gaymon & West, 1976). The specific purpose of the current study is to ascertain what happens to a randomly selected cohort of men as they move throught their first four-year term of enlistment. The information derived from a background questionnaire was used to determine levels of expectation upon entry into the Navy with the intent of codifying the data in ways which could aid the Navy in developing more sensitive selection, assignment, counseling, and remediation policies.

Previous research efforts (LaRocco et al, Lockman, Plag & Goffman) have investigated various combinations of biographical, personality, or attitudinal variables as they relate to effective performance in the military. In a recently published study, LaRocco et al have demonstrated that early dischargees, as compared to recruits who graduate from basic training in the Navy, score significantly lower on scales which measure patterns of affiliation. Such affiliation might be described as social adaptability. As these authors describe it, effectiveness in social participation appears to be a key component of success in the Navy. In terms of negative indicators, LaRocco and his colleagues found that anti-social behavior (e.g., problems with authority figures, suspensions or explusions from school) predicts early attrition especially when coupled with alienation and/or demonstrated lack of effectiveness in social participation.

The current study is designed to expand the knowledge base concerning the relationship between individual abilities and effectiveness in institutional settings. The effect of such demographic variables, such as age, educational level, and race will also be examined. The basic purpose of the study is to examine the individual - institutional interface in an

attempt to develop a deeper understanding of the underlying mechanisms which maximize the probability of success and/or failure. The research should aid in determining the extent to which skill which one develops in establishing effective interactions with various socializing institutions serves to enhance his/her chances of success in a Navy environment. The Life Path Questionnaire (LPQ) to be used in this research focuses upon perceived patterns of interaction with institutions prior to one's entry into the Navy. If the individual scores high on any of the six LPQ scales, it is inferred that his/her interactions were favorable in that particular area.

The basic hypothesis to be examined is that those with more positive patterns of interaction, as manifested by high scores on the LPQ scales, are more likely to demonstrate effective performance in the Navy than those with less positive patterns of interaction. The various criterion measures will be described in a later section.

METHODOLOGY

Pre-Survey Instrument Development

Life Path Questionnaire (LPQ) (Appendix A). The LPQ developed during Phase I of this project was subjected to an item analysis during Phase II and was further modified. The resulting LPQ which contained six scales and 228 items was field tested on a sample of 212 recruits at the Recruit Training Center (RTC) Orlando, Florida during the month of October 1976. The data collected from the preliminary survey was submitted to a series of factor analyses to determine the component scales of a final LPQ.

From the factor analyses we were able to identify six factors in which the various marker items (at least seven from each of the original scales) showed significant loadings. Marker items were those scale items which correlated highly with a scale score and epitomized the meaning of a scale. For example, on the Authority scale, several of the marker items and their r values were: (1) "Police use unnecessary force," (.52); (2) "Police hassle kids," (.65); (3) "Most high school principals would fail at any other job," (.53); and (4) "During high school, I was expelled ____ times," (.43). These factors were labelled appropriately and formed the basis for the final six scales of the LPQ. The LPQ scales were made by selecting those items from the original scales which correlated .14 or

greater ($p < .05$ for N of 212) with the marker items used in the factor analysis. The resulting six scales, as shown in Table 1, represented substantial modifications and/or deletions of the original six scales. In summary:

(1) The Early Maturity, Family Relations, Personal Competence, and Authority Figures scales were maintained.

(2) Vocational Maturity and Adaptability scales were identified.

(3) The Heterogeneous Situations, Alienation Affiliation, and Conformity scales were eliminated.

The internal consistency of the six scales of the LPQ was evaluated via Cronbach's Alpha coefficient. The final six scales, their respective Alpha coefficients, and number of items are as follows:

- Adaptability (ADAPT) - .74 - (18)
- Relationships With Authority Figures (AUTH) - .74 - (28)
- Evidence of Early Maturity (EMAT) - .69 - (15)
- Quality of Family Relationships (FAM) - .74 - (21)
- Personal Competence (COMP) - .84 - (26)
- Vocational Maturity (VMAT) - .62 - (16)

The total number of items on the LPQ was 124.

As suggested by the scale titles, the items comprising a scale were designed to assess the relative presence or absence of behaviors or attitudes which could be used to describe the quality of interaction with the various socializing institutions which one encounters in the process of maturation. Though the major thrust of the LPQ is biographical, some of the items deal with underlying attitudes or opinions. The intent of the attitudinal questions was to ascertain the most probable behavioral pattern that an individual might manifest in a given person-institutional situation. For example, item #54 of the Authority scale reads: "In my opinion, school officials show little sensitivity to the real needs of students."

Recruit Behavior Checklist (Appendix C). Using the content material from extensive interviews with training personnel at a Navy RTC, a checklist of highly typical recruit behaviors was developed. The checklist items focused on behavior which could be observed among recruits

during the eight-week basic training program. A set of 50 such items was prepared which dealt with a broad cross-section of recruit behaviors ranging from the use of free time to the quality of performance in the classroom. The checklist was constructed so that half of the items were indicative of effective performance while the other half suggested ineffectual performance (in point of fact, 26 items were negatively keyed while 24 were positively keyed). The checklist also provided for an overall evaluation of performance on a ten-point scale ranging from poor to outstanding.

Subjects

The sample consisted of 1555 male Navy recruits all of whom were in the first week of basic training. Of the total sample, 478 were at the Great Lakes Recruit Training Center, 534 were at Orlando, and 543 were at San Diego. Data for these three groups were combined for all analyses.

The salient characteristics of the sample were as follows:

Mean age 19.1, range 17-29

Mean Educational Level 11.7, range 8-18

Racial Group Membership (50 questionnaires carried no racial identification)

	Number	Percentage
White	1239	82%
Nonwhite	266	18%
Black	182	12%
Mexican-American	32	2%
Spanish-American	19	1%
Native American	14	1%
Asian	7	.5%
Other	12	1%

Procedure

The subjects were randomly selected from company rosters by selecting every third recruit until the desired number was obtained. An average of 25 recruits from each company was selected as part of the survey. The

intent was to survey 500 entering, male recruits from each RTC. As a practical matter, it was necessary to depart from the general approach for two important reasons: (1) recruit intake procedures differed markedly at the three RTC's and, consequently, the investigator was obliged to vary sampling procedures accordingly; (2) alterations were made as necessary to ensure that the total sample included meaningful percentages of minority-group members. In spite of such alterations which consisted of slight over sampling of minority recruits, all recruits were selected without prior knowledge of individual characteristics, except race. Essentially, the sample was considered to be random.

Administration and Scoring of the LPQ

The LPQ was administered in a group setting ranging from 30 to 60 recruits. The investigator explained the purpose of the survey (i.e., "to obtain information which will help the Navy to provide better selection, assignments, and counseling for future Navy recruits) and assured each participant that: (1) he was not obliged to complete the survey; (2) that the completed LPQ forms would be treated as confidential; and (3) that under no circumstances would the Navy have access to information in a form which would allow identification of respondents. Administration time for the 124-item LPQ varied from 20 to 60 minutes, depending on reading speed.

On the basis of responses to the 124-item questionnaire a score was derived for each individual on each of the six LPQ scales. The scoring protocol was such that a high score was always interpreted positively, indicative of positive life path. For example, questionnaire item #24, "In high school I spent about ___ hours per week (outside of school) on school work" could be scored in a straight forward manner, i.e., the greater the number, the greater the increment to a positive score on the scale in question. On the other hand, item #14, "During my school career I can recall having ____ disputes with school officials (principals, teachers, etc.)," required a transformation in the scoring scheme so that low values would be coded as a high score for that item while high values would be coded as low scores. In summary, a high scale score represents positive interactions in the particular institutional setting represented by individual items comprising a scale. The converse is true for a low scale score.

Completion and Scoring of Checklist

Each company commander whose recruits were involved in the survey was instructed in the proper procedures for completing the checklist. As explained previously, the checklist provided a means of cataloging a wide array of behavioral observations on each recruit at three points during the training cycle: (1) at the end of the first week of training; (2) mid-way in the training program; and (3) at the end of training. A special attempt was made to elicit cooperation from the company commanders in supplying thorough and accurate data for each recruit. As the recruits dropped out of the company, either as set-backs or dischargees, they were eliminated from further tracking.

The Recruit Behavior Checklist yielded two scores, both of which were used as criterion measures in the data analysis. The first score was a composite score derived from the 50 observational items. Each individual's score represented the mean of all checklists completed for him by the company commander. For the composite score (labelled "score" in the table), each item was scored as follows: (1) a value of +1 was assigned for appropriate responses from company commanders (e.g., "Is a key member in group activities. If checked yes, a value of +1 was assigned); (2) a value of -1 was assigned for inappropriate responses (e.g., if the same item was checked no by the company commander, a value of -1 was assigned); and (3) a response of "not observed" was assigned a value of zero. To eliminate the possibility of negative scores, a constant of 50 was added to each composite score. Thus, an individual's score on the checklist could range from zero to one hundred.

Defining and Scoring Status in Training

As a second overall measurement, a score was assigned based on the training outcome for each member of the cohort of 1555. At the termination of the training program, officials at each RTC were asked to place each recruit included in the original Life Path survey in one of three categories: (1) finished training with the original unit; (2) set back in training, but expected to complete; and (3) discharged for whatever reason. Membership in one of these categories yielded the following scores: (1) a recruit who finished with the original training unit was assigned a score of three;

(2) a recruit who was set back in training, but eventually completed was assigned a score of two; and (3) a recruit who was discharged early was assigned a score of one.

DATA ANALYSES

This section presents the results of the data analyses. These analyses addressed two major questions:

Question 1. Is there a positive relationship between the LPQ scale scores and the training performance measures?

Question 2. What is the magnitude of the difference between the mean LPQ scale scores for the various performance groups?

These questions were addressed for several samples: first, for the total sample; secondly, for the different racial groups; and third, for other groups defined by demographic variables of age and level of education. Results for these three samples follow.

Total Sample

LPQ Scale Scores

Table 1 presents the means and standard deviations of the six life path scales for the total sample. Each score represents the proportion of positive responses over the total number of items on a scale. Values on each LPQ scale can vary from one to one thousand; the higher the score the more indicative it is of positive life path. The scores for each subject were normalized based on the number of items to which he/she responded. Such a procedure precluded the possibility of an individual being assigned a low score simply on the basis of a low response rate.

Table 1. LPQ Scale Means and Standard Deviations for Total Sample (N=1555)

LPQ Scale	Mean	SD
COMP	550	189
VMAT	532	152
EMAT	219	82
AUTH	696	153
FAM	575	153
ADAPT	469	151

A matrix of the LPQ inter-scale correlations is presented in Table 2. Inspection of the matrix suggests that for the most part there is relatively little overlap among the scales. The data presented in the table suggest that the Authority figure scale is quite independent of all others - except for the Family Relationship scale where the correlation is .26. This finding is interesting since many of the Family Relationships scale items could be thought of as authority relationships. Of interest also is the relationship between the Competence, the Vocational Maturity and the Adaptability scales which suggests that, to some degree, the three have something in common. Another finding worthy of note is that the Vocational Maturity scale correlated .46 with the Adaptability scale.

Table 2. Intercorrelation Matrix of LPQ Scales

	COMP	VMAT	EMAT	AUTH	FAM	ADAPT
COMP	1.00	.46	.18	.00	.27	.58
VMAT		1.00	.18	.07	.20	.46
EMAT			1.00	.06	.11	.18
AUTH				1.00	.26	.03
FAM					1.00	.34
ADAPT						1.00

Criterion Measures

The three criterion measures used were: (1) a composite score derived from the 50 checklist items, referred to as SCORE; (2) an overall rating, called RATING; and (3) an index of training outcome, labelled TRAINING STATUS. It is well to emphasize that those criterion measures labelled SCORE and RATING were collected at three points in time during the training period. The data presented in Table 3 show greater consistency among the measures as the training period progressed. In spite of problems inherent in using the data collected at the beginning of training (i.e., when the recruit had been in training only one week), the data analyses presented use the average of the three measures.

The first two measures overlapped in that the overall rating was completed at the end of the 50 checklist items. The third was an objective account of the outcome of training for each subject. Interrelationships among the three criterion measures are shown in Table 4.

Table 3. Interrelationships Among the Three Checklist Ratings and Scores

	RATING		
	1	2	3
Rating 1		-.03	-.04
2			.46
	SCORE		
	1	2	3
Score 1		.23	.25
2			.50

Table 4 presents means, standard deviations, and correlations for these performance measures.

Table 4. Criteria Means and Standard Deviations for Total Sample (N=1555)

Criteria	Mean	SD
SCORE	72	19
RATING	5.74	1.67
TRAINING STATUS	2.68	.60

Intercorrelations

	SCORE	RATING	TRAINING STATUS
SCORE	1.0	.76	.37
RATING		1.0	.36
TRAINING STATUS			1.0

The correlations of the six LPQ scales and the three criterion measurements are shown in Table 5 . Pearson product-moment correlations are presented for LPQ scales and SCORE and RATING criterion measures which are all continuous variables. Status in Training measurement represents a trichotomy of training outcomes and, hence, a point correlation procedure (for three categories) was used. Perusal of the correlation matrix will show

Table 5

CORRELATIONS OF LPQ SCALES AND PERFORMANCE MEASURES

PERFORMANCE MEASURES	LPQ SCALES					
	COMP	VMAT	EMAT	AUTH	FAM	ADAPT
RATING	.06*	.11**	.10**	.17**	.08**	.08**
SCORE	.02	.12**	.05*	.14**	.07**	.05*
TRAINING STATUS	.02	.04	.03	.12**	.00	.01

* $p \leq .05$

** $p \leq .01$

that the scale which shows the highest correlation with performance is the Authority scale and that this relationship holds for all three of the criterion measures. The other scale criterion relationship which deserves mention involves the Vocational Maturity scale where the correlation between this scale and the SCORE and RATING are .11 and .12, respectively.

Two stepwise multiple regression analyses were conducted using the two continuous criterion measures (i.e., SCORE and RATING) as the dependent variables and the six LPQ scale scores as independent variables. The resulting multiple R's were:

(1) R LPQ vs SCORE = .18 in which the Authority and Vocational Maturity scales entered into the equation.

(2) R LPQ vs RATING = .21 in which the Authority, the Vocational Maturity and the Early Maturity scales entered into the equation.

The prediction of both SCORE and RATING were only slightly improved by adding other variables to the Authority LPQ scale alone. Based on the correlational analysis one can conclude that though the Authority and the Vocational Maturity scales did not yield prediction values as high as one would like, they nonetheless show promise for future development. Such development would proceed by improving (modifying or combining) the scales on the one hand and developing more sensitive criterion measures on the other. The checklist data analysis indicated ample justification for eliminating the data from the first checklist since the data from the second two checklists showed a closer relationship to each other than the first to either. For example, in the nonwhite sub-sample, to be discussed later, using RATING from the second and third checklists, thereby dropping out the data from the first checklist, increases the size of r from .16 to .23 in the case of the VMAT and from .16 to .20 in the case of the Authority scale. Further re-analysis of the data, already collected, might result in adding even greater increments to the size of the correlations between the LPQ scales and performance.

In the case of the noncontinuous criterion measure, which was labelled "Status in Training," a discriminant analysis was performed to determine which combination of scales best predicted membership in one of the three training outcome groups (i.e., (1) graduates with original group, (2) set

back in training, or (3) discharged. Since the discriminant analysis was not successful in predicting group memberships, the results have not been reported.

Analysis of Differences

Having demonstrated that there are significant relationships between two of the life path scales and the criterion measurement, the next question raised was whether the extremes of the distributions of the six LPQ scales differed significantly with respect to the criterion measurements. The first such analysis to be reported used status in training as an independent variable of which there were three levels. The question here is whether or not there are differences in the six LPQ scores with respect to variations in training status. The means and standard deviations of LPQ scale scores, by training status group, are presented in Table 6.

Table 6. Comparison of Means and Standard Deviations by Training Status (Group 1 = Dischargees, Group 2 = Set Backs, Group 3 = Graduated on Schedule)

Variable	Group 1 (N=108)		Group 2 (N=268)		Group 3 (N=1147)	
	Mean	SD	Mean	SD	Mean	SD
COMP	536	222	553	189	551	185
EMAT	213	092	216	083	220	079
VMAT	523	178	520	160	535	147
ADAPT	463	155	467	160	469	149
AUTH	659	155	666	159	708	149
FAM	578	148	570	154	573	153
SCORE	55.80	21.34	60.88	20.51	75.38	15.56
RATING	4.41	2.08	4.72	1.58	6.05	1.44

The corresponding ANOVA showed that among the six LPQ scales, the only one which revealed significant differences as a function of variations in TRAINING STATUS was the Authority scale with an F value of 12.03 ($P < .01$). The SCORE and the RATING were also significant beyond the one percent level of confidence.

For the purpose of identifying high and low scorers, it would have been desirable to partition the distribution at convenient standard deviation points above and below the means of LPQ scores (e.g., values beyond ±10). Inspection of the six LPQ score distributions, however, revealed a preponderance of cases at the upper end of the distributions. It is entirely explicable that by virtue of having been selected for Navy duty, the data derived from samples used would show some restriction in range. Prior LPQ work with nonselected high school samples resulted in more normal distribution of scores. Because of these considerations, we were obliged to partition the distributions of LPQ scores by quartiles.

Proceeding in the analysis, the next step was to determine whether the recruits in the three training status groups would differ significantly as a function of their location (high or low) in the quartile groupings of the six LPQ scales. These analyses demonstrated that of the six scales, only the Authority and the Competence scales showed significant variations of observed from expected frequencies along the continuum of quartile groupings.

Regarding the Authority scale, Figure 1 shows that the higher the score, the higher the probability of a first pass (graduating on time). Fifty-two percent of the high scorers on this scale passed while 46 percent of the low scorers did. Conversely, 61 percent of the low scorers were discharged as compared to 39 percent of the high scorers. The Chi-Square value for these data was 23.74 and was significant beyond the one percent level.

The corresponding Chi-Square value for the Personal Competence scale was also significant ($X^2 = 18.49$ ($P < .01$). Figure 2 shows the relationship between Competence, as measured by the LPQ, and TRAINING STATUS. A higher percentage of recruits in the mid-quartile groupings show a first pass than do recruits in the upper or lower groupings. The percentages of upper and lower quartile recruits increase as we move to the set-back and discharge levels. Conversely, the percentages of mid-quartile recruits decreases at the set-back and discharge levels of TRAINING STATUS.

ANALYSIS BY RACE

The racial and ethnic variable is of considerable importance to the Navy

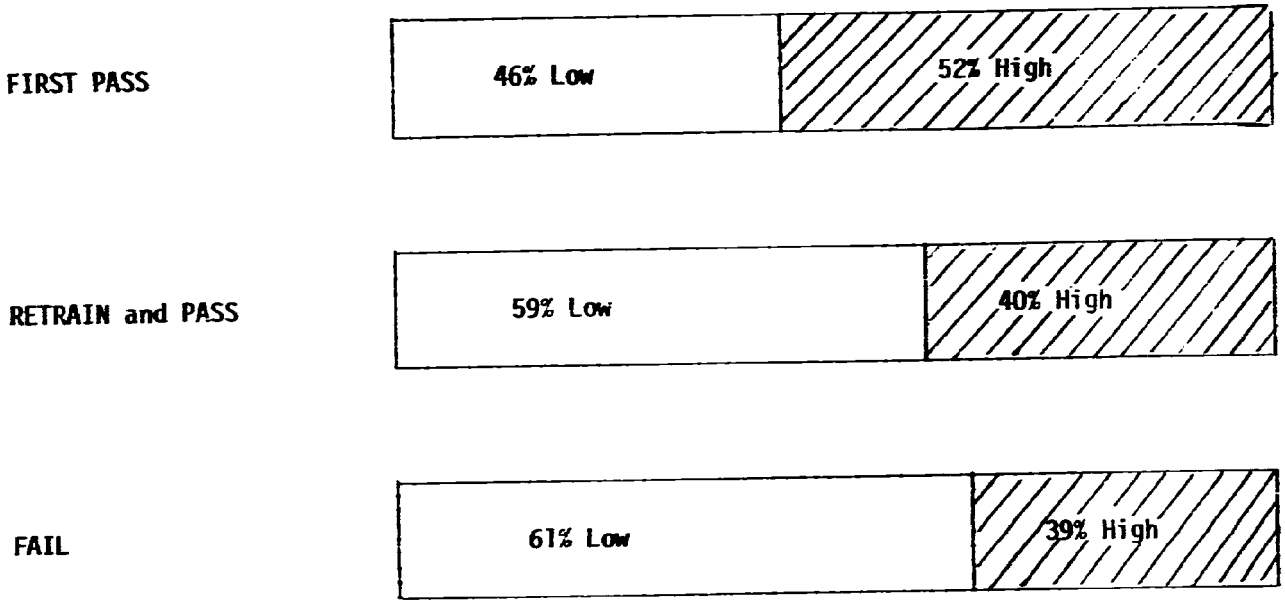

Fig. 1

Percentages of Trainees With High and Low

Authority Scores By Training Status

($\chi^2 = 23.74$; $p \leq .01$)

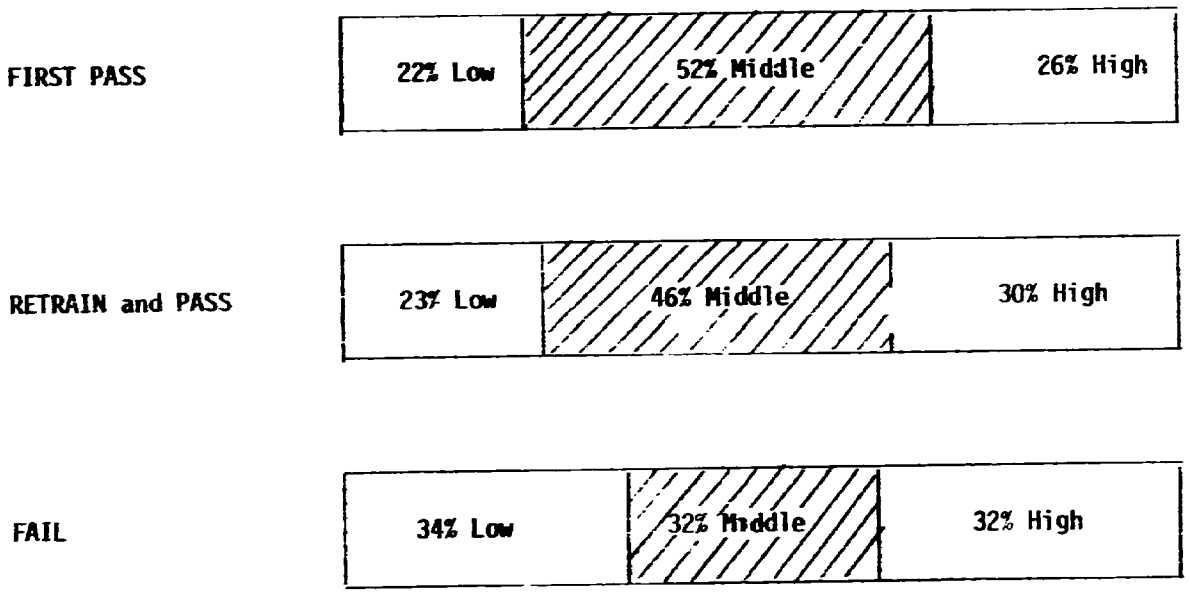

Fig. 2

Percentages of Trainees With High, Middle, and Low Competence Scores By Training Status

($\chi^2 = 18.40$; $p \leq .01$)

as over the past decade many programs have been initiated to: (1) increase equal opportunity in selection, assignment, and promotion; (2) eliminate inter-group conflict and hostilities; (3) minimize bias in testing; and (4) create an harmonious working atmosphere among all Navy personnel. It was, therefore, considered essential to examine the LPQ data to determine what, if any, racial differences exist in the array of measures collected in the current survey. Referring back to page 4 where characteristics of the sample are discussed, we find that 18 percent of the sample were nonwhite of which the greatest percentage (i.e., over two-thirds) was black.

Table 7 presents correlations of LPQ scores and performance measures sub-divided by race. The values in the matrix maintain the same ordinal relationship as those for the overall sample. That is, the Authority and the VMAT scale show the highest relationship with the criterion measures. Nonetheless, there are some interesting trends in the cross-race comparisons. With respect to RATING and SCORE, the VMAT scale shows higher r value for whites than for nonwhites as does the RATING value of the Authority scale. Though none of these differences are significant, they suggest the need for further scrutiny as other criterion measures are developed at different points in the careers of the cohort members.

Table 7. Correlations of LPQ Scales and Performance Measures by Race

	Rating		Score		Training Status	
LPQ Scales	White N=1121	Nonwhite N=248	White N=1124	Nonwhite N=250	White N=1218	Nonwhite N=270
COMP	.05*	.04	.02	.02	.03	.03
VMAT	.10**	.16**	.10**	.16**	.03	.08
EMAT	.12**	.06	.06*	.05	.03	.04
AUTH	.16**	.16**	.15**	.09*	.11**	.14*
FAM	.09**	.09	.07*	.11	.01	.05
ADAPT	.09**	.11	.05	.08	.03	.05

* $P \leq .05$

** $P \leq .01$

The means and standard deviations of LPQ scale scores and criterion measures, sub-divided by race, are shown in Table 8.

Table 8. Comparison of Means and Standard Deviation by Race

	Nonwhite (N=278)		White (N=1239)		F
	Mean	SD	Mean	SD	
LPQ Scales					
COMP	606	191	537	186	30.60**
VMAT	528	150	533	153	.28
EMAT	214	86	220	80	.98
AUTH	689	153	699	153	.91
FAM	602	143	566	154	12.50**
ADAPT	526	144	455	150	51.90**
Criteria					
SCORE	70	20	72	18	1.55
RATING	5.67	1.9	5.73	1.56	.36
TRAINING STATUS	2.54	.7	2.71	.6	18.94**

** $p \leq .01$

An ANOVA performed, using these data, revealed that there were significant differences in three of the LPQ scale comparisons between whites and nonwhites. The scales which differed were the Competence, Family Relationships and Adaptability ones. The respective F-values were 30.60, 12.50, and 51.90. All F-values were significant beyond the one percent level of confidence. Of the three criterion measures, only the status in training score differed significantly between whites and nonwhites. It is of further interest to note that in all cases where there was a significant difference between the two groups, except for one, the values for nonwhites was higher than that for whites. The exception was found in the values for status in training where the white score is significantly higher than that for nonwhites.

Using status in training as the independent variable and percentage of recruits in each category as the dependent measure, these differences are depicted in Figure 3. The graph shows that the big differences in the TRAINING STATUS data between white and nonwhite groups can be attributed to two facts:

(1) the under-representation of nonwhites in the first pass groups. (In overall percentages, 75% of the total group passed, 18% was set back in training, and 7% was discharged.) Using 75% as a baseline value, one can see that the nonwhite group is considerably below this while the white group exceeds it by a small amount.

(2) the over-representation of the non-white group in the set-back statistics. Here again using the overall set-back percentage of 18 as a baseline figure, one can observe that the nonwhite group far exceeds it while the white group falls somewhat below it.

In terms of outright failures, as represented by early discharges, the two groups do not differ by much (i.e., 7 percent for whites as compared to 9 percent for nonwhites). The Chi-Square value for the data presented in Figure 3 is 26.21 which is significant beyond the 1 percent level of confidence.

The racial analysis presents data which would seem to have important implications for Navy management. Perhaps we are observing a phenomenon which could be thought of as distancing (i.e., the unwillingness of a company commander to assume responsibility for the training of minority recruits) which takes place during training and increases the likelihood that nonwhite recruits will be removed from their original training groups. The ANOVA by race indicated that there were no differences in the checklist scores or ratings between the two groups and, in terms of discharges, there is again essentially no differences. It would be of interest to go beyond the current data to understand more fully some of the reasons for the tendency to prescribe re-training of nonwhites at a significantly higher rate than for whites. Some of this difference might be explained by the apparent lack of mutual understanding among racial and ethnic groups comprising the Navy. One would like to know if the process of re-training operates in the same manner in cases where the company commander is nonwhite. It would also be of interest to determine what differences, if any, distinguish successful from nonsuccessful nonwhites.

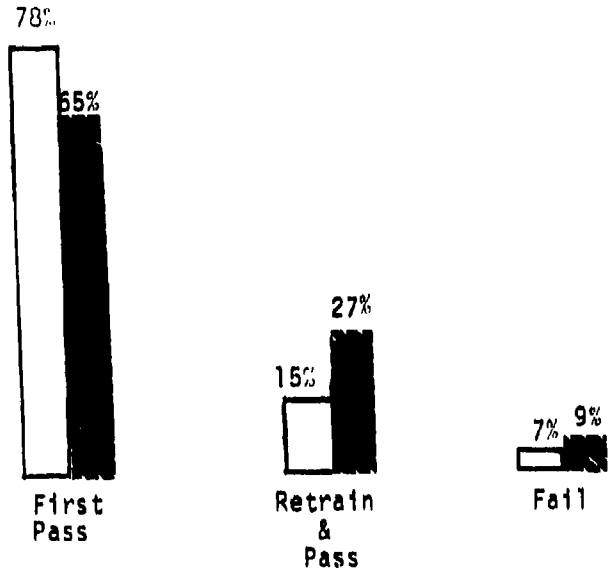

Fig. 3
Percentages Of Whites And
Nonwhites By Training Status
(χ^2 = 26.21; p≤.01)

LEGEND

□ = White

■ = Nonwhite

ANALYSIS BY AGE

It is almost axiomatic in the Navy that very young, inexperienced recruits are especially problematic in terms of their performance. It was considered useful to analyze the current data from the standpoint of age to ascertain whether the LPQ scales would be sensitive to variations in age. For the purposes of the analysis, three levels of age were specified as follows: (1) 16-20; (2) 21-25; and (3) 26-30. It must be emphasized here that 82% of the sample fell in age level one with 17% in level two, leaving only 1% (18) in the upper-age range. The means and standard deviations of the LPQ and criterion scores, as a function of age, are presented in Table 9.

Table 9. Means and Standard Deviations by Age

	16 - 20 (N=1237)		21 - 25 (N=255)		26 - 30 (N=18)		
	Mean	SD	Mean	SD	Mean	SD	F
LPQ Scales							
COMP	542	185	585	200	652	170	8.41**
VMAT	526	152	562	150	538	142	5.79**
EMAT	200	66	296	81	418	108	268.67**
AUTH	688	155	735	141	740	172	11.14**
FAM	570	153	594	146	656	137	5.33**
ADAPT	465	151	483	153	528	133	2.95*
Criteria							
SCORE	71	18	74	19	68	21	3.12*
RATING	5.64	1.56	6.10	1.9	5.36	1.93	8.50**
TRAINING STATUS	2.69	.59	2.67	.6	2.61	.6	.17

**$p \leq .01$; *$p \leq .05$

The ANOVA based on the data shown in Table 9 showed all F-values, except TRAINING STATUS, to be significant. With respect to the LPQ scale scores, in all cases except the VMAT scale, the higher the age group, the higher the scale score. This trend did not hold in the case of the

criterion scores where, in fact, the mid-age group had higher scores than either their younger or older mates. Very interestingly, with regard to all three criteria the older age group not only scored lower than the mid-age group, but below the younger age group as well. We can conclude that, as far as training outcome is considered, older recruits do not fare as well as the younger ones.

ANALYSIS BY EDUCATIONAL LEVEL

As a final analysis, the data were examined for differences in performance as a function of educational level. According to conventional wisdom, and well supported by attrition data, non-high school graduates are not good risks for a Navy career either from the standpoint of performance or in terms of longevity of service. Though the data presented here do not dichotomize high school from non-high school graduates, a continuum of education exists in the data. Four levels of education (years of schooling completed) were established as follows: (1) 8-10; (2) 11-12; (3) 13-15; and (4) 16-18. Corresponding means and standard deviations for the LPQ scales and criterion measures are presented in Table 10.

An ANOVA of the data presented in the table showed all differences to be significant beyond the one percent level of confidence. Examination of the table will reveal that, in the case of educational level, in all cases higher educational levels were consistent with higher LPQ scores. This might well suggest that there is a sizable amount of variance common to education and the six LPQ scales. In general, this trend held for the criterion scores as well.

DISCUSSION

The current study was envisioned as the second in a series of investigations which will examine, in a longitudinal design, possible relationships between a biographical construct, labelled "life path," and performance during the first term of enlistment in the Navy. A cohort of 1500 male, first-term recruits were identified and administered an experimental instrument called a Life Path Questionnaire which was comprised of six separate scales and 124 items. The intent of the current study was to develop a large body of information on recruits, at the point of their entry into the Navy system, and to determine if this information could be

Table 10. Means and Standard Deviations by Educational Level

	8 - 10 (N=270)		11 - 12 (N=1017)		13 - 15 (N=181)		16 - 18 (N=20)		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	F
LPQ Scales									
COMP	503	180	549	187	620	185	671	183	17.73**
VMAT	497	165	529	147	591	143	623	155	17.30**
EMAT	181	71	218	77	267	82	336	108	6.33**
AUTH	649	167	699	150	746	135	755	158	6.90**
FAM	538	157	576	150	598	148	677	135	10.50**
ADAPT	437	147	470	149	508	147	534	184	9.90**
Criteria									
SCORE	67	19	72	18	78	17	78	20	12.21**
RATING	5.17	1.5	5.73	1.58	6.39	1.76	6.67	2.15	22.30**
TRAINING STATUS	2.56	.7	2.70	.6	2.76	.5	2.60	.8	5.07**

**$p \leq .01$

used to predict levels of performance. Secondarily, it was hoped that the information, which dealt with the characteristic patterns of interaction (favorable and unfavorable) which individuals have experienced with the various socializing institutions, could be used to enhance the Navy's capability in providing more sensitive programs in selection, assignment, counseling and remediation.

The primary concern of the present study was assessment of the predictive capabilities of the LPQ. Three criterion measures were developed and have been adequately described in the body of the report. To reiterate briefly, they were labelled: (1) Score, (2) Rating, and (3) Status in Training. Though the values at present are modest, the validity coefficients reported in Table 4 suggest that two of the LPQ scales show promise for further development as this research continues. These two scales were the Authority and the Vmat of which the former showed the highest degree of relationship. In the opinion of the writer, several factors served to depress the level of the correlation. Firstly, the recruits who formed the sample had already been selected from a more random population and, hence, it is not surprising that there was some restriction in range of variance existing in the population at large. Secondly, we will discuss the primary criterion measure, the Recruit Behavior Checklist. It was obvious from the uneven quality of the responses received that uniform attention was not given to this instrument by the company commanders. In the majority of cases, the data provided were thoroughly and conscientiously reported, but, in some cases, incomplete data were provided or there was a tendency to overuse the "not observed" category. In addition, the investigators noticed a tendency on the part of some commanders to say uniformly good things about their recruits. It might well be that the checklist was too lengthy and encroached too heavily upon company commander time. In any case, it appeared that the checklist was a source which very possibly depressed the true level of relationship between the LPQ scales and performance.

The interrelationships among the three checklist scores and ratings were presented earlier in Table 3. On the basis of the values shown in the table, there was ample evidence to justify discarding the first rating. The second and third Ratings and Scores correlated more highly with each other than did the first to either. In the analysis, the data from all three

checklists were pooled and thereby in all probability, depressed the size of r. It must be remembered that the first checklist was done after the recruits had been in training for just five days. It goes without saying that, at that point, they were probably not well known by the company commanders.

The results from the present study indicate that to gain the maximum from the life path research, future efforts must address the criterion problem on the one hand and the LPQ scale scores on the other. A brief discussion of how one would proceed in those areas is in order.

Regarding criterion measures, there are at least three immediate tasks to be addressed: (1) improvement of the existing Recruit Behavior Checklist; (2) further analysis of the Status in Training data; and (3) selection of appropriate criterion measures to track the cohort as it moves beyond the recruit training environment.

Improvement of the Existing Checklist

On the basis of our examination of the checklist data provided, with particular reference to the lack of uniformity in quality, a more concise rating instrument is indicated. In future research, we would plan to work closely with Navy training officials to develop an instrument which might be accomplished only once during the training cycle. We would further suggest that the investigator be on site to consult with training officials at the time such an instrument is to be completed. The checklist used in the current research provided a broad cross-section of recruit behavior and was equally balanced in terms of positive and negative indicators. In future research we must attempt to maintain the breadth of inquiry while reducing both the length and the times of administration. It might well be that one administration of the checklist at some point in the latter quarter of the training cycle would be the optimal arrangement.

Further Analysis of the Status in Training Data

A factor which may have depressed the size of the correlation between LPQ and performance is the first category of the training status measure, the discharge category. This represents a rather mixed category since recruits are discharged for a variety of reasons not all having to do with competence. For example, recruits are discharged for compassionate reasons

such as death or hardship in the family, medical reasons, etc. Unfortunately, in the present sample, the size of the discharge group was sufficiently small to negate any attempts to take account of the many reasons for discharge. We attempted to deal with the problem by doing a point biserial which dropped category one from the analysis, thereby leaving the group which graduated on time and the set-back group. This analysis did not clarify the issue either for the overall sample or for the white sub-sample. In both of these cases, the elimination of the data from the failure category resulted in a decrease in the value of r. Only the correlation between the Authority scale and TRAINING STATUS was significant. For the nonwhite sample, however, all of the r's increased in value (the VMAT was the only significant value.)

The main point here is that further analysis of the data will seek to identify optimum categories of the Status in Training scores to be used in future analyses.

Selection of Criterion Measures for Further Tracking

This task will require close collaboration with the Navy to learn more of existing rating systems and to determine how these can be built into a reliable and accurate measure. In theory, one might reasonably expect more variation in performance among enlistees in fleet assignments than in recruit training where there is little discretionary time. Criterion measures for future tracking of the cohort will try to include meaningful behaviors across a wide range of situations.

Further research with the LPQ will proceed primarily in the direction of improving the predictive capabilities of the instrument. Modification and/or deletion of some of the scales should increase scale reliability and validity. As mentioned earlier, there was a high degree of interrelationship found among the Competence, the VMAT, and the Adaptability scales. Future research will explore the possibilities of combining the best items from these three scales into a single scale which would be labelled according to the most common characteristics of the constituent items. Another future possibility involves examination of the Authority and Family Relationships scales and the commonality between them. To reiterate, several of the items on the Family Relationships scale are Authority as well as Family related. For example, two such items from the FAM scale are: "I have had substantial difficulty communicating with my parents" and "My parents disapprove of ____ of my current friends." In summary, re-analysis of the

existing data will permit re-structuring of the LPQ to provide more reliable and valid scales.

Returning to the relationships between the demographic variables and performance, it seems to the writer that of the three demographic variables of age, education, and race, the latter showed the most interesting patterns. Future research must address the possibility of differential predictors for white and nonwhite groups. It would also be of interest to select a black group, which in the current study forms over two-thirds of the nonwhite group. It might be that the black group bears examination apart from the other nonwhite groups. The mechanisms underlying the over-representation of the nonwhite groups in the set-back category needs further clarification. The discrepancy between self-perceptions (a key component of expectancy) and training outcome needs extensive investigation. In terms of scores on the LPQ, nonwhites express higher competencies for themselves than do whites (the nonwhite Competence score was 606, compared to 537 for whites). The situation for training outcome was just the reverse (2.54 for nonwhites and 2.71 for whites). Such disparity between expectation and performance serves to heighten individual dissatisfaction within the system.

There is no need to belabor the findings of the current study regarding the effects of age and educational level. The findings merely confirm what is common knowledge within the Navy - namely, that individuals without a high school education for the most part do not perform well and that younger recruits operate at risk within the system. It is nonetheless interesting that the LPQ scales are sensitive to the impact of these variables upon performance.

In conclusion, it would seem that the present study has uncovered some interesting and promising relationships between the life path construct and performance and that these relationships were established under the least promising of circumstances inasmuch as: (1) the very fact of having been accepted for active duty signifies that the samples were drawn from a previously selected population and (2) during recruit training an individual's behavior options are severely curtailed. Both of these factors serve to constrict the range of population variance. In spite of these factors, two of the LPQ scales, with further development, might aid the Navy in

selection, assignment, and remediation. The longitudinal study should be extended to a subsequent phase of Navy life, such as advanced training and/or performance of recruits in routine fleet assignments. In addition, special attention should be given to the race variable to account for over-representation of minority group members in the retraining group and under-representation in the graduate on time group. These and other questions will be addressed as the life path research continues.

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APPENDIX A

Life Path Questionnaire

APPENDIX A

Life Path Questionnaire

You are being asked to participate in a research study conducted by the American Institutes for Research (AIR) which will determine the extent to which biographical and attitudinal factors relate to success in the Navy. The results from this research will aid the Navy in making more effective use of personnel. Please answer <u>all</u> questions as rapidly and as accurately as you can. Be sure to respond appropriately within each of the three sections. We need complete information from all respondents.

The results from this study are to be used for research purposes only and will not form a part of your permanent file. The Navy will <u>not</u> have access to your answers which will remain the property of AIR. You are not required to participate in this study and there will be no penalties applied if you should decide not to participate. I hereby agree to voluntary participation in this research study.

_____
Signature

Name: _____

Age: _____ Sex: M _____ F _____ Serial Number: _____

Circle Highest Grade Completed: 9 10 11 12 College: 1 2 3 4

Race: _____ Social Security Number: _____

Part I. <u>Numbers</u>. (All of the blanks in the following items are to be filled with <u>numbers</u>. If zero is the correct response, write 0.)

1. I typically spent about _____ hours per week doing something with one or both of my parents.

2. I have received _____ citations for moving traffic violations.

3. During my school career I consider that _____ teachers exerted a positive influence on my development.

4. While in high school I was put out of _____ classes by teachers.

5. I was _____ years of age when I became responsible for setting my own hour for coming in at night.

6. I assumed responsibility for planning the courses I would take during high school _____ years ago.

7. During the past year I did something special for one or both of my parents _____ times.

8. In a typical week I spend about _____ evenings with my family.

9. I participated in _____ different extra curricular high school activities (student council, drama, etc.).

10. I first attended a summer camp (Boy/Girl Scouts, YMCA, etc.) _____ years ago.

11. During my high school days I was expelled/suspended _____ times.

12. The first time that I took a lengthy trip (one week or more) away from my parents was _____ years ago.

13. In my first year of high school I participated in _____ different school activities.

14. During my school career I can recall having _____ disputes with school officials (principals, teachers, etc.).

15. I was so displeased with conditions at my home that I ran away _____ times.

16. My parents allowed me to date for the first time _____ years ago.

17. I spend about _____ hours per week doing assigned chores around the house.

18. I have been responsible for planning and following my own time schedule for _____ years.

19. I received my driver's permit _____ years ago.

20. My parents first began to leave me at home on my own _____ years ago.

21. I decided on a career in the Navy _____ years ago.

22. I felt my parents stopped treating me like a child _____ years ago.

23. In a typical week I spend _____ hours watching T.V.

24. In high school I spent about _____ hours per week (outside of school) on school work.

25. During my last year of high school I visited _____ other schools in my area.

26. I feel very close to _____ friends of my parents.

27. I have had _____ friends of another racial group.

28. During my junior high school years I was nominated for _____ offices.

29. My parents disapprove of _____ of my current friends.

30. I began working regular part-time jobs _____ years ago.

31. I have been responsible for budgeting my own money for _____ years.

32. I have quit _____ jobs because of unsatisfactory relationships with my boss.

33. I would estimate that, on the average, my parents usually had _____ hostile arguments per year.

Part II. Activities. (Place a check mark (✓) after each item which is true for you.)

34. If I am selected to attend an advanced school, I am sure the Navy will train me in the necessary fundamentals necessary for success in the advanced school. _____

35. The skill I expect to learn in the Navy will help me in civilian life. _____

36. I have had substantial experience working in a team effort to achieve group objectives. _____

37. I spend a lot of time in the library. _____

38. I am confident of my ability to succeed. _____

39. I was frequently the one who initiated group activities among my close friends. _____

40. I own my own car. _____

41. I have heard that Navy schools are good and have good instructors and training equipment. _____

42. When I was in high school I felt I was among the first students to learn of significant events occurring in the school. _____

43. My parents encouraged me to make friendships with people of varied social strata. _____

44. I think the Navy will provide the proper atmosphere for me to utilize my present skills. _____

45. I have avoided taking difficult subjects. _____

46. On the basis of my interview with the Navy recruiter I was able to explore both good and bad points of a Navy career. _____

47. My parents often hassle me for not doing things I'm supposed to do around the house. _____

48. School officials must be forced to accept change. _____

49. I discuss important personal matters with one or both of my parents. _____

50. I feel that, after my early Navy schooling, I will have no trouble fitting into the crew of my first duty assignment. _____

51. I stay away from my house as much as possible. _____

52. The active participation in community affairs of one or both of my parents influenced me to do the same. _____

53. I could read when I entered first grade. _____

54. I feel that the Navy will enable me to perform duties which will give me self satisfaction and a sense of accomplishment from my work. _____

55. I generally resist being bossed around. _____

56. In my opinion, school officials show little sensitivity to the real needs of students. _____

57. I anticipate attending Navy schools that will prepare me very well for my first duty assignment. _____

58. I am anxious to learn the customs and lifestyles of people in other countries. _____

59. As I remember it, I usually resented discipline from my parents. _____

60. I have always felt more comfortable working alone on projects. _____

61. I am well acquainted with the educational requirements of my chosen profession. _____

62. My parents are separated/divorced. _____

63. I have had limited contact with people from other ethnic/racial groups. _____

64. I have never been a good reader. _____

65. I have had prior training in the skill area I expect to pursue in the Navy. _____

66. My parents have friends of other racial groups. _____

67. I made my best grades in math and/or science. _____

68. I have had trouble working under strict supervision from teachers and/or employers. _____

69. I feel confident that the Navy schools I plan to attend will make me a highly skilled person. _____

70. My parents value my opinions. _____

71. It is best not to trust police. _____

72. My parents encouraged me to form friendships among people of other ethnic/racial groups. _____

73. Most policemen abuse their authority. _____

74. I have definite career objectives which I hope to achieve in the Navy. _____

75. In general, I feel teachers have given me the grades I earned. _____

76. Most high school principals would fail at any other job. _____

77. I have a checking account in my name. _____

78. My parents want me to go to college, but I don't intend to go. _____

79. I have had substantial difficulty communicating with my parents. _____

80. I find it difficult to relax with people who have authority over me. _____

81. On more than one occasion, I have been treated unfairly by a school principal. _____

82. I have been assured of an advanced rating after I complete boot camp. _____

83. I am a very good swimmer. _____

84. Most police use unreasonable force. _____

85. I usually feel confident in dealing with new situations. _____

86. My entire family is very close to one another. _____

87. From an early age, my parents included me in their discussions. _____

88. Most students don't show proper respect for authority figures. _____

89. Police often hassle kids for no good reason. _____

90. I stay at home only when there is nothing else to do. _____

91. I possess a skill in which the Navy has expressed interest. _____

92. Teachers have generally treated me fairly. _____

93. I tried to learn as much as I could about the Navy before joining it. _____

94. I have used marijuana on at least three occasions. _____

95. I have felt excluded from some school activities. _____

96. School learning has come easy to me. _____

97. Most clerks in retail stores are not very nice to customers. _____

98. I spend a lot of my time reading. _____

Part III. In the following section, place a check mark (✓) beside the things which you do (or have done) frequently.

99. Attend classical concert. _____

100. Participate in athletics. _____

101. Visit a museum. _____

102. Go to library. _____

103. Go boating. _____

104. Argue with teachers. _____

105. Get mad at parents. _____

106. Visit relatives. _____

107. Write letters. _____

108. Read newspapers. _____

109. Go to see a play. _____

110. Hassle with brothers and sisters. _____

111. Work on projects with parents. _____

112. Engage in school politics. _____

113. Make new friends. _____

114. Do gardening. _____

115. Read novels. _____

116. Drag race. _____

117. Go to movies. _____

118. Read nonfiction books. _____

119. Do volunteer work. _____

120. Play a musical instrument. _____

121. Go swimming. _____

122. Read editorials. _____

123. Read science fiction. _____

124. Travel out of town. _____

APPENDIX B

LIFE PATH SCALES

APPENDIX B

LIFE PATH SCALES

(N=26) Personal Competence (Ability)

35 - 37 - 44 - 45 (V142) - 53 - 54 - 57 - 64 (V152) - 69 - 96 - 98 - 99 - 100 - 101 - 102 - 103 - 107 - 108 - 109 - 112 - 114 - 115 - 118 - 121 - 122 - 123

(N=16) Vocational Maturity

24 - 34 - 38 - 46 - 61 - 63 (V151) - 65 - 67 - 74 - 77 - 82 - 83 - 91 - 93 - 117 (V172) - 120

(N=15) Early Maturity

5 (V173) - 6 - 10 - 12 - 16 - 17 - 18 - 19 - 20 - 21 - 22 - 28 - 30 - 31 - 40

(N=28) Authority Figures

2 (V132) - 3 - 4 (V133) - 11 (V135) - 14 (V136) - 32 (V140) - 41 - 47 (V143) - 48 (V144) - 55 (V146) - 56 (V147) - 59 (V146) - 68 (V153) - 71 (V154) - 73 (V155) - 75 - 76 (V156) - 80 (V159) - 81 (V160) - 84 (V161) - 88 (V162) - 89 (V163) - 92 - 94 (V165) - 95 (V166) - 97 (V167) - 104 (V168) - 116 (V171)

(N=21) Family Relationships

1 - 7 - 8 - 15 (V137) - 26 - 29 (V139) - 33 (V141) - 49 - 51 (V145) - 52 - 62 (V150) - 70 - 78 (V157) - 79 (V158) - 86 - 87 - 90 (V164) - 105 (V169) - 106 - 110 (V170) - 111

(N=18) Adaptability

9 - 13 - 23 (V138) - 25 - 27 - 36 - 39 - 42 - 43 - 50 - 58 - 60 (V149) - 66 - 72 - 85 - 119 - 124 - 113

LIFE PATH SCALES

(N=26) PERSONAL COMPETENCE (ABILITY)

35. The skill I expect to learn in the Navy will help me in civilian life. ____

37. I spend a lot of time in the library. ____

44. I think the Navy will provide the proper atmosphere for me to utilize my present skills. ____

45. I have avoided taking difficult subjects. ____

53. I could read when I entered first grade. ____

54. I feel that the Navy will enable me to perform duties which will give me self satisfaction and a sense of accomplishment from my work. ____

57. I anticipate attending Navy schools that will prepare me very well for my first duty assignment. ____

64. I have never been a good reader. ____

69. I feel confident that the Navy schools I plan to attend will make me a highly skilled person. ____

96. School learning has come easy to me. ____

98. I spend a lot of my time reading. ____

99. Attend classical concert. ____

100. Participate in athletics. ____

101. Visit a museum. ____

102. Go to library. ____

103. Go boating. ____

107. Write letters. ____

108. Read newspapers. ____

109. Go to see a play. ____

112. Engage in school politics. ____

114. Do gardening. ____

115. Read novels. ____

118. Read nonfiction books. ____

121. Go swimming. ____

122. Read editorials. ____

123. Read science fiction. ____

(N=16) VOCATIONAL MATURITY

24. In high school I spent about _____ hours per week (outside of school) on school work.

34. If I am selected to attend an advanced school, I am sure the Navy will train me in the necessary fundamentals necessary for success in the advanced school. ____

38. I am confident of my ability to succeed. ____

46. On the basis of my interview with the Navy recruiter I was able to explore both good and bad points of a Navy career. ____

61. I am well acquainted with the educational requirements of my chosen profession. ____

63. I have had limited contact with people from other ethnic/racial groups. ____

65. I have had prior training in the skill area I expect to pursue in the Navy. ____

67. I made my best grades in math and/or science. ____

74. I have definite career objectives which I hope to achieve in the Navy. ____

77. I have a checking account in my name. ____

82. I have been assured of an advanced rating after I complete boot camp. ____

83. I am a very good swimmer. ____

91. I possess a skill in which the Navy has expressed interest. ____

93. I tried to learn as much as I could about the Navy before joining it. ____

117. Go to movies. _____

120. Play a musical instrument. _____

(N=15) EARLY MATURITY

5. I was _____ years of age when I became responsible for setting my own hour for coming in at night.

6. I assumed responsibility for planning the courses I would take during high school _____ years ago.

10. I first attended a summer camp (Boy/Girl Scouts, YMCA, etc.) _____ years ago.

12. The first time that I took a lengthy trip (one week or more) away from my parents was _____ years ago.

16. My parents allowed me to date for the first time _____ years ago.

17. I spend about _____ hours per week doing assigned chores around the house.

18. I have been responsible for planning and following my own time schedule for _____ years.

19. I received my driver's permit _____ years ago.

20. My parents first began to leave me at home on my own _____ years ago.

21. I decided on a career in the Navy _____ years ago.

22. I felt my parents stopped treating me like a child _____ years ago.

28. During my junior high school years I was nominated for _____ offices.

30. I began working regular part-time jobs _____ years ago.

31. I have been responsible for budgeting my own money for _____ years.

40. I own my own car. _____

(N=28) AUTHORITY FIGURES

2. I have received _____ citations for moving traffic violations.

3. During my school career I consider that _____ teachers exerted a positive influence on my development.

4. While in high school I was put out of _____ classes by teachers.

11. During my high school days I was expelled/suspended _____ times.

14. During my school career I can recall having _____ disputes with school officials (principals, teachers, etc.)

32. I have quit _____ jobs because of unsatisfactory relationships with my boss.

41. I have heard that Navy schools are good and have good instructors and training equipment. _____

47. My parents often hassle me for not doing things I'm supposed to do around the house. _____

48. School officials must be forced to accept change. _____

55. I generally resist being bossed around. _____

56. In my opinion, school officials show little sensitivity to the real needs of students. _____

59. As I remember it, I usually resented discipline from my parents. _____

68. I have had trouble working under strict supervision from teachers and/or employers. _____

71. It is best not to trust police. _____

73. Most policemen abuse their authority. _____

75. In general, I feel teachers have given me the grades I earned. _____

76. Most high school principals would fail at any other job. _____

80. I find it difficult to relax with people who have authority over me. _____

81. On more than one occasion, I have been treated unfairly by a school principal. _____

84. Most police use unreasonable force. _____

88. Most students don't show proper respect for authority figures. ____

89. Police often hassle kids for no good reason. ____

92. Teachers have generally treated me fairly. ____

94. I have used marijuana on at least three occasions. ____

95. I have felt excluded from some school activities. ____

97. Most clerks in retail stores are not very nice to customers. ____

104. Argue with teachers. ____

116. Drag race. ____

N=21) FAMILY RELATIONSHIPS

1. I typically spent about _____ hours per week doing something with one or both of my parents. ____

7. During the past year I did something special for one or both of my parents _____ times. ____

8. In a typical week I spend about _____ evenings with my family.

15. I was so displeased with conditions at my home that I ran away _____ times.

26. I feel very close to _____ friends of my parents.

29. My parents disapprove of _____ of my current friends.

33. I would estimate that, on the average, my parents usually had _____ hostile arguments per year.

49. I discuss important personal matters with one or both of my parents. ____

51. I stay away from my house as much as possible. ____

52. The active participation in community affairs of one or both of my parents influenced me to do the same. ____

62. My parents are separated/divorced. ____

70. My parents value my opinions. ____

78. My parents want me to go to college, but I don't intend to go. ____

79. I have had substantial difficulty communicating with my parents. ____

86. My entire family is very close to one another. ____

87. From an early age, my parents included me in their discussions. ____

90. I stay at home only when there is nothing else to do. ____

105. Get mad at parents. ____

106. Visit relatives. ____

110. Hassle with brothers and sisters. ____

111. Work on projects with parents. ____

(N=18) ADAPTABILITY

9. I participated in _____ different extra curricular high school activities (student council, drama, etc.).

13. In my first year of high school I participated in _____ different school activities.

23. In a typical week I spend _____ hours watching T.V.

25. During my last year of high school I visited _____ other schools in my area.

27. I have had _____ friends of another racial group.

36. I have had substantial experience working in a team effort to achieve group objectives. ____

39. I was frequently the one who initiated group activities among my close friends. ____

42. When I was in high school I felt I was among the first students to learn of significant events occurring in the school. ____

43. My parents encouraged me to make friendships with people of varied social strata. ____

50. I feel that, after my early Navy schooling, I will have no trouble fitting into the crew of my first duty assignment. ____

58. I am anxious to learn the customs and lifestyles of people in other countries. ____

60. I have always felt more comfortable working alone on projects. ____

66. My parents have friends of other racial groups. ____

72. My parents encouraged me to form friendships among people of other ethnic/racial groups. ____

85. I usually feel confident in dealing with new situations. ____

119. Do volunteer work. ____

124. Travel out of town. ____

113. Make new friends. ____

APPENDIX C

RECRUIT BEHAVIOR CHECKLIST

APPENDIX C

Recruit's Name & Serial No._____ Date Completed _____

Name & Title of Completing Officer_____ Week of Training_____

RECRUIT BEHAVIOR CHECKLIST

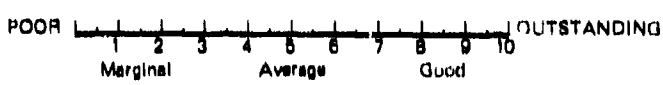
During the past two weeks I have observed the behavior indicated below, in the recruit, named above.

	Yes	No	Not Observed	
Is an active participant in athletic activities	____	____	____	+
Spends most of his free time alone	____	____	____	-
Always completes assignments on time	____	____	____	+
Needs frequent help from instructors or other recruits	____	____	____	-
Always understands an explanation the first time	____	____	____	+
Does more than is required	____	____	____	+
Offers help to other recruits	____	____	____	+
Is a key member in group activities	____	____	____	+
Is in rather poor physical condition	____	____	____	-
Needs constant prodding	____	____	____	-
Always engaged in productive activity	____	____	____	+
Avoids work	____	____	____	-
Visits sick bay frequently	____	____	____	-
Always well groomed	____	____	____	+
"drifty;" seems to be in a fog	____	____	____	-
Is extremely well organized	____	____	____	+
Has a "chip on the shoulder" attitude	____	____	____	-
Frequently fails to pass inspection	____	____	____	-
Very popular with other recruits	____	____	____	+
Has poor posture and bearing	____	____	____	-
Notebook always up-to-date	____	____	____	+
Uses free time to improve his performance	____	____	____	+
Does what is told and nothing more	____	____	____	-
Rarely knows "saying or rate of the day"	____	____	____	-
Always attentive in class	____	____	____	+
Highly regarded by other recruits	____	____	____	+

	Yes	No	Not Observed	
Resists authority, especially recruit officers	____	____	____	-
Goofs off during free time	____	____	____	-
Keeps to a small clique	____	____	____	-
Poor classroom performance	____	____	____	-
Generally late on assignments	____	____	____	-
Never understands the first explanation	____	____	____	-
Appears to be nervous much of the time	____	____	____	-
Adapts well to adverse physical conditions	____	____	____	+
Always friendly and cooperative	____	____	____	+
Looks for ways to improve	____	____	____	+
Always does a half-assed job	____	____	____	-
Very poised and self-assured	____	____	____	+
Needs step-by-step guidance	____	____	____	+
Asks sensible questions of instructor	____	____	____	-
Is arrogant and condescending to other recruits	____	____	____	-
Always seems to be tired	____	____	____	-
Is in excellent physical condition	____	____	____	+
Sloppy in appearance	____	____	____	-
Works hard on assigned tasks	____	____	____	+
Is a very slow learner	____	____	____	-
Locker always in shape	____	____	____	+
Never volunteers information	____	____	____	-
Always plans ahead	____	____	____	+
Seeks out things to do	____	____	____	+

OVERALL RATING: In comparison to all recruits I have known, on a scale of 1-10 I rate this recruit as:

(Mark X at appropriate point on scale)



SIGNIFICANT EVENTS:

Examples: Leadership, outstanding achievement, prizes won, disciplinary actions, premature discharge (type), etc.

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Urban Institute for Human Services
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Dr. John J. Collins
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San Diego, California 92120

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National Defense Research Institute
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Stockholm, Sweden

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Military Psykologisk Tjeneste
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