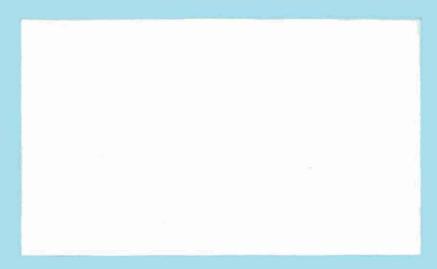
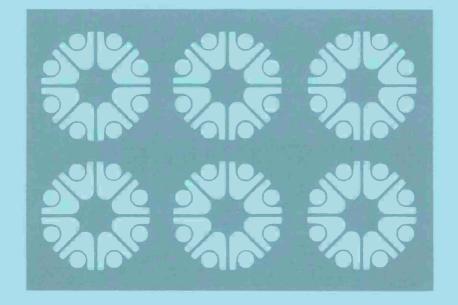
TECHNICAL REPORT SECTION
NAVAL POSTGRADUATE SCHOOL
MONTEREY, CALIFORNIA 93040



Human Affairs Research Centers 4000 N.E. 41st Street / Seattle, Washington 98105

Research Report





Technical Report-#3 October 1974

Navy Leadership: Are Recruit Expectations Accurate?

Susan Nix George C. Thornton, III Stanley M. Nealey

Report of Work Accomplished Under Contract N00014-73-C-0259

at

Battelle Human Affairs Research Centers

Sponsored by

Organizational Effectiveness Research Programs
Psychological Sciences Division
Office of Naval Research

Stanley M. Nealey Principal Investigator

Reproduction in whole or in part is permitted for any purpose of the United States Government.

Approved for public release; distribution unlimited.

REPORT DOCUMENTATION	READ INSTRUCTIONS BEFORE COMPLETING FORM			
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER		
TR #3		·		
4 TITLE (and Subtitle)		5. TYPE OF REPORT & PERIOD COVERED		
Navy Leadership: Are Recruit	Technical Report			
Accurate?		6. PERFORMING ORG. REPORT NUMBER		
7. AUTHOR(s)		B. CONTRACT OR GRANT NUMBER(#)		
Susan Nix				
George C. Thornton, III		N00014-73-C-0259		
Stanley M. Nealey				
9. PERFORMING ORGANIZATION NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS		
Battelle Memorial Institute	AREA & WORK UNIT NUMBERS			
Human Affairs Research Center				
4000 NE 41st Street, Seattle,	NR 170-738			
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE			
Organization Effectiveness Re		ms October 1974		
Office of Naval Research (Coo	le 452)	13. HUMBER OF PAGES		
Arlington, VA 22217				
14 MONITORING AGENCY NAME & ADDRESS(If dilleren	15. SECURITY CLASS. (of this report)			
	Unclassified			
		15. DECLASSIFICATION/DOWNGRADING		
	SCHEDULE			
16 DISTRIBUTION STATEMENT (of this Report)				

Approved for public release; distribution unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, If different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

leader power organizational climate basic training

recruiting orientation

retention job expectations leadership

rank and authority

20. ABSTRACT (Continue on reverse side if necessary and identity by block number)

The expectations of 303 new Navy recruits regarding the type of leadership climate and leadership power practices they would experience during basic training and later on in Navy duty were compared with reports of these actual situations by 365 basic trainees and 599 experienced enlisted men. The expectations of the new recruits regarding boot camp were significantly inaccurate on six of ten leadership climate and power variables. (over)

These new recruits were overly optimistic with respect to three of the six variables and overly pessimistic regarding the other three variables. Four out of five predictions by new recruits about leadership climate on regular Navy duty were inaccurate. In most cases, the real Navy leadership climate was more positive than recruits expected. This was so even though new recruits expected that Navy duty would be characterized by much more positive leadership climate than would be typical of boot camp. The potential benefits to recruiting and adjustment to Navy life of more realistic orientation programs are discussed.

INTRODUCTION

The purpose of this report is to provide recruiters and personnel at the Armed Forces Entrance and Examining Stations (AFEES) with information regarding the accuracy of perceptions of Navy leadership held by inductees. Such information could have a bearing on Navy orientation programs and be helpful to personnel who talk with potential and recent recruits.

The Navy relies on voluntary enlistments to fulfill its total manpower requirements. With elimination of the draft there is no longer pressure to enlist in the Navy to avoid being drafted by another branch of the Armed Services. A variety of new recruiting programs and programs to encourage reenlistment may be necessary to ensure adequate manpower levels. One type of change might relate to the development of a more realistic orientation program for inductees.

Previous research on attitudes toward civilian employment (Porter & Steers, 1973; Wanous, 1973) suggests that realistic job previews lead to increased job satisfaction, fewer thoughts of quitting, and longer tenure. An analogy of this civilian situation can be made to satisfaction in Navy duty. Thus, it would be useful to determine whether or not recruit anticipations of various aspects of Navy life are accurate—whether recruits unrealistically fear the worst or underestimate the difficulties they are about to face. By presenting a realistic picture of what is to come, recruiters and AFEES personnel can minimize misconceptions of the leadership and organizational

climate in the Navy. Such a program would possibly improve satisfaction at later points and may reduce the incidence of negative reappraisals that lead to turnover.

This report focuses on how accurately Navy inductees perceive the types of leadership style and organizational climate that exist in basic training and subsequent Navy duty. It was hypothesized that significant differences would be found between inductees' expectations of and enlisted men's descriptions of these phases of their careers. Expectations are defined as inaccurate if they differ from enlisted men's descriptions.

METHOD

Sample. A total of 1,267 men from the United States
Navy participated in this project. Three groups were defined
in terms of respondents' position in the Navy and were composed as follows: 303 inductees at the Armed Forces Entrance
and Examining Station (new recruits) at Los Angeles (N=165)
and Denver (N=138), 365 trainees at the Navy Training Center
(basic trainees) in San Diego, and 599 enlisted men with
eighteen months experience on various duty stations throughout
the world (experienced enlisted men).

Demographic characteristics, such as mean age, high school class ranking, and size of home town were found to be similar for all three groups of men with the exception of age comparisons as presented in Table 1. Age was not obtained from the eighteen-month enlisted men but it can be assumed

they were approximately eighteen months older than the trainees.

The eighteen-month sample came from slightly smaller home towns.

The questionnaires were administered to the inductees and trainees in groups and returned anonymously. The eighteenmonth sample was identified from the master enlisted file of Navy personnel and surveyed by mail sent directly to each individual at his duty station. The respondents completed the questionnaires anonymously and mailed them directly back to the researchers. Of the 1700 questionnaires mailed out, 78 were returned unopened and 22 were returned after analyses began. From past experience in conducting mail surveys of Navy personnel under similar conditions it was estimated that approximately 1/4 to 1/3 of the questionnaires did not reach the intended subjects. Thus, the estimated effective response rate was approximately 50-60 percent. The new recruits and basic trainees samples were surveyed in the summer of 1972; the eighteen-month sample received their questionnaires in the spring of 1973.

The questionnaires given to the three groups were similar in form and content. They were designed to assess attitudes toward five organizational climate dimensions and five modes of expression of interpersonal influence or leadership power.

The five organizational climate dimensions were (1) hierarchical vs equalitarian decision making, (2) formal vs informal superior-subordinate relations, (3) supportive vs

punitive handling of mistakes by subordinates, (4) close vs general supervision, and (5) considerate vs inconsiderate supervision. These five organizational climate dimensions were described by five pairs of contrasting situations. On each dimension the respondent used a five-point scale to describe (1) attitude toward Navy basic training, (2) expectation (or description) of Navy duty eighteen months after boot camp, (3) attitude toward civilian jobs, (4) the situation in which he would try hardest to do a good job, and (5) the situation in which he would be most satisfied. For this report only questions one and two will be analyzed. Discussions of other phases of the project can be found in other reports (Maynard, Thornton & Nealey, 1974; Thornton, Hamilton & Nealey, 1973; Thornton & Nealey, 1974a, 1974b, and 1974c).

The five leadership power dimensions used in this study were defined by French & Raven (1959) as follows: (1) legitimate power based on rank and position, (2) expert power based on knowledge, (3) reward power based on positive rewards, (4) referent power based on personal respect, and (5) coercive power based on negative sanctions and punishment. Attitudes toward the use of the five power modes by superiors were obtained by presenting situations that illustrated each mode. The respondents indicated (1) how frequently each form of power is used during basic training (or current duty), (2) how frequently they think each form of power should be used during basic training, (3) how frequently each form of power

is used in most civilian jobs, (4) how hard they would try to do a good job under each mode of power, and (5) how satisfied they feel with each mode of power. Only the results from question one relating to basic training is analyzed in this report.

In addition to the organizational climate and leadership power questions, respondents were presented fourteen Likerttype items designed to probe general attitudes toward the military, basic training, the supervision process, and taking orders. Each item consisted of a statement with which the respondent indicated agreement or disagreement on a five-point scale. The items were grouped by a priori judgment into four dimensions. Only two dimensions (A and B) pertaining to basic training are relevant to the focus of this report. The items are shown in Table 4. Dimension A consists of four questions indicating how enthusiastic or "gung ho" men are toward basic training. Respondents scoring high on this dimension feel boot camp is important, necessary, a useful preparation for combat, and should be rugged to enhance respect for the Navy. Dimension B consists of three questions designed to assess positive and successful reactions to boot camp. Respondents scoring high on this dimension try hard in basic training, feel they are doing well, and believe there is little chance of physical injury.

RESULTS

New Recruits' Perceptions of Basic Training

The new recruits' perceptions of basic training and the basic trainees' descriptions of basic training are presented in Table 2. Some expectations were accurate and some inaccurate. Inductees accurately perceived that decision-making would be hierarchical and undemocratic and the authority structure would be very formal. However, the basic trainees found the leadership climate more punitive of mistakes and inconsiderate than the new recruits expected. On the other hand, the basic trainees found supervision during basic training to be more general than the new recruits expected.

Results relating to the types of power modes used in basic training are also included in Table 2. New recruits expected to encounter legitimate and expert power significantly more than trainees reported experiencing in basic. In addition, new recruits thought their superiors would rely on reward power less frequently than trainees had encountered in basic. Speculations by new recruits on the use of referent and coercive power were consistent with basic trainee reports and can be considered accurate.

New Recruits' Perceptions of Navy Duty

When the new recruits at AFEES were asked to look ahead and speculate on the way leadership power would be used in regular Navy service eighteen months after basic training, only

one expectation was accurate. This related to the democratic nature of decision making processes as shown in Table 3. New recruits expected to encounter a more formal authority structure, a more punitive evaluation system, and closer supervision than was being experienced by enlisted men. On the other hand, the experienced enlisted men found Navy leadership less considerate than the inductees expected. In other words, Navy duty was not as expected.

Prospective, Current, and Retrospective Attitudes Toward Basic Training

The two sets of attitudes toward basic training expressed by the three groups are reported in Table 4. The average scores for the first dimension show that the new recruits were the most "gung ho", basic trainees slightly less, and the eighteen-month enlisted men somewhat less enthusiastic about basic training. Results for the second dimension show that all three groups experienced about the same degree of positive commitment and confidence in their success in basic training.

DISCUSSION

As hypothesized, the result showed that inductees had few accurate expectations. Combining results from questions on the climate situations and power modes found in basic training and future Navy duty, only five expectations out of a total of fifteen were shown to be correct. The number of

inaccurate expectations increased when inductees were instructed to look ahead and speculate on Navy climate after eighteen months experience. Table 5 summarizes the findings regarding the perceptions of basic trainees. (Inaccurate expectations regarding regular Navy duty may be considered of more serious practical consequences than inaccurate expectations of basic training. After all, recruits join the Navy to be in the Navy, not basic training.

Some of the inaccurate perceptions depicted Navy leader-ship more favorably than it was found to be, e.g., (trainees found basic training more punitive and inconsiderate than the inductees expected.) Expert power is used less frequently than expected. In addition, experienced enlisted men found less considerate behavior on Navy duty than expected by the inductees. In contrast, (the majority of the inaccurate perceptions painted an unrealistic negative picture of Navy leader-ship. At boot camp, trainees experienced more general supervision than new recruits expected and legitimate power was used less frequently and reward power more frequently than expected. After eighteen months experience, the enlisted men found Navy leadership to be more informal, permissive and general than new recruits expected.

These results, on balance, indicate that basic training is prospectively viewed by new recruits as a somewhat disagreeable (if necessary) experience and that the leadership climate typical of regular Navy duty is looked forward to as

being somewhat more positive. This point can be seen clearly by comparison of the climate expectations of new recruits shown in Table 2 vs Table 3. However, the new recruits underestimate the extent to which the Navy has a more positive climate than basic training. As the right hand column of Table 5 shows, three out of four of the inaccurate perceptions that new recruits hold about the Navy are less positive than justified. Perhaps the bleak perceptions of basic training held by new recruits generalizes unfairly to Navy duty in general.

Results from the two groupings of Likert items are interesting when considered with results presented above. General enthusiasm toward basic training decreased across groups as experience in the Navy increased. Basic trainees were most "gung ho", while the experienced enlisted men were the least. Conceivably, the decline of enthusiasm among the more experienced Navy men is related to the high number of inaccurate expectations they may have had as inductees. Orientation at time of recruitment and induction into the Navy should be made as accurate and realistic as possible. Summarizing a vast number of research studies on the relationship of job satisfaction to turnover and absenteeism, Porter and Steers (1973) conclude that job satisfaction can be viewed as:

The sum total of an individual's met expectations on the job. The more an individual's expectations are met on the job, the greater his satisfaction. Viewing withdrawal [absenteeism and turnover] within this framework points to the necessity of focusing on the various factors that make up the employee's expectation set. (p. 169)

Realistic job previews have been found (Wanous, 1973) to lead to more realistic job expectations, fewer thoughts of quitting and higher numbers remaining on the job. Wanous also found that realistic orientation did not depress job acceptance rates.

To the extent that future satisfaction with the Navy is dependent on realistic expectations, consideration should be given to revision of existing orientation programs. The results of this study suggest several areas where Navy recruiters and AFEES personnel could improve the understanding of potential recruits and new inductees.

Table 1

Demographic Variables for Three Samples of Navy Recruits

	New recruits		Basic trainees		Experienced enlisted men	
Variables	X	S.D.	X	S.D.	X	S.D.
Age (months) 1	228	14.8	230	16.3		
Population of Home Town ²	3.46	1.72	3.32	1.57	3.02	1.70
High School Class Standing 3	2.85	.80	2.86	.74	2.98	.79
N in sample	3	03	3	65	59	9

¹Age not obtained from experienced enlisted men

 $^{^2}$ 1 = Less than 5,000

^{2 = 5,000 - 10,000}

^{3 = 10,000 - 30,000}

^{4 = 30,000 - 100,000}

^{5 = 100,000 - 1,000,000}

^{6 =} Over 1,000,000

^{3&}lt;sub>1</sub> = Bottom 25 percent

^{2 =} Below average but not in bottom 25 percent

^{3 =} Above average but not in top 25 percent

^{4 =} Top 25 percent

Table 2 Inductee Expectations of and Trainee Description of Basic Training

	New recruit expectations	Basic trainee descrip- tions	<u>t</u>
Climate Dimensions			
Decision Making: Hierarchical (1) to Democratic (5)	1.96 ¹ (1.23)	2.00 (1.20)	42
Authority Structure: Formal (1) to Informal (5)	1.42	1.35	.99
Performance Evaluation: Punitive (1) to Permissive (5)	2.72 (1.61)	2.14 (1.53)	4.74**
Supervision: Close (1) to General (5)	1.84 (1.21)	2.37 (1.42)	-5.21**
Leadership: Inconsiderate (1) to Considerate (5)	2.79 (1.53)	2.45 (1.49)	2.89**
Power Modes			
Legitimate: Seldom (1) to Often (5)	4.16 (1.01)	2.93 (1.50)	12.60**
Expert: Seldom (1) to Often (5)	3.86 (1.16)	3.32 (1.40)	5.45**
Reward: Seldom (1) to Often (5)	2.73 (1.40)	3.40 (1.44)	-6.08**
Referent: Seldom (1) to Often (5)	2.82 (1.32)	2.78 (1.53)	.36
Coercive: Seldom (1) to Often (5)	3.84 (1.30)	3.72 (1.45)	1.13

^{*} p < .05 **p < .01

¹ Mean value; standard deviation in parentheses

Table 3

Inductee Expectation of and Enlisted Men's Descriptions of Navy Duty after 18 Months of Service

	New recruits' expectations after 18 months	descrip- tion of current	<u>t</u>
Climate Dimensions			
Decision Making: Hierar- chical (1) to Democratic (5)	2.75 ² (1.11)	2.65 (1.13)	1.27
Authority Structure: Formal (1) to Informal (5)	2.15 (1.16)	2.75	-7.49**
Performance Evaluation: Punitive (1) to Permissive (5)		3.37 (1.13)	-3.74**
Supervision: Close (1) to General (5)	2.70 (1.16)	3.45 (1.18)	-9.12**
Leadership: Inconsiderate (1) to Considerate (5)	3.28 (1.18)	3.04 (1.30)	2.32*

¹No analysis of attitudes toward the power modes used after 18 months service will be made since the relevant data are not available

^{*} p < .05 **p < .01

²Mean value; standard deviation in parentheses

Table 4

Mean Responses of the Three Groups to General Attitude Items Grouped into Two Dimensions

		Position in Navy			
D.i	ension A items	New recruits	Basic trainees	Experienced enlisted men	
Dim	ension A items	recruits	trainees	entisted men	
1.	I believe basic training is a very important part of military training.	4.24	4.04	3.49	
2.	Basic training is mostly a lot of unnecessary things you have to go through to be "initiated". (reverse scoring)	2.31	2.78	2.62	
3.	If I'm ever in combat, the things I've learned in basic training will be very essential.	3.94	3.40	2.95	
4.	Without a rugged boot camp experience, recruits will have no respect for the service.	3.22	3.42	2.67	
		$\bar{x}^1 = 3.43$	3.41	2.93	
Dim	ension B items				
1.	It's important to me to do well in basic training.	4.50	4.32	3.72	
2.	I am making it through basic training without any serious problems.	4.07	4.07	4.21	
3.	There is a good chance of being accidentally injured during basic training. (reverse scoring)	3.14	2.75	3.36	
		$\bar{X} = 3.90$	3.71	3.76	

¹ Recruits = Trainees > Experienced Enlisted Men (p < .05)

Table 5
Summary of Accuracy of New Recruit Perceptions of Basic Training and Navy Duty

Climate dimension	Basic	training	Nav	y duty		
Hierarchical vs Democratic	A	As expected		As expected		
Formal vs Informal	A	As expected	(+)	Less formal than expected		
Punitive vs Permissive		More punitive than expected	(+)	Less punitive than expected		
Close vs General Supervision		Less close than ex- pected	(+)	Less close than expected		
Inconsiderate vs Considerate Leadership		More inconsiderate than expected	(-)	More inconsiderate than expected		
Power Mode						
Legitimate	(+) L	Less than expected				
Expert	(-) L	Less than expected				
Reward	(+) M	More than expected				
Referent	A	As expected				
Coercive	A	As expected				
(1) Demotor the coture distriction is more position than compated						

- (+) Denotes the actual situation is more positive than expected
- (-) Denotes the actual situation is worse than expected

REFERENCES

- French, F. R. P., & Raven, B. The bases of social power. In D. Cartwright (Ed.), <u>Studies in Social Power</u>. Ann Arbor: University of Michigan, <u>Institute for Social Research</u>, 1959.
- Maynard, W. S., Jr., Thornton, G. C., III, & Nealey, S. M. Navy Basic Training as Seen by New Recruits, Basic Trainees, and Experienced Enlisted Men (TR 4). Seattle, Washington: Battelle, Human Affairs Research Centers, October 1974.
- Porter, L. W., & Steers, R. M. The organizational, work, and personal factors in employee turnover and absenteeism. Psychological Bulletin, 1973, 80, 151-176.
- Thornton, G. C., III, Hamilton, J., & Nealey, S. M. <u>Differences</u> in Attitudes Toward Leadership Between "Draft-Induced" and "True" Volunteers (TR 1). Seattle, Washington: Battelle, Human Affairs Research Centers, December 1973.
- Thornton, G. C., III, & Nealey, S. M. Comparisons of Military and Civilian Leadership Among Navy Recruits (TR 2). Seattle, Washington: Battelle, Human Affairs Research Centers, October 1974a.
- Thornton, G. C., III, & Nealey, S. M. Effective Leadership: Perceptions of Newcomers and Old Timers in the Navy (TR 5). Seattle, Washington: Battelle, Human Affairs Research Centers, October 1974b.
- Thornton, G. C., III, & Nealey, S. M. Leadership Preferences as a Function of Amount of Experience in the Navy (TR 6).

 Seattle, Washington: Battelle, Human Affairs Research Centers, October 1974c.
- Wanous, J. P. Effects of a realistic job preview on job acceptance, job attitudes, and job survival. <u>Journal of Applied Psychology</u>, 1973, 58, 327-332.

OFFICE OF NAVAL RESEARCH PERSONNEL AND TRAINING RESEARCH PROGRAMS (Code 452) DISTRIBUTION LIST

- 3 Office of Naval Research (Code 452) 800 N. Quincy Street Arlington, VA 22217
- 6 Director U. S. Naval Research Laboratory Dr. James A. Bayton Washington, DC 20390 Department of Psychology Washington, DC 20390 ATTN. Technical Information Div. Howard University
- 2 Defense Documentation Center Building 5 Cameron Station Alexandria, VA 22314
- 6 Library, Code 2029 U. S. Naval Research Laboratory Washington, DC 20390

Science and Technology Division Library of Congress Washington, DC 20540

Psychologist ONR Branch Office 495 Summer Street Boston, MA 02210

Psychologist ONR Branch Office 1030 E. Green Street l'asadena, CA 91106

Research Psychologist · ONR Branch Office 536 S. Clark Street Chicago, IL 60605

Director Human Resources Research Office ARPA, Room 625 1400 Wilson Blvd. Arlington, VA 22209

Dr. Alvin J. Abrams San Diego, CA 92152

Dr. Clayton P. Alderfer Department of Administrative Sciences Yale University New Haven, CT 06520

Washington, DC 20001

Dr. H. Russell Bernard Dept. of Sociology and Anthropology West Virginia University Morgantown, WV 26506

Dr. Milton R. Blood Department of Psychology University of California Berkeley, CA 94720

Dr. David G. Bowers Institute for Social Research University of Michigan Ann Arbor, MI 48106

Dr. Fred E. Fiedler Department of Psychology University of Washington Seattle, WA 98195

Dr. Samuel L. Gaertner Department of Psychology University of Delaware 220 Wolf Hall Newark, DE 19711

Dr. Gloria L. Grace System Development Corporation 2500 Colorado Avenue Santa Monica, CA 90406

Dr. Eric Gunderson Code 8030 Navy Personnel R&D Center Navy Medical Neuropsychiatric Research Unit San Diego, CA 92152

Dr. J. Richard Hackman Department of Administrative Sciences Yale University New Haven, CT 06520

Dr. Thomas W. Harrell Graduate School of Business Stanford University Stanford, CA 94305

Dr. Norman J. Johnson School of Urban & Public Affairs Carnegie-Mellon University Pittsburgh, PA 15213

Dr. Terence R. Mitchell School of Business Administration University of Washington Seattle, WA 98195

Dr. Edgar H. Schein Sloan School of Management Lt. Col. R. B. Tebbs Massachusetts Institute of Technology Cambridge, MA 02139

Dr. Siegfried Streufert Department of Psychology Purdue University Lafayette, IN 47907

Dr. Saul B. Sells Texas Christian University Fort Worth, TX 76129

Dr. Victor H. Vroom School of Organization & Management Yale University 56 Hillhouse Avenue New Haven, CT 06520

Dr. Clark L. Wilson Administration University of Bridgeport Bridgeport, CT 06602

Dr. Philip G. Zimbardo Department of Psychology Stanford University Stanford, CA 94305

Dr. Richard E. Sykes Minnesota Systems Research, Inc. 2412 University Avenue, S. E. Minneapolis, MN 55414

Dr. Karlene H. Roberts School of Business Administration University of California Berkeley, CA 94720

Military Assistant for Human Resources OAD (E&LS) ODDR&E Pentagon 3D129 Washington, DC 20301

AFOSR (NL) 1400 Wilson Blvd. Arlington, VA 22209

- Air University Library/LSE-8110 Maxwell AFB, AL 36112

DFLS USAF Academy, CO 80840

Office of the Deputy Chief of Staff for Personnel, Research Office ATTN: DAPE-PBR Washington, DC 20310

Chief, Plans & Operations Office USA Research Institute for the Behavioral & Social Sciences Room 278 1300 Wilson Blvd. Arlington, VA 22209

> 2 Army Research Institute Commonwealth Bldg. 1300 Wilson Blvd. Rosslyn, VA 22209

Graduate School of Business Chief, Psychological Research Branch U. S. Coast Guard (G-P-1/62) 400 7th Street, S. W. Washington, DC 20590

Commandant of the Marine Corps Naval Air Station
(Code MPI-20) Pensacola, FL 32508 Washington, DC 20380

(Pers-Or) Washington, DC 20370

Bureau of Naval Personnel (Pers-6) Assistant Chief of Naval Personnel for Human Goals Washington, DC 20370

Cdr. Paul D. Nelson, MSC, USN Head, Human Performance Div. (Code 44) Navy Medical R&D Command Bethesda, MD 20014

Naval Postgraduate School Monterey, CA 93940 ATTN: Library (Code 2124)

Professor John Senger Operations Research & Monterey, CA 93940

' Training Officer Human Resource Management Center Candadian Defence Liaison NTC, San Diego, CA 92133

Scientific Director San Diego, CA 92152

5 Navy Personnel R&D Center (Code 10) San Diego, CA 92152

> Officer in Charge (Code L5)
> Naval Aerospace Medical Research Lab. Naval Aerospace Medical Center Pensacola, FL 32512

Dr. A. L. Slafkosky

Scientific Advisor

Commandant of the Marine

Capt. Bruce G. Stone, G. Ston Research and Program Development Washington, DC 20380 Chief of Naval Education and Training Staff

Chief of Naval Personnel 300 N. Washington Street
Assistant for Research Liaison Alexandria, VA 22314

Director of Research HumRRO Division #4 (Infantry)
P. O. Box 2086
Fort Benning, GA 31905

Journal Supplement Abstract Service APA 1200 17th Street, N. W. Washington, DC 20036

Division Director for Social Science National Science Foundation 1800 G St., N. W. Washington, DC 20550

Office of the Air Attache Embassy of Australia 1601 Massachusetts Ave Washington, DC 20036 1601 Massachusetts Avenue, N. W.

Administration Sciences Scientific Information Officer
Naval Postgraduate School British Embassy 3100 Massachusetts Avenue, N. W. Washington, DC 20008

Staff, Washington 2450 Massachusetts Avenue, N. W. Washington, DC 20008 Naval Health Research Center ATTN: Chief, Defence Research

> Dr. Lennart Levi, Director Lab. for Clinical Stress Research Fack S-104 01 Stockholm, SWEDEN

Mr. Luigi Petrullo 2431 N. Edgewood Street Arlington, VA 22207

> Dr. John J. Collins 9521 Cable Dr. Kensington, MD 20795