THE NAVY PERSONAL RESPONSE PROGRAM:
REVIEW, EVALUATION, AND RECOMMENDATIONS

Peter H. Stoloff

Professional Paper No. 75

July 1971

CENTER FOR NAVAL ANALYSES

1401 Wilson Boulevard
Arlington, Virginia 22209
THE NAVY PERSONAL RESPONSE PROGRAM:
REVIEW, EVALUATION, AND RECOMMENDATIONS

Peter H. Stoloff
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Background</td>
<td>1</td>
</tr>
<tr>
<td>Philosophy of PR</td>
<td>1</td>
</tr>
<tr>
<td>Navy Experience with PR</td>
<td>2</td>
</tr>
<tr>
<td>Evaluations of PR-type programs</td>
<td>6</td>
</tr>
<tr>
<td>Issues Concerning Expansion of the Navy Program</td>
<td>13</td>
</tr>
<tr>
<td>Development of a Good Ideological Package</td>
<td>13</td>
</tr>
<tr>
<td>Provision for Reinforcement of Ideological Concepts</td>
<td>15</td>
</tr>
<tr>
<td>Obtaining Command Support</td>
<td>17</td>
</tr>
<tr>
<td>Selection of Instructors</td>
<td>17</td>
</tr>
<tr>
<td>Conclusions and Recommendations</td>
<td>19</td>
</tr>
<tr>
<td>References</td>
<td>21</td>
</tr>
</tbody>
</table>
THE NAVY PERSONAL RESPONSE PROGRAM:
REVIEW, EVALUATION, AND RECOMMENDATIONS
Peter H. Stoloff

BACKGROUND

Reference (a) suggests that a rather extensive study be conducted to determine the future course and possible expansion of the Personal Response Program (PR). Included in reference (a) is a draft study outline where several fundamental issues are raised: assessment of the effectiveness of the current program; applicability of the PR concept to other problem areas; identification of motivational, training, costing, etc., issues related to PR requiring additional research; and implementation options.

In response to reference (a), CNA has (1) made an extensive search of the literature on cross-cultural research; (2) discussed the relevant issues both with the people who developed PR and those who have had administration experience with it; (3) reviewed attempts at assessments of PR and similar programs; (4) reviewed proposals submitted to DOD for the purpose of expanding and evaluating PR-type programs. The result of this effort is an attempt to define the steps necessary to make PR a workable program.

PHILOSOPHY OF PR

PR is a cross-cultural training program aimed at developing the skills necessary for effective communication with our foreign hosts. Certain ill-founded attitudes about the host nationals, which are stumbling blocks in cross-cultural interaction, are evaluated and modified.
The concept of PR is viewed by some as a form of ideological warfare and by others as human relations training. The difference in these viewpoints is one of emphasis. PR may be separated into a number of components, as presented in table 1.

The ideological components provide a frame of reference for interaction with host nationals. The basis for the culture's modal behaviors are examined to produce a feeling of empathy for the local people. Presumably it is easier to communicate and interact with people when you are familiar with the motivation for their behavior. Human relations skills provide a tool for effective communication, and language facility provides the medium. Therefore, PR is seen to be an ideological warfare program (using human relations as a method of training), whereby an understanding of the foreign culture should result in behavior conducive to winning the local people over to our side. This is the major goal of the program.

NAVY EXPERIENCE WITH PR

The Navy is not new in the business of training its men for performance in roles involving cross-cultural interaction. A number of Navy PR programs, organized by the Chaplain Corps Planning Group, are currently in operation:

3. Project HIEU (MACV Cross-Cultural Improvement Program) - Saigon.
**TABLE 1**

**COMPONENTS OF THE PR CONCEPT**

A. Ideological Components
   1. Teaching of values basic to different cultures
      a. Equality of human life - your own and those of others
      b. Desire for freedom and the pursuit of happiness
   2. Economic and political philosophy
   3. Attitude modification

B. Human Relations Skill Development
   1. Interpersonal relationship training skills
   2. Crisis intervention - shaping problem-centered behavior

C. Utilitarian Aspects
   1. Culture shock preparation
   2. Language facility
   3. "Someday you may need a friend" idea*

---

*Emphasis that a friend, in the form of a sympathetic Vietnamese, may someday be a valuable ally to an American in distress.
4. Pre-deployment Training for Marines - Camp Pendleton (lectures to deploying Marines presented by chaplains trained in Personal Response).

5. Pre-deployment training in Personal Response given to chaplains at Amphibious Base, Coronado, California, being assigned to Navy commands in Vietnam.


7. Personal Response Training conducted by Vietnamese Navy with assistance from ComNavForV Personal Response Project Officer.

Other PR programs are being (informally) developed at the Roosevelt Roads Naval Air Station, Puerto Rico, and the Navy Station, Iceland.

The USMC, in conjunction with the American Institutes for Research (AIR), is developing a full-blown PR program. Human relations training, focusing on racial issues, will also be incorporated into the ideology of the program. The program tentatively consists of an 18-hour curriculum to be administered at boot camp to all recruits. The Marine Corps currently administers a PR training program for all troops to be deployed to Vietnam. This training is supplemented in the field following initial contact with host nationals. Responsibility for administering the program lies with local commands. Chaplains assigned to these commands provide guidance for training instructors.

To date, no billets for PR have been authorized. Rather, CNP has been providing chaplains who have directed the development of these programs in conjunction with the cognizant field activities who have
provided supporting personnel and logistics. The development of the concept and initial administration of a human relations program to improve relationships between American troops and nationals of other countries is credited to Dr. Robert L. Humphrey of AIR. Under the sponsorship of the Department of the Army, programs have been developed in Turkey, Italy, Korea, and Thailand. The Navy's program is based upon the original AIR concept, and most of the Navy chaplains were trained for their roles in PR by Humphrey himself.

As an historical footnote, a brief discussion concerning AIR's involvement in the Navy and Marine programs is included here. Having heard of Dr. Humphrey's work in Korea and Thailand, ComNavForV and Commanding General, Marine Forces, Vietnam, on separate occasions, requested to be briefed on the AIR Program. Humphrey went to Saigon and presented his "pitch". Reference (b) indicates the favorable reception Humphrey's concept was given. As a result, Navy chaplains were given TAD to Humphrey's training facilities in Thailand to receive the necessary training for Navy adoption of the program. This was the inception of the Navy PR program. (It is interesting to note that the Navy's PR instructors were trained under Army Research Office funds).

Reference (c) outlines the various goals, educational content, and general training techniques of the AIR Korean program. This program is presented in some detail because of its similarity to that of the Navy's program.

The AIR program stresses the need for the men to believe the ideology
and to reinforce this belief through some direct experience with host nationals. A good presentation is seen to be essential if the credibility of the ideological package is to be established. The techniques of presentation and the stress of the ideological package are critical in the implementation of the program. Similarities and differences between the AIR and NavForV Accelerated Turnover of Assets to the Vietnamese (ACTOV) program are described in reference (d).

EVALUATIONS OF PR-TYPE PROGRAMS

Data evaluating the effectiveness of the Navy's PR program is sparse. McGonigal and O'Connor have collected questionnaire data from trained and untrained units in Vietnam. They report that units who have had PR training showed more favorable attitudes towards the Vietnamese than units not receiving training. No data is reported indicating changes in behavior toward the Vietnamese or the reactions or perceptions of the Vietnamese to the differences between trained or untrained U.S. troops. It is important to note that the attitude survey data was collected prior to the troops gaining any field experience in Vietnam.

A recent survey was conducted to determine the reasons for the effectiveness of the Navy's PR and the Army's HIEU programs in Vietnam. The survey was conducted by AIR and gathered ratings of the importance of the various content areas of the programs as they contribute to the development of constructive attitudes. The respondents included 14 AIR-trained instructors who conducted training sessions from October 1968 through April 1970. The data suggest
that the ideological components (particularly the life value aspects) were the more important program content items responsible for the success of the programs. From the instructors' point of view, then, the ideological package is seen to be the most important content area responsible for the program's success.

Evaluations of the AIR Korean program have shown both attitudinal and behavioral changes. It was reported (reference c) that, following participation in the program, negative attitudes were reversed and constructive behaviors were reported. For instance, after the troops have discussed specific problems, they tend to be less hesitant to engage in action relevant to that problem. The positive behaviors reported include:

1. learned some of the local language,
2. spent time with Koreans,
3. ate Korean food,
4. refrained from ridiculing behavior of locals,
5. encouraged peers to take similar actions.

The program has also been instrumental in getting the troops to participate in a number of extensive programs with Koreans, such as teaching English in Korean schools and organizing community development programs, including farm development, tree planting, and setting up playgrounds.

Other evaluations, in the form of discussions with PR administrators, highlighted several problems associated with the program. Brislin (reference e) commenting on the Navy-Marine Corps PR program in Saigon observed:
1. There is little data on the effectiveness of the program as determined by its long-range effects on troopers' behavior in the field. Short-term behavioral effects have been reported. For example, PR instructors have expressed a willingness to extend their military careers if they would be able to continue in their roles in the programs; this feeling presumably arose from their own positive evaluation of the program's effectiveness.

2. Large numbers of people must be taught at one time, making personalized instruction impossible. Two types of problems are reflected here. If a smaller group is considered desirable, as it would be for teaching human relations skills, more instructors are needed. On the other hand, if a large group is tolerable, techniques are needed for instructing large numbers of trainees.

3. Two Navy chaplains, along with a small support staff supplied by the command (ComNavForV), form the core of the PR program in Vietnam. They are responsible for training groups of men (officers and petty officers) who, in turn, train the troops in the field. The chaplains responsible for the program cannot always select the people who will actually do the training in the field. Since some officers do not want to be involved in PR - because, for example, they (a) lack motivation, (b) do not subscribe to the ideology or other basic concepts,
or (c) do not believe it to be especially beneficial to their careers - their negative impact on the field troops could serve to wash out any desirable effects of the program.

4. When chaplains themselves interact with the troops, they sometimes are unable to communicate effectively because of their position. If the role of instructor necessitates swearing, telling dirty jokes, etc., credibility in the program may suffer.

5. In any new program like PR, the first generation of administrators, as innovators, may possess tremendous enthusiasm. This may not be true for their successors.

Dr. Robert Ayling, of the National Training Laboratory, an expert in the area of human relations training, was recently in Vietnam to provide sensitivity training for the Navy's PR teams. The following is a summary of his comments and evaluation of the PR program:

1. Advisors were heavily content and task oriented and greatly lacking in personal awareness or personal interaction skills (factors stressed by sensitivity training).

2. The PR program is really several programs. Orientation is basically attitude modification. Reorientation frequently gets into problem identification. The crisis intervention function of PR teams is highly problem centered. Sometimes PR personnel are used as investigative agents, which is most unfortunate.
3. PR is highly supported at the top level, but support decreases in local unit commands. Because PR teams are from Saigon, they have limited relationships with local commands. Sometimes they are looked upon as spies from headquarters. Frequently the information gathered by the PR team and identified to the local command is not acted upon. On second orientations, the personnel repeat the same problems that have remained untouched from previous surfacing.

4. There is no close cooperation in the field between Vietnamese PR and U.S. PR. U.S. personnel are taken from their jobs for reorientation, but Vietnamese personnel stay on their jobs and mark time until the U.S. group returns.

5. The organization of PR in a central office moving out into unit commands causes problems of command acceptance of PR teams and their recommendations. A PR junior officer, even though from ComNavForV, dealing with a senior officer in his own command about attitudes or practices in that command is likely to be received defensively.

A number of semi-official evaluations have been communicated. For instance, the previous Commander of the U.S. Naval Forces, Vietnam, credits the Personal Response Program with a significant contribution to the success of the Navy portion of the ACTOV program. The Commandant, U.S. Marine Corps, considers the Personal Response Program of significant value in fostering better interpersonal relations within the Marine Corps and with host nationals. A section in Headquarters, Marine Corps, has been recently established to direct the Personal Response Program.
To summarize these evaluations of the Navy's PR and similar programs, we find that trained men report more favorable attitudes than nontrained men, and trained men do exhibit behavioral changes in the form of a willingness to interact with host nationals. It is obvious that no "hard" measures of PR effectiveness have emerged from these evaluations. A number of reasons for this are suggested.

1. The program is relatively new and limited in funds and resources.
2. PR is considered to be a training program, and although its training goals may be fulfilled (getting people to internalize the ideology and develop interpersonal interaction skills), effectiveness of the program itself may extend beyond the goals of training. For example, effectiveness may involve some sort of action on the part of the local people, or even the Viet Cong. The relationship of training goals to this sort of effectiveness criterion is not clear.
3. No formal study has been attempted to define, measure, and evaluate the effectiveness of the program. Problems inherent in conducting such a study are manifold. Such problems are:
   a) The relevant dimensions of effectiveness must be defined;
   b) Modification of the program, as it exists in the field, may be necessary to study it. If certain variables (aspects of the program) are to be manipulated, changes in staffing, method of instruction, and selection of trainees
and instructors may be necessary;

c) The method of sampling instructors, trainees, problem
issues and training sites must be determined;

d) The cost is high. Estimates for two such studies are
$2.5 million and $750 thousand respectively (references f, g).

In lieu of a formal study to define and evaluate effectiveness of
PR, a rather pragmatic approach to this problem is suggested. If we
view the purpose of PR as a means for successfully integrating the
Riverine Force in Vietnam, or for getting troops to mingle and interact
with foreign nationals, we can observe what effect the introduction of
PR training has had upon these programs. Before PR training began, a number
of incidents were reported which indicated that the turning over of U.S.
vessels to the Vietnamese Navy was not going smoothly. PR training
was then introduced. Better relations among mixed Vietnamese and American
crews and a smoother transition was then observed. If one can assume a
causal relationship, we have a situation where PR training resulted in
the favorable outcome it was designed to effect. Under these circumstances,
the PR program can be judged as highly effective.

Using this anecdotal or "successful incident" approach for gauging
the effectiveness of the Navy's PR program, the comments of ComNavForV
and those of Commander, USMC Forces, Vietnam, can also be viewed as
evidence of the apparent success of the program.

Rather than dwell on how effective the program is, it would now
seem useful to ask, "What makes it work?"
ISSUES CONCERNING EXPANSION OF THE NAVY PROGRAM

Clues as to why PR works and, consequently, how to make an expanded program work, may be obtained by analyzing successful (or effective) programs. Conversely, we can look at unsuccessful programs and determine why they didn't work. Issues focusing upon what has made successful programs what they are will be discussed.

Development of a Good Ideological Package

The AIR evaluation study, reviewed earlier, indicated that the ideological package seemed to be the most important component of the program. Observers of the PR program in action (e.g., Ayling, Humphrey, Spector) have also stressed the importance of trainees buying the ideology. Therefore, the assembling of the ideological package is a critical factor.

Much of the work in the development of a generalized ideological package has already been done. Examination of its content reveals that the concepts of life value, equality, and freedom represent the core of the ideology. The importance and substance of these core concepts have already been established. However, a successful method for communicating these concepts has been shown to be an "anecdotal" method (from Humphrey's aforementioned study). This involves integrating informational materials concerning the commonality of the core American values and those of the foreign nationals. For example, anecdotes about how Americans and Vietnamese value human life equally are related using real life experiences. When developing a program for a different culture,
information concerning their "way of life" needs to be gathered and an-
ecdotally related to the ideology.

It has been suggested that a centralized academic research center for
the purpose of gathering details of the religious, political, economic,
psychological, and social aspects of the foreign cultures involved in
PR be established. The pros and cons for the establishment of such
a center would include:

Pros

1. Some countries into which PR would be expanded may have a common
culture or common core of cultural factors as they relate to the
ideology. Research performed separately in each of these
countries would be redundant.

2. Staff assigned to a given PR program may not have the training
or resources to gather the necessary information. Conversely, a
small staff of centrally located experts with expertise in many
cultures could be assembled.

3. If all the military services develop programs in the same
countries, duplication of effort could be avoided.

Cons

1. Current U.S. foreign service and embassy staffs in countries
where PR will be used may already have facilities and resources,
easily tapped, for obtaining necessary information.

2. The costs of a centralized system may be greater than those
of decentralized information-gathering activities.
3. Local help, in the form of university professors and other foreign civilians, may be adequate to do the job.

4. Field observers may be needed to gather the necessary information, requiring an "in country" billet for this purpose. Therefore, a centralized system would require at least one field representative in each area where PR will be implemented. This defeats the economy of a centralized system.

Before a decision about the need for a centralized academic research center can be made, each of these issues needs to be answered.

To summarize this issue - a viable program must have at its core a good ideological package. The concepts presented must be internalized by the audience. If the information upon which the ideology is based is unacceptable, the method of presentation poor, or the speaker insincere, the audience will be lost and perhaps alienated. This could result in the reinforcement of already negative attitudes.

The action of reinforcement of an attitude or belief suggests a second reason for why the program works.

Provision for Reinforcement of Ideological Concepts

PR-type programs have also been called action programs. The term action, here, has two connotations. The purpose of the ideological package is to change attitudes in a specified direction. By changing what a person believes, we also aim to modify his behavior toward the object of his beliefs. This behavioral change is one kind of action. A second type of action implied is the reinforcement that a person
receives relevant to his attitudes. An attitude can be considered a predisposition to act in a manner consistent with beliefs. When a person experiences some sort of event, or action, congruent with an attitude or what he is told, this tends to strengthen his attitude or belief and increases the probability of some sort of response consistent with the attitude.

Thus, given some attitude or predisposition for action, if the environment (in the form of a "guided" interaction with foreign nationals) operates favorably on the individual, he will be more likely to reciprocate this action.

A number of ways can be suggested in which the PR program can provide the reinforcement necessary to promote cross cultural interaction. The initial training sessions and discussions among peers do provide initial reinforcement, but more reinforcement is needed. This may take the form of additional training sessions following some experience in the field, combined with opportunities for the men to "mingle" with the locals. The Army's Korean program did provide these types of reinforcements, and their program was a success.

As the result of a PR program that encourages our men to mix and interact with host nationals, the number of negative incidents involving Americans and host nationals may increase. Thus, a higher level of negative incidents than is being reported while a low degree of interaction behavior may be observed. However, as the number of interactions increase the ratio of positive to negative incidents should also increase.
Therefore, the net effect of the program is to increase positive incidents. The direction of this net effect is predicated upon the fact that the positive incidents will be reported.

**Obtaining Command Support**

Discussions with current administrators of PR in the Navy, Marine Corps, and AIR (for the Army), as well as with many who have observed PR in the field, revealed the need for command support of the program. In the past PR has enjoyed a prominent position in the structure of the major commands (e.g., ComNavForV). By implementing the program "from the top," its obvious support by the commander is understood and appreciated.

Support of local commands is another necessity for the success of the program. In some instances, PR teams have been sent into the field or aboard vessels to "trouble-shoot." Rather than settle any specific problems, such an activity has probably served to alienate local commands. Such instances may be looked upon as sending spys from the larger command into the field. This function for PR teams should be avoided.

In planning an expanded program, it would seem wise to place it in an organizational position reflecting the support of CNO and other major commanders. Subsuming it as a branch of the Chaplain's Corps, for example, would be inconsistent with promulgating an ideological warfare program.

**Selection of Instructors**

Experience with PR-type programs has shown that the individual
instructors or lecturers have a strong effect on program effectiveness. Ayling's comments, discussed earlier, also bear on this issue. The problem is "how does one select or develop inspiring instructors?"

Selection of PR instructors has, to date, rested with the Chaplain's Planning Group. Discussions with them revealed that a rather informal basis for selection was being used. They simply select a chaplain to supervise a given program who they feel is "right for the job." Needless to say, a more formal selection procedure should be developed.

The AIR PR effectiveness evaluation study asked instructors to identify either the methods or people (instructions or instructor) having the greatest "importance" (or effect) in their training. The names Dr. Robert Humphrey and Commander Earl Fedge were nearly always rated as the most important. Perhaps the qualities or guidance of these men can serve as a starting point for developing a selection program for PR instructors.

Suggestions have been made to establish a human relations sub-specialty within the Navy. This is another issue obviously related to the selection and training of PR instructors. Most of the instructors who have headed the Navy PR programs, particularly chaplains, have had extensive human relations training - from seminary training to advanced graduate degrees in the behavioral sciences. Many officers and enlisted men who currently serve in support roles to the chaplains running the programs have not had such training, and the program may suffer as a result.
CONCLUSIONS AND RECOMMENDATIONS

The purpose of this report has been to review the Navy's Personal Response Program and to define the steps necessary to make it a workable program. PR was viewed as a form of ideological warfare, using human relations as a training method to facilitate interpersonal communication between Americans abroad and host nationals. The philosophy, growth, and composition of the program were discussed and compared to other operational programs.

To date, no formal evaluation or definition of the effectiveness of the program has been attempted. Observers have agreed, however, that it does work. Reasons as to why it works were examined. Based on these reasons, the following recommendations are made for expanding the Navy PR program:

1. Develop a good, credible, ideological package, making available the academic resources to perform the necessary background research.

2. Reinforce the ideological concepts by promoting actual interaction between Americans and host nationals.

3. Obtain command support and high-status organizational placement of the program in the Navy to promote its acceptance on all levels. It is essential that local commands be receptive to and support the program if its effect is to be felt Navy-wide.

4. Develop a formal selection program for PR program operators. The individuals who train the instructors, and the characteristics of the instructors themselves, have been related to the success of the
program. Examination of the characteristics of instructors associated with successful programs is a good starting point for developing a selection program. The establishment of an officer human relations subspecialty, in conjunction with the selection program, is also recommended.

5. Integrate plans for studying the impact and defining the effectiveness of the program with the establishment of the expanded effort.
REFERENCES


(b) COMNAVFORV ltr Personal Response Program ser 3636 of 14 October 1969.

(c) Spector, P., Harris, T.C., Humphrey, R.L., Aronson, J.B., Williams, C.F. Troop-Community Relations Program, American Institutes for Research, April 1969.

(d) CDR M.E. Roberts, CHC, USNR - Personal Response Officer ltr to Dr. R. L. Humphrey, AIR. Subj: Comments concerning the NAVFORV Personal Response Program of 28 April 1970.


List of CNA Professional Papers*

PP 1

PP 2

PP 3
Brown, George F.; Corcoran, Timothy M. and Lloyd, Richmond M., "A Dynamic Inventory Model with Delivery Lag and Repair," 16 pp., 1 Aug 1969, AD 699 513

PP 4

PP 5

PP 6 - Classified

PP 7

PP 8

PP 9

PP 10 - Classified

PP 11

PP 12

PP 13

PP 14

*CNA Professional Papers with an AD number may be obtained from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22151. Other papers are available from the author at the Center for Naval Analyses, 1401 Wilson Boulevard, Arlington, Virginia 22209.
CNA Professional Papers – Cont’d.

PP 15

PP 16

PP 17
Brown, Lee (Lt., USN) and Rose, Marshall, “An Incremental Production for the End-Item Repair Process,” 17 pp., 3 Mar 1970, (Published in Annual Conference of the American Institute of Industrial Engineers Transactions, May 1970, Cleveland, Ohio) AD 702 453

PP 18

PP 19

PP 20
Brown, George F.; Corcoran, Timothy M. and Lloyd, Richmond M., “Inventory Models with a Type of Dependent Demand and Forecasting, with an Application to Repair,” 4 pp., 10 Feb 1970, (Published in Management Science: Theory Section, Mar 1971) AD 702 456

PP 21

PP 22

PP 23

PP 24

PP 25

PP 26

PP 27

PP 28

PP 29
PP 30

PP 31

PP 32

PP 33

PP 34
*Department of Economics, Massachusetts Institute of Technology

PP 35

PP 36

PP 37

CNA Professional Papers – Cont’d.

PP 38

PP 39
Hardy, W. C. and Blyth, T. S.*, "Quasi-Residuated Mappings and Baer Assemblies," 22 pp., 14 Jul 1970, (To be published by the Royal Society of Edinburgh)
*Mathematical Institute, University of St. Andrew

PP 40

PP 41

PP 42

PP 43

PP 44

PP 45
CNA Professional Papers – Cont’d.

PP 46
*Mathematical Institute, University of St. Andrew

PP 47

PP 48

PP 49

PP 50

PP 51

PP 52

PP 53
Kadane, Joseph B., “On Division of the Question,” 12 pp., Nov 1970, (Published in Public Choice, Fall 1971) AD 714 652

PP 54

PP 55

PP 56

PP 57
Lando, Mordechai E., “A Comparison of the Military and Civilian Health Systems,” 20 pp., Dec 1970, AD 716 897

PP 58

PP 59

PP 60

PP 61
CNA Professional Papers – Cont’d.

PP 62

PP 63

PP 64
*School of Electrical Engineering, Purdue University

PP 65

PP 66

PP 67

PP 68

PP 69

PP 70

PP 71

PP 72
*University of Michigan

PP 73
*School of Electrical Engineering, Purdue University

PP 74

PP 75
CNA Professional Papers – Cont’d.

PP 76

PP 77

PP 78

PP 79
Wilson, Desmond P. and Brown, Nicholas (Cdr), “Warfare at Sea: Threat of the Seventies,” 14 pp., Nov 1971, AD 734 856

PP 80

PP 81

PP 82

PP 83

PP 84

PP 85
Brown, Jr. George F., “Comparison of Forecast Accuracy When the Disturbances Are Small: Directly Estimated Reduced Forms vs. K-Class Induced Reduced Forms,” 17 pp., Dec 1971, AD 736 355

PP 86

PP 87

PP 88

PP 89

PP 90
Heider, Dr. Charles H., “An N-Step, 2-Variable Search Algorithm for the Component Placement Problem,” 58 pp., Apr 1972

PP 91

PP 92