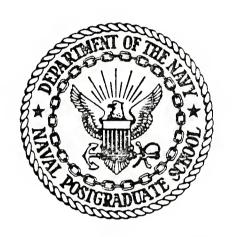A NEED FOR CHANGE: A STUDY OF THE ATITUDES
OF THE UNITED STATES NAVAL OFFICER TOWARD HRM

Frank L. Mixner

NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

A NEED FOR CHANGE

A Study of the
Attitudes of the United States Naval Officer
toward HRM

by

Frank L. Mixner

June 1978

Thesis Advisor: R. A. McGonigal

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Lieutenant Commander, United States Navy
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I. INTRODUCTION

Since 1970, the United States Navy has officially been
in the Human Resource Management (HRM) business. Established
as a separate and distinct unit in the Bureau of Naval Per-
sonnel, the people program was designed to promote the worth
and dignity of all naval personnel. Problems with implementa-
tion of the people-oriented policies and programs have arisen
with some of them being addressed and some of them being ig-
nored. The problem of acceptance of the Human Resource Manage-
ment concept by the operational units of the Navy, be it real
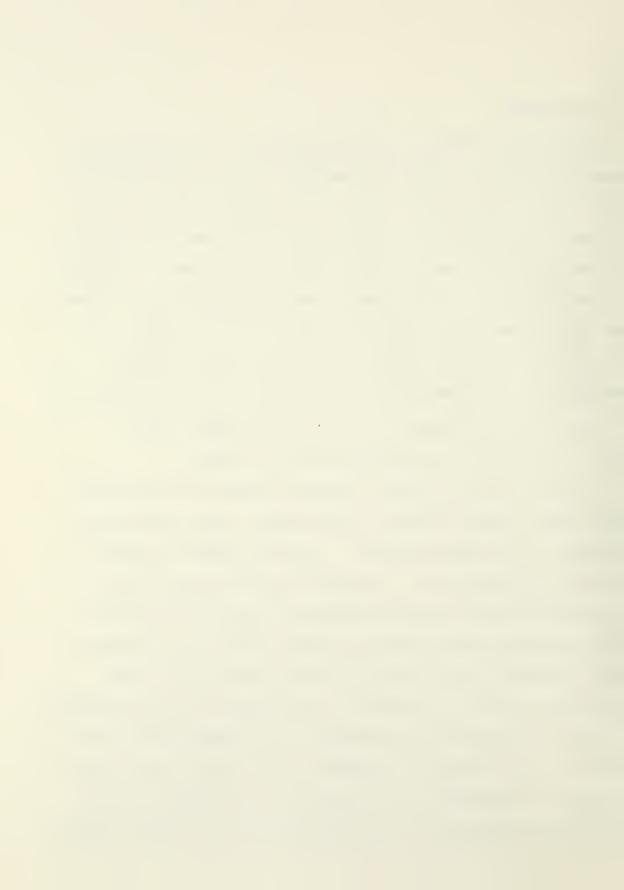or perceived, needs to be looked at in a candid manner.

The thrust of the entire problem is to attack the social
and human relations problems within the Navy and develop leader-
ship and management skills to effectively integrate men and
mission. This would result in a more effective organization
and higher operational readiness. There is at least a per-
ceived resistance to the policies and programs of the HRM
system. In order for the Navy to achieve maximum benefit
from the HRM effort, there must be a high percentage of ac-
ceptance of the policies and programs by fleet members. The
present technique of enforcement through directives alone
hasn't proven to be the most effective. An approach for im-
plementation must be designed that is more in consonance with
what the fleet units desire or at least based on their per-
ceptions.

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A. BACKGROUND

The initial phases of implementation of the HRM program
caused resentment among fleet members toward the entire con-
cept. This was primarily due to the subject matter and the
methods of presentation, both of which were new and different
to the traditional Navy way of conducting business. Through
a great amount of innovativeness and persistence, the system
has grown tremendously since then but it still suffers from
the initial negative reaction based on the early phases. A
new approach in presentation could prove to be very effective
in improving the acceptance of the HRM program, which in
turn would result in a higher degree of success.

In July 1974, the Naval Personnel Research and Develop-
ment Center (NPRDC) formally established a HRM Studies and
Analysis Unit to specifically   provide research support in
the area of Human Goals. The basic purpose of this unit was
to provide studies toward assessment of impact of the Navy
HRM effort and monitor ongoing efforts, both in the Depart-
ment of Defense (DoD) and the civilian sector, that would
likely be relevant to Navy HRM. The Center's primary emphasis
has been in determining the impact of the HRM program in the
areas of: Non-Judicial Punishment (NJP) rates, Naval Status
of Forces (NAVFORSTAT), reenlistment and advancement rates,
unauthorized absence (UA) and desertion rates. These studies

have provided an excellent analysis of program effectiveness and results but the degree of acceptance by the fleet members has not been addressed.

The past eight years has provided sufficient time for the establishment and acceptance of the HRM program. The true problems in the acceptance area need to be identified first and then addressed. This perceived resistance has been generated by an atmosphere of questioning the need for the program. There has been a great deal of talk concerning the waste of time generated by the program and a general lack of understanding of the HRM concept.

In order to provide a better understanding of the increased emphasis which has been placed upon people in the Navy, the overall changing environment must be described. There has been a significant change in the culture of the United States during the past two decades. This emphasis on change has been generated not only by increased technology but also by people's behavior and attitude toward society and environment. These changes in values and priorities have or will eventually affect not only each individual but each organization. In order to manage successfully in this changing society, there must be an understanding and acceptance of environmental constraints, personal needs, and values. This may require a reorganization of priorities and at times limit managerial control. Strategies

must be developed for coping with these pressures and constraints for any organization to survive and grow.

Accepting and adapting to these changing values is the most logical and effective course of action. Organization development has emerged as a result of these increasing social pressures and constraints on organizations. It is an effective means of adapting and can be defined as a basic process of organizational change through coordination of the individuals' and organizations' goals and needs.

The military establishment is by no means exempt from the effects of the changing social values and environment. Societal influences are a major factor confronting today's military forces. One direct result and still a controversial defense department policy was the decision to end peacetime conscription or the draft and to rely entirely on volunteers to meet the manpower requirements of the armed forces. This required the military services to start meeting the same conditions in the labor market as the civilian employees because the services were in competition in the open market for personnel. This first step indicates the need for organization change and improvement in the future in order to survive.

The applicability and need for improvement in the personnel area in the Navy did not go unnoticed. Admiral Elmo R. Zumwalt, Jr., Chief of Naval OPerations, 1970-1974,

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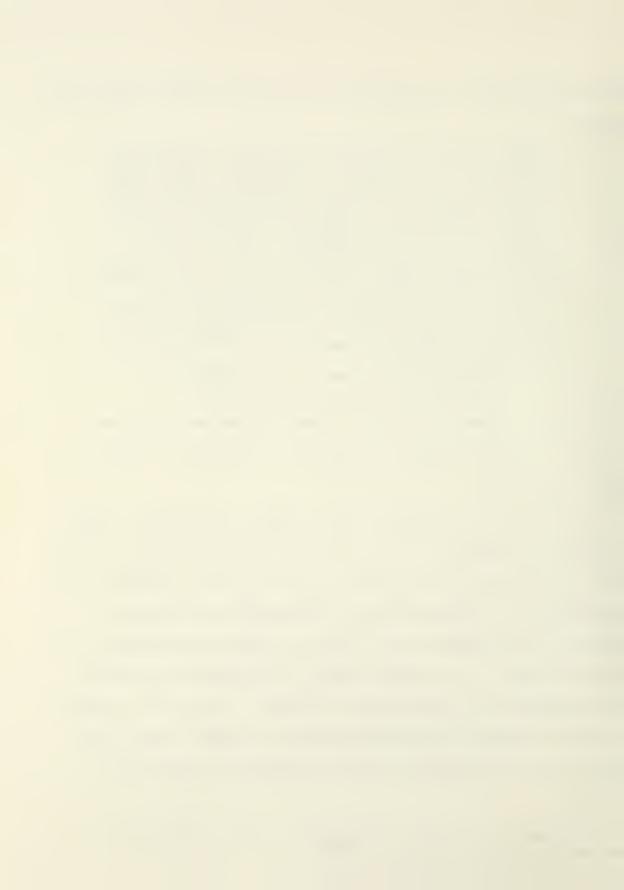reflecting back on his selection as Chief of Naval Operations, stated:

> "Where I was virtually alone among those being
> considered was in viewing existing policies and
> practices in the field of personnel administra-
> tion as an even greater immediate danger to the
> Navy's capability - though a far easier one to
> avert - than its obsolescing physical plant.
> After all, the best warships in the world are
> of no avail without crews to sail and fight them.
> And in recruitment, and especially in the reten-
> tion of men and women who had completed their
> first hitches, the Navy was approaching a crisis.
> For many years the goal for reenlistment after
> the first hitch had been 35%. In 1970 the actual
> figure was 9.5%.
> "Moreover, there was little prospect that
> this trend would reverse itself soon."[1]

The initial thrust of the Navy's HRM Program was provided by Admiral Zumwalt after he assumed the position of Chief of Naval Operations.

Organization development is an effective means of imple- menting the necessary changes in any organization and is appli- cable to the United States Navy but not without limitations or restrictions. Although change is necessary and desired, or- ganization development in the Navy can only be applicable to a certain point. In certain combat situations there can be no collaborative or participative effort. The Navy's present day Human Resource Management Program has been further ham- pered by the ever-present time or scheduling limitations

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[1] Zumwalt, E. R., Jr., On Watch, p. 167, Quadrangle - The New York Times Book Co., 1976.

coupled with the constant personnel turnover. In spite of these limitations, the Navy's organization development effort has been established and is in operation throughout most of the fleet, although acceptance of the program is not at the 100% level.

This resistance is probably due to long established policies and traditions and the "nature of the beast." There is always a need for any unit or organization (i.e. a division, department, squadron or ship) to improve its effectiveness and the Human Resource Management Program is designed to accomplish this. In order for the program to be successful, it must be accepted and the personnel implementing the program must be also accepted. Therefore, the attitude of non-acceptance or resistance must be addressed.

This attitude of resistance toward the Navy's HRM program has presented itself in both verbal and written form and appears to have received its basis from the early stages of development of the entire effort. The program has been complied with in the requirements sense, but this just scratches the surface of the potential of what the program can provide.

B. PURPOSE

It is the purpose of this thesis to identify areas of concern and determine specific directions for improvement of the image of the Navy's HRM program. The problem being

addressed is how to present and implement the policies and programs of the HRM effort in a manner that is more acceptable to the naval officer. In order to modify the present image held by the naval officers toward HRM, their present attitude toward the concept must be determined along with their perception of what it should be. By quantitatively measuring these attitudes, the apparent differences can be utilized for more effective methods and designs. The basic hypothesis to be tested in this study is that there is no significant difference between the present or "as is" attitude of the naval officer toward the HRM effort and the future or "should be" attitude of the naval officer toward the HRM effort.

Based on the consistency theory of attitude change, a questionnaire was designed and administered to the naval officers who were students at the Naval Postgraduate School in Monterey, California. The questionnaire responses provided an adjective description of the Navy HRM program and the HRM specialist, both as perceived presently and with needed changes. By factor analysis of the adjective variables and a plot of the results in three dimensional semantic space, differential vectors were obtained. When these differences were taken into account specific directions were determined toward improving the acceptance or image presented of both the program and the specialist.

These identified areas and directions as to what to emphasize should provide a starting point for making changes and decisions in the methods of presentation and possible implementation of the current HRM policies and programs. This information may be useful for all management level personnel to gain insight into and awareness of the overall perceptions of the Navy's HRM effort. The perceptions held by naval officers toward HRM play a vital role in the acceptance and overall success of the entire concept.

II. LITERATURE REVIEW

A. ATTITUDE

In order to address the concern over attitudes in the
Navy toward HRM, the concepts of attitude and attitude change
had to be discussed. Attitude is a frequently-used term and
in general can be considered an important concept. It is used
to summarize many different behaviors, can be considered the
cause of a person's behavior toward another person or object,
helps explain the consistency of a person's behavior and re-
flects the way a person perceives the world around him.[2]
There is not one standard or agreed upon definition of attitude.
A common thread or consensus does run through the multitude of
formal definitions and that is the central feature of pre-
paration or readiness to respond. It exists in all degrees of
readiness from latent or dormant to tension or motion actively
determining an on-going behavior.[3]

The concept of attitude has both affective and cognitive
properties and the fact that there is no formal definition which
is acceptable to all researchers has not caused major confron-
tations or arguments and hindered progress in this area. The

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[2] Oskamp, S., Attitudes and Opinions, p. 5, Prentice Hall,
Inc., 1977.

[3] Fishbein, M., Readings in Attitude Theory and Measure-
ment, p. 8, John Wiley & Sons, Inc., 1967.

definitions stressing the cognitive approach are most typical in the theories of attitude change. The definition should be closely associated with the measurement technique being utilized because "material about the function of attitudes within the personality and society is theory about - not measurement of - attitudes."[4]

According to Allport, who has carefully reviewed and combined many definitions, attitude has come to mean a posture of the mind or mental set. It is not a behavior or something a person does but a preparation for behavior or the way a person will respond to the attitude object, i.e. a response inclination. In recent years the evaluative aspect has been stressed - the readiness to respond in a favorable or unfavorable manner.[5] This evaluative aspect of response has further been described by Osgood in that attitudes can be placed on a bi-polar continuum with a zero reference point implying that they have both a direction and intensity.[6]

Social scientists have accepted the fact that attitudes can be measured in spite of the non-concurrence of a definition. The most common measurement technique for all definitions and theories is the pencil and paper instrument which does

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[4] Kiesler, C. A., Collins, B. E., and Miller, N., Attitude Change, p. 4, John Wiley & Sons, Inc., 1969.

[5] Oskamp, op cit., pp. 7-9.

[6] Osgood, C. E., Suci, G. J., and Tannenbaum, P.H., The Measurement of Meaning, p. 189, University of Illinois Press, 1957.

not make use of overt behavior. According to the taxonomy of Cook and Selltiz (1964) there are five general categories of attitude measurement. The measure in which inferences are drawn from are: (1) self-reports of beliefs, behaviors, etc., (2) the observation of ongoing behavior in a natural setting, (3) individual's reaction to or interpretation of partially-structured stimuli, (4) performance of objective task, (5) physiological reactions to the attitudinal object or representation of it. In all these methods and in particularly the self-reports (method one), the subjective nature of the interpretation of the results must be kept in mind by both the researcher and the reader.[7] All individuals have different beliefs with favorable and unfavorable attitudes toward each object.

B. ATTITUDE CHANGE

When an attitude has been identified and, knowing that it is based on past experiences, it is combined with a present stimulus and a response is generated, the idea of attitude change may be approached. In the case of the attitude toward HRM, the stimulus may very well be the manner in which the HRM program and/or specialist is being presented or at least being perceived by individuals. This brings another concept into focus - that of perceptions. Perceptions play a significant role in forming attitudes. Perceptions are the way

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[7] Kiesler, op cit., p. 9.

things look or sound to people - an understanding awareness or meaning of objects or surrounding conditions. They are based largely on the impressions these objects make on the individual's senses.[8] If the methods of presentation of the HRM program to the fleet were changed, there possibly could be a change in the perception of the program and a resultant change in attitude.

One of the major forces that has shaped the theory of attitude change is the research effort known as the "Yale Program." Hovland, Janis and Kelley have identified the process of attitude change as a "process of learning."[9] They assume that an opinion, which is a statement of an attitude or response, will remain constant unless the individual undergoes a new learning experience. Their studies show that attitude change occurs when an individual is exposed to persuasive communication which successfully induces him to change his opinion.[10] There are two key elements to this theory. The "recommended opinion" presented by the communicator and the need for incentives for accepting the new opinion. It is not enough that an attitude can be learned. There must be some motivation for choosing

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[8] Allport, F. H., Theories of Perception and the Concept of Structure, p. 14, John Wiley & Sons, Inc., 1955.

[9] Kiesler, op cit., p. 104.

[10] Hovland, C. I., Janis, I. L., and Kelley, H. H., Communication and Persuasion, p. 10, Yale University Press, 1953.

one response over another. Each individual is different in his beliefs and the message must provide rational and logical support for the conclusion. Acceptance is influenced by three variables: (1) observable characteristics of communication source, (2) setting in which exposure takes place, (3) communication stimuli - arguments or appeals.[11]

The significance of this theory is the persuasive communication concerning the HRM program that has been presented to the naval officer may not be appropriate or sufficient to change his opinions or habitual responses. The communication must present the desired image in consonance with his perceptions and provide for logical and rational support for justification of a change in opinions or attitude.

C. CONSISTENCY THEORIES

In analyzing attitude changes, it was necessary to investigate the psychological structure or the organized set of cognitions an individual has about himself and the world around him. Cognitions are defined as the image or map of the world held by a person and all responses are based on the way things look to him. Under the principle of cognitive consistency, psychological structure is organized and integrated regarding some object or event. New information aimed at attitude change will disrupt this organization and produce disequilibrium which

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[11] Kiesler, op cit., pp. 10-11.

is counter to a person's continual push for congruous, harmonious relationships in his cognitive system. This creates tension and/or pressure to reduce the inconsistency and the resulting process is one of attitude change.[12] The basic principle of the consistency theories of attitude change is that an awareness of inconsistencies among an individual's ideas is an uncomfortable situation which will motivate cognitive changes. Attitude change results from individuals receiving new information which is inconsistent with their previous viewpoint or if already existing inconsistencies in their attitude are pointed out to them.[13]

The Navy may be contributing to its own problem and perpetuating the attitude of resistance by the manner in which the HRM program is presented to individuals in the fleet. By pushing in the wrong direction and causing more stress and psychological tension, inconsistencies continue to be presented. By possibly changing the image of HRM and making it more consistent with the prevailing attitudes, it will become more acceptable. There are numerous theories that are devoted to this principle of consistency and the relationship to attitude change. This paper cannot begin to review all of the data and associated research and shall not attempt to

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[12] Cohen, A. R., _Attitude Change and Social Influence_, pp. 62-63, Basic Books, Inc., 1964.

[13] Oskamp, op cit., p. 192.

do so. The principle aim of this research is to determine what
attitudes exist and how they can be quantifiably measured for
the purpose of modification. The following three basic theories
are related and will provide the basic necessary understanding
of the concept of attitude change and their relation to this
research. They are: (1) Heider's Balance Model, (2) Festinger's
Theory of Cognitive Dissonance and (3) Osgood and Tannenbaum's
Congruity Theory. The author did not attempt to prove or dis-
prove these theories but to use them as a foundation for de-
veloping a method of attitude change.

Heider's Balance Theory is basic and somewhat limited but
he is considered one of the originators of the consistency
theory. His concern was over the manner in which people per-
ceive other people, objects and ideas in their own environ-
ment. Considering only three units: the individual perceiver,
significant others and the object(s) of an attitude; he states
that they are all drawn toward a balanced state. If the re-
lationships are in equilibrium or harmony so that there is no
cognitive stress in the perceiver's view of the system, then
it is balanced or stable. Conversely, if psychological tension
is produced in the perceiver, the system is unbalanced or un-
stable. This results in a push toward a change in the rela-
tionship. Between each pair of elements, the relationship
can be only one of liking or unliking and in one direction.

The system is balanced if there are an odd number of positive
or liking relationships, otherwise it is unbalanced.[14]

In Figure 1 (Heider's Triadic Relationships), P represents
the perceiver, O represents significant other(s) and X repre-
sents the object, while + depicts liking and - depicts dis-
liking.

Figure 1: Heider's Triadic Relationships

[14] Ibid., pp. 193-194.

In a triadic relationship there are eight possible states.
In this figure states a, b, e, and f are balanced and states
c, d, g, and h are unbalanced.[15]

Heider stated that an unbalanced state will seek equili-
brium or balance and a balanced state will resist change in
its equilibrium. His theory is limited in several areas but
he has provided a significant amount of information in the
area of attitude change and a basis for further research. In
applying this theory, the perceiver might be an individual
in the Navy who likes the Navy, likes organization development
and agrees that there is a need for change in the Navy. The
negative or disliking part of the triangle comes into the
situation creating an unbalanced state through the individual's
perception that organization development or HRM is not what the
Navy needs based on past experience and present methods of im-
plementation.

Festinger's Theory of Cognitive Dissonance concerns it-
self with the conditions that arouse dissonance or inconsis-
tencies within an individual and the way in which it can be
reduced. His definition of cognition is the belief, opinion
or any knowledge about the environment, oneself or one's behav-
ior. Dissonance is the inconsistent relationship between
cognitions. The existence of dissonance in an individual

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[15] Kiesler, op cit., p. 159.

will cause him to be psychologically uncomfortable, which will motivate him to reduce the dissonance or to avoid information or situations which will increase dissonance.[16] When considering two cognitive elements alone Festinger states "These two elements are in a dissonant relation if, considering these two alone, the obverse of one element would follow from the other."[17] An important fact is that the magnitude of the dissonance between two elements is a function of the importance of the elements to be individual. The magnitude of the dissonance is therefore an important variable because the strength of the pressure for the reduction of dissonance is a function of it.[18] The pressure generated by dissonance between cognitive elements results in behavior or cognition changes and exposure to new information and opinions.[19] An application here is the avoidance or rejection of the Navy's HRM program. Dissonance exists between the two cognitive elements of the Navy and the HRM program and a means of reducing this dissonance would be to provide new and/or different information concerning HRM.

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[16] Festinger, L., A Theory of Cognitive Dissonance, p. 3, Stanford University Press, 1957.

[17] Ibid., p. 13.

[18] Ibid., pp. 16-18.

[19] Ibid., p. 39.

The Congruity Theory of Osgood and Tannenbaum has provided a degree of quantification to the field of attitude change. In their theory, objects are evaluated on a scale running from good to bad and each individual has an infinite amount of attitudes toward an infinite amount of objects. It is possible to have varying attitudes without incongruity as long as certain objects are not brought together in some kind of relationship. If they are brought together, there is a possibility of an incongruent or inconsistent cognition. If this incongruity results in pressure to change or reduce it then an attitude change occurs.[20] This theory is limited in scope in that it deals only with communication results in its prediction of direction and amount of attitude change. An individual's attitude toward a source and an object are already established and evaluated when a message suddenly brings these two elements into a relationship which causes incongruity. A person's attitude toward both the object and source will change toward a more neutral point and the amount is dependent upon the degree of polarization of the initial attitudes. Further experimentation found that persuasive communication and the credibility of the source played a significant role in the degree of change.[21] A specific example in this case would be the incongruity between the Navy and the HRM program.

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[20] Cohen, op cit., pp. 65-66.

[21] Oskamp, op cit., pp. 196-197.

The attitude toward the Navy would be extremely positive while the attitude toward HRM as presently being implemented would be extremely negative based on perceptions. Relating these two concepts causes incongruity.

These three basic theories of inconsistency have provided background and information for understanding the concept of attitude change. Each one addresses the same problem but uses different terms and approaches it from a different direction. The purpose is not to prove or disapprove each theory, but to provide a starting point or reference to approach the area of concern over the resistant attitude toward HRM in the Navy.

D. MEASUREMENT

In order to develop any plan for reducing inconsistencies and changing attitudes, there must be a means for determining or measuring what the present attitude is. There has been a great deal of research into the area of attitude measurement and all the results are affected by the extremely subjective nature of the problem. This is due to the differences in individual beliefs and attitudes toward an object. The most common means of measurement is on a quantitative scale which provides a degree of favorability or unfavorability toward an object. This includes the use of an ordinal scale vice an interval scale due to the subjective nature of assigning an

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equal unit of measurement to the difference between two individuals' attitude. The most popular method is the Likert attitude scale which was the first to provide the extent of the respondent's agreement or approval with each response item and not just whether he agreed or disagreed. The respondent's attitude score is determined by adding his ratings for all of the items.

In the theory developed by Osgood, Tannenbaum and Suci, the meaning of an image is measured in a quantitative manner. An image is developed as a result of all the past experiences of the image processor. It is what is believed to be true or a perception and is classified as subjective knowledge and as different events occur, this subjective knowledge or image is altered. The meaning of an event or a received message is the change which it produces in the image.[22] Their method is also very subjective in nature but it does provide a reference point from which to work in measuring attitudes and designing attitude changes. It attempts to measure the connotative or implied meaning of the concept or object being presented to the respondent. A list of adjectives combined with an intensity scale is provided and the respondents indicate a point on the scale for each adjective which corresponds to their impression or feeling concerning the object being rated.

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[22]Boulding, K. E., The Image, pp. 6-7, University of Michigan Press, 1966.

E. SEMANTIC SPACE

The premise of Osgood was that the meaning of a concept, idea, event or image could be displayed or plotted in semantic space. Semantic space is a region of unknown dimensionality and Euclidian in character. A straight line passing through the origin of this space represents a semantic scale or polar adjectives and a sample of such scales represents a multi-dimensional space. In order to fully define this space with a minimum number of axes, it was necessary to reliably measure and identify independent dimensions. Factor analysis was used to uncover these dimensions.[23]

Using a given population, Osgood generated long list of adjectives and had the respondents indicate the intensity of the meaning of each adjective in reference to specific concepts. In order to cross check the results and remove as much bias as possible, several methods of factor analysis were utilized resulting in three major factors which accounted for approximately fifty percent of the total variance. Thurstone's Centroid Factor Method of factor analysis was first, followed by the D-Factorization Forced-Choice Method. The three factors which emerged in both analyses were: Evaluative, Potency and Activity with Evaluative being the most heavily loaded.[24] To provide an exhaustive sampling of semantic dimensions, a

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[23] Osgood, op cit., p. 25.

[24] Ibid., p. 46.

further Thesaurus sampling was obtained and factored using the centroid procedure with a quartimax rotation. This resulted in the same three dominant factors but accounted for less of the total variance.[25]

Figure 2 (Semantic Space) provides a visual presentation of these three factors as they are projected in semantic space. Utilizing the three dimensions it is possible to plot the meaning of the image or concept in semantic space as it is perceived by a particular group of people. The intensity and direction of this point in semantic space provides a means or measurement of the attitude toward the object being rated. The meaning of a concept or image in semantic space is measured by the projections onto each of the axis or dimensions. This provides magnitude and direction of the coordinate on each of the dimensions.[26]

FACTOR INTENSITIES

——————— I

——————— II

——————— III

Figure 2: Semantic Space

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[25] Ibid., p. 64.

[26] Ibid., p. 27.

The allocation of a concept to a point in this multidimensional space is provided by selection from a given set of scaled semantic alternatives. Semantic differential or the difference in meaning between two concepts is provided as a function of the differences in their respective allocation within the same space, i.e., the distance between the two points. This provides direction and distance of meaning.[27]

It was Osgood's purpose to set up a semantic measuring instrument which would be applicable to people and concepts in general. They realized that both the data concerning semantic measurement and the interpretation of the results was a subjective matter but they submitted the semantic differential to evaluation against the standard criteria for measuring instruments, specifically with the reliability, validity and comparability of the instrument.[28]

Application of this theory and methodology to the Navy and its HRM program could provide the necessary starting point for identification of the problems associated with the attitude of resistance toward the Navy's organization development effort in the fleet. By measuring and plotting the meaning of the present image of the HRM program and personnel and the projected or desired image of the HRM program and personnel in semantic space, the resultant vector could provide the direction

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[27] Ibid., p. 27.

[28] Ibid., p. 125.

and intensity of change needed to improve the attitude. It must be realized that the identification of planned changes based on the resultant vector would be based on subjective judgment also and must be approached in a cautious, unbiased manner.

In spite of the subjective nature of the theories of inconsistency, attitude measurement and attitude change; there is a real need for improvement of the fleet attitude toward HRM in the Navy. As long as the subjective nature of the problem and solution is kept in mind it is highly probable that this thesis will establish at least a starting point. If nothing else is provided, there will be a reference for future developments. The primary concern is not with sophisticated quantification but with the views held by a group of individuals toward HRM in the Navy.

It could be that the present approach is pushing in the wrong direction toward imbalance, incongruity and dissonance causing increased stress and psychological tension. By identifying the factors causing this attitude, and changing the image of HRM based on these factors, the attitude of resistance may well be reduced or even eliminated. This is an important area of concern in which a great deal of time should be spent for the continued survival of the Navy's organization development effort. The continued survival of the Navy in this day of the all-volunteer force may well depend on the continued survival of the Navy HRM program. It's important to care about what the HRM image evokes right now.

III. <u>METHODOLOGY</u>

The primary objective of this research was to develop
and utilize a method for measuring the attitudes of naval
officers toward the Navy's organization development effort.
Based on the consistency theories of attitude change, the
author specifically intended to identify the areas of greatest
concern and provide recommendations for improvement of the pre-
sent image projection of the HRM program. Policy direction
could be recommended by providing a more accurate description
of the ideal HRM image provided by this population.

It is very important that the reader keep in mind that
all of the factors influencing this image have not been ac-
counted for. Attitude and attitude change have been the ob-
jects of numerous research efforts and studies. The subjec-
tive nature of the concept has provided for continuous debate
and theories. This thesis is one approach on just one facet
of the multitude environmental factors influencing attitudes.
The specific purpose and design was to obtain attitudes and
perceptions of the Navy HRM program.

A. HYPOTHESES

Assuming that a high degree of similarity between the
present or "as is" image of HRM and the future or "should be"
image of HRM will lead to a stable condition of more balance

or consistency and a greater acceptance of the HRM effort, the following hypotheses were tested.

1. **HRM specialist**

   H_0: There is no significant difference between the naval officer's present or "as is" attitude toward the HRM specialist and the naval officer's future or "should be" attitude of the HRM specialist.

   H_1: The naval officer's future or "should be" attitude of the HRM specialist will be significantly different than the naval officer's present or "as is" attitude toward the HRM specialist.

2. **HRM Program**

   H_0: There is no significant difference between the naval officer's present or "as is" attitude toward the HRM program and the naval officer's future or "should be" attitude of the HRM program.

   H_1: The naval officer's future or "should be" attitude of the HRM program will be significantly different than the naval officer's present or "as is" attitude toward the HRM program.

B. QUESTIONNAIRE

The first step in the procedural method of this research was the development of the survey questionnaire which would be used to obtain responses for measurement of the attitudes of naval officers. Due to the unavailability of any instrument concerning the area of attitude toward HRM and the specific nature of the problem being addressed, the author developed a questionnaire specifically directed at describing the nature of HRM. Using the measure of meaning theory of Osgood as the foundation, two separate lists of descriptive adjectives were developed. One list specifically designed for the HRM program and the other list for the HRM specialist. A five point Likert Scale was utilized to complete the questionnaire. The Likert Scales were incorporated as a means to indicate to what extent the adjectives were descriptive of the HRM program and the HRM specialist. The respondents marked each adjective according to the following key:

> 1 - To a very little extent
>
> 2 - To a little extent
>
> 3 - Somewhat
>
> 4 - To a great extent
>
> 5 - To a great deal.

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The Likert Scale was chosen due to the familiarity of naval officers with the scale and the ordinal or ranking characteristics of the scale.

Several basic parameters were met in designing the survey questionnaire. In the author's opinion, the adjectives finally selected were not only the most descriptive covering the widest possible range of factors or dimensions but the most appropriate considering the population that would be taking the survey. Selecting words common and/or distinct to naval terminology provided for the familiarity to the naval officer. Considering the time involved to complete the survey, the lists were continuously reviewed until the length was reduced to a minimum while still providing the necessary description range. Having no particular reason or justification for word order on either list, the adjectives were placed in alphabetical order. Clear and concise instructions were added along with three basic demographic questions resulting in the completed survey questionnaire (Appendix A). The questionnaire was distributed and returned through the Student Mail Center at the Naval Postgraduate School.

C. THE SAMPLE

The subjects of this research were drawn from the student body at the Naval Postgraduate School, Monterey, California.

The student body contains foreign students as well as students from all of the United States armed services. Because of the nature of the research on naval officer attitudes, constraints were placed on the selection, in that participants were all naval officers.

The author realized the limitations imposed on this study by using this small sample and did not assume or imply that the results reflected the attitude of all naval officers. In this era of time and monetary constraints coupled with emphasis on cost and administrative reductions, this sample still provided a significant cross-section of the naval officer community. The student body is comprised of officers of various ranks, experience and background.

The survey questionnaire was distributed to the 590 naval officer students present in January, 1978. 252 responses were returned by the end of March, 1978, which resulted in a 43% response rate. An n of 252 was utilized by this study. Appendix B (Respondents' Demographic Data) provides a breakdown of the distribution of demographic data from this study. It is significant to note that the majority of the respondents are classified in three main categories. These are 43% from the surface warfare community or 1100 designator code, 26% from the aviation community or 1300 designator code, and 12% from the supply community or 3100 designator code. Appendix C provides a description of Naval Officer

Designator Codes. The ranks of the sample ranged from
Lieutenant, junior grade to Commander. Of the total, 61%
were Lieutenants and 30% were Lieutenant Commanders.

D. STATISTICAL ANALYSIS

The survey questionnaire utilized in this study was de-
signed to provide the degree or intensity that each variable
described the HRM program and HRM specialist, identification of
factors or dimensions based on these variables and finally
identification of possible problem areas based on the dif-
ferences between the present and future image of HRM in terms
of these measured factors. The responses were numerically
coded for computer assimilation and processing. Several
respondents provided amplifying comments which were extracted
and used as supporting data in the results and discussion
section of the thesis. These comments proved valuable in pro-
viding insight into the rationale behind many of the responses.

The analysis of the responses was accomplished at the U.S.
Naval Postgraduate School using the Statistical Package for
the Social Sciences (SPSS) computer package on the IBM 360/65
computer to provide descriptive statistics, hypothesis test-
ing using the t-test for significance and factor analysis.[29]

The subprogram CONDESCRIPTIVE was used. This provided de-
scriptive statistics of the data. These included mean, stan-
dard error, standard deviation, variance, kurtosis, skewness,

[29] Nie, N. Y., and others, SPSS-Statistical Package for the
Social Sciences, 2nd edition, McGraw-Hill, 1975.

and range. In order to test the hypothesis and determine the significance of the differences in the means of each variable under the conditions of "as is" and "should be," the subprogram T-TEST was utilized. T-Test provided the capability of computing student's t and probability levels for significance. The use of means and t-test on statistical analysis of attitude scales is common practice in spite of the requirements for the use of non-parametric distribution free statistical techniques. Statistical research has proven in most cases that violations of the assumptions based on the use of parametric techniques do not lead to significant distortions of the results. If data shows markedly skewed or grossly different variances, the use of parametric techniques may produce misleading results.[30] It is not the intent of this thesis to join in the debate and try to prove or disprove the use of descriptive statistics with variables of ordinal measurement. This was a judgment decision by the author to use the t-test because it more than adequately served the purpost in this instance for significance test.

In order to determine the underlying pattern of relationships the subprogram FACTOR - PA1 was utilized. PA1 is a principal component factor analysis without interaction. This was followed by a VARIMAX rotation of the matrices which

_____

[30] Oskamp, op cit., p. 37.

centers on simplifying the columns of a factor matrix. This
technique provided a correlation matrix of the variables,
extraction of initial factors, percent of variance accounted
for by each factor, component loading of each variable on the
initial factors and the orthagonal rotation of the matrix to
a terminal solution for the simplest explanation of the rela-
tionship among factors and the association of all variables.

After identification and labeling of the factors, the mean
or index score of each factor was computed based on the means
of the variables or components of each factor. These index
scores provided an intensity scale for plotting and displaying
each image in semantic space. Once displayed in semantic
space, the differences or resultant vectors provided for iden-
tification of problem areas and directions in which to push
for improvement of the HRM image.

IV. RESULTS

The results of this study have indicated the presence of a problem area in the projected image of the Navy's HRM effort. A summary of the mean scores of each variable and a comparison between "as is" and "should be" is provided in Appendix D. In examination of these tables, the differences between "as is" and "should be" are readily observed. The null hypothesis in both the case of the HRM specialist and the HRM program were rejected based on the results of the t-tests. t statistics are also presented on the tables in Appendix D. These results show that at the 0.1% level, there is a significant difference between naval officer's present perception of HRM and what naval officers perceive HRM should be. Exceptions to this level for the specialist were Competitive at the 0.2% level and Powerful at the 10% level while for the program the only exception was Competitive at the 0.5% level. This reflects an attitude of non-agreement or non-acceptance of the HRM effort by the participants in this study.

Under each of the four conditions measured, the five variables with the largest or widest differences between means were identified as well as the five with the smallest differences between means. These were identified in order to provide possible impact or significance to the image comparisons and final results. The widest differences for the

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HRM specialist were:

> Respected   (1.90)
>
> Practical   (1.75)
>
> Productive   (1.61)
>
> Competent   (1.59)
>
> Professional   (1.54)

The smallest differences were:

> Powerful   (0.15)
>
> Competitive   (0.26)
>
> Serious   (0.33)
>
> Cold   (-0.40)
>
> Methodical   (0.43)

The widest differences for the HRM program were:

> Effective   (2.13)
>
> Successful   (1.99)
>
> Efficient   (1.96)
>
> Productive   (1.94)
>
> Practical   (1.86)

The smallest differences were:

> Competitive   (0.26)
>
> Important   (1.02)
>
> Irresponsive   (-1.08)
>
> Weak   (-1.29)
>
> Threatening   (-1.29)

The factor analysis determined the dimensions measured
by the questionnaire which provided the primary results of
this study and the necessary factors for projecting the
images in semantic space. A separate factor analysis was per-
formed in each of the following areas: (1) the HRM specialist
"as is," (2) the HRM specialist "should be," (3) the HRM
program "as is", and (4) the HRM program "should be."

The varimax rotated factor matrices shown in Appendix E
provided the results from each of the factor analysis on the
component loadings on each of the factors. The information
identified the variables that loaded on each factor. The
loadings of the variables on the factors describing the HRM
specialist "as is" were as follows:

FACTOR I

Capable	Practical
Competent	Productive
Cooperative	Professional
Dynamic	Respected
Efficient	Resourceful
Helpful	Responsive
Impressive	Serious
Industrious	Stable
Innovative	Valuable
Methodical	Versatile
Open	

FACTOR II

Cold	Opinionated
Hostile	Wasteful
Irresponsible	

FACTOR III

Competitive	Powerful
Influential	

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The loadings of the variables on the factors describing the HRM specialist "should be were as follows:

FACTOR I
Capable	Practical
Competent	Productive
Cooperative	Professional
Dynamic	Respected
Efficient	Resourceful
Helpful	Responsive
Impressive	Serious
Industrious	Stable
Innovative	Valuable
Methodical	Versatile
Open	

FACTOR II
Competitive	Opinionated
Influential	Powerful

FACTOR III
Cold	Irresponsible
Hostile	Wasteful

The loadings of the variables on the factors describing the HRM program "as is" were as follows:

FACTOR I
Acceptable	Practical
Adaptable	Professional
Appropriate	Productive
Dynamic	Responsible
Effective	Serious
Efficient	Successful
Helpful	Thorough
Important	Useful
Impressive	Versatile
Innovative	Valuable

FACTOR II
Unresponsive	Weak
Wasteful	

FACTOR III
Competitive	Threatening

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The loadings of the variables on the factors describing the HRM program "should be" were as follows:

FACTOR I	
Adaptable	Professional
Dynamic	Productive
Effective	Responsible
Efficient	Serious
Helpful	Successful
Impressive	Thorough
Innovative	Versatile
Practical	

FACTOR II	
Acceptable	Useful
Appropriate	Valuable
Important	

FACTOR III	
Threatening	Wasteful
Unresponsive	Weak

FACTOR IV	
Competitive	

The reader will note the appearance of four factors describing the HRM program "should be" and three factors describing the other three conditions. With the intent of this study in mind and by accepting the fact that the measurement of a group's perceptions of what a program should be is extremely delicate and subjective, the author considered this a minor discrepancy and realigned the HRM program "should be" factors to coincide with the HRM program "as is" factors. Specific reasons for this discrepancy are unknown and will be addressed later in the discussion section of this thesis.

Appendix F (Cumulative Percentage of Variance) provides a listing of the cumulative percentage of variance accounted for

under each of the four separate conditions. The first three
factors of each condition accounted for an average of 60%
of the total variance.

Index scores were computed for each factor by adding the
means for each variable in the factor and then dividing by the
number of variables in the factor. In the case of the factors
for the HRM program "should be," the index scores were com-
puted using the variable loadings as in the HRM program "as is"
factors but the means for each variable under the HRM program
"should be" condition. Table I is a summary of the mean index
scores for all four conditions.

TABLE I

FACTOR	HRM SPECIALIST		HRM PROGRAM	
	"AS IS"	"SHOULD BE"	"AS IS"	"SHOULD BE"
I	2.75	4.07	2.49	4.07
II	2.38	2.67	2.79	1.45
III	2.42	1.31	2.42	1.91

In addition to the numerical or statistical results of
the survey questionnaire other data was provided both ver-
bally and in writing. Nine separate verbal responses were
received by the author. Each statement expressed the same
attitude and can be summarized as follows: The Navy's HRM
Program is a waste of my time and the Navy's time and any
survey concerning HRM is also a waste of time.

The written comments received on the questionnaire fell into three categories. These are the degree of familiarity with the present HRM program, the need for HRM and the waste of time. The following two quotations provide an excellent summary of the last two categories. "If division officers/XOs/COs did the basic things leaders (ref-Div. Off. Guide et al) are supposed to do, HRM serves no purpose. If most commands seem to need HRM in learning and understanding their own people, we are in trouble in deed." "I have been through Upward and executive seminar programs and my experience has been that the HRM program was an administrative imposition on an already overburdened system - especially when it was forces upon the crew by distress with little regard for timing and ship's schedule. Most prevalent attitudes after the seminar were 'waste of time.'" The use of the word Competitive in describing the HRM program also generated written comments specifically in reference to what or who.

V. DISCUSSION

In the review of the literature the author found the consistency theories and their role in attitude change to be specifically appropriate to the resistent attitude of the naval officer toward HRM. The theories of Heider, Festinger and Osgood, et al, state that when individuals are in a state of dissonance or incongruity, psychological tension results. Individuals will seek to reduce this psychological tension and therefore reduce the dissonance.

This dissonance or psychological tension can be characterized by the resistance or lack of acceptance by the naval officer of HRM. By projecting an image of HRM that is not in accord with the naval officer's perception of HRM, dissonance arises. Image projection must be more in accord with the naval officer's perception in order to relieve tension and make HRM more acceptable.

The rejection of both null hypotheses supports the dissonance theory and its relationship to this study. Direct application of the differences between "as is" and "should be" in both the case of the specialist and the program, are reflected in the lack of acceptance of the HRM effort. The questionnaire responses suggest in most cases that the variables should be more descriptive, while in other cases the variables should be less descriptive.

In addition to the statistical data clearly providing the results that there is a significant difference between "as is" and "should be," the verbal and written inputs further support this assumption. There is a lack of acceptance by naval officers of the HRM program as presently projected. The image must be improved in a direction making it more acceptable.

In the case of the HRM specialist, the adjectives with the widest differences included Respected, Practical, Productive, Competent, and Professional. All five of these variables had a positive difference indicating a perceived need to place more emphasis in these areas. The adjectives with the smallest differences included Powerful, Competitive, Serious, Cold, and Methodical. Four of these variables had a positive difference with Cold having a negative difference. These variables are the most descriptive of the HRM specialist both "as is" and "should be" indicating less emphasis for image improvement needed in these areas. It is important to note that Powerful was the only variable where no significant difference resulted from the t-test.

In the case of the HRM program, the adjectives with the widest differences included Effective, Successful, Efficient, Productive and Practical. Again all five of these variables had a positive difference indicating more emphasis in these areas. The adjectives with the smallest differences included

Competitive, Important, Unresponsive, Weak and Threatening.
Only two of these five variables - Competitive and Important -
resulted in positive differences while the other three had
negative differences. These variables best describe the HRM
program both "as is" and "should be" indicating less emphasis
needed for image improvement. The adjective Competitive ap-
peared as the variable with the smallest difference of all
the adjectives describing the HRM program. A fact that must
be kept in mind is the questions generated by the respondents
on the survey questionnaire concerning the use of Competitive
as an adjective for describing the HRM program. A definite
consideration here is the interpretation of how this word
describes the program. It was the author's intent in select-
ing this variable that a competitive program would be one in
which high performers would desire or compete for in selecting
a billet and duty station. The concern generated on the ques-
tionnaire as to what or with whom the program was being com-
petitive indicates that the interpretation was not the same
by all the respondents.

Osgood's theory on semantic differential and the display
of meaning or image in semantic space was developed around
the technique of factor analysis. In the research conducted
by Osgood, three factors were identified and accounted for
approximate-y 50% of the variance. This thesis is based on
this theory of measurement of meaning and display of an image

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in semantic space. In all four conditions of this study,
three factors accounted for over 50% of the cumulative variance
(see Appendix F). Factor analysis in three of the four condi-
tions resulted in three factors while four factors appeared
in the HRM program "should be" condition. The author realigned
the loading of the variables under this condition to coincide
with the loadings of the HRM program "as is" to facilitate the
display of the image in semantic space.

The reason for this minor discrepancy cannot be specifically
identified. Due to the extremely difficult task of trying to
measure and identify how any one group perceives an object or
event, the subjectiveness of the design of the instrument and
the techniques must be considered. The factor of a small
sample (n = 252) plays a significant role and possibly the
selection of adjectives descriptive of the HRM program may
have caused the discrepancy. The word Competitive, particu-
larly in the case of HRM program "should be," as discussed
previously may have also affected the solution.

A close examination of the factors of the HRM program "as
is" and the HRM program "should be" reveals a significant
trend and explains the author's decision to realign the
"should be" variables. Factors II and III under the condition
of "as is" contain the same variables as Factors III and IV
under the condition of "should be." Factor I and Factor II

under the condition of "should be" contain the same variables as Factor I under the condition of "as is." Due to the similarity of the factors and the extreme closeness of the means, the realignment did not produce any significant differences in the results. Factors I and II before and Factor I after realignment were descriptive of the same areas for increased emphasis. Factors III and IV before and Factors II and III after realignment were descriptive of similar areas for decreased emphasis.

Once the factors were realigned, a new index score was computed using the means of the new factor components. This allowed for consistent designation of factors and still provided a valid measurement of intensity for plotting in semantic space.

This realignment was a judgment decision by the author and the reader will have to make his own judgment. The important point to remember is the identification of areas of concern in order to improve the image of HRM. Based on the trends observed in the factors, this realignment provides for identification of these areas.

The three dimensions of Osgood semantic space were designated as Evaluative, Potency and Activity. In order to properly display the images measured in this study, the factors were labeled in accordance with that theory. Due to the impact on the overall conclusions and recommendations, the labeling of the factors was an extremely important step in

this entire procedure. The subjective nature of this judg-
mental decision required that the selection of labels be as
free from bias as possible. In the author's judgment this
was accomplished but the reader must make his own judgment.
The factors of this study were labeled as follows:

HRM Specialist "as is"

       Factor I   - Evaluative
       Factor II - Activity
       Factor III - Potency

HRM Specialist "should be"
       Factor I   - Evaluative
       Factor II - Potency
       Factor III - Activity

HRM Program "as is"
       Factor I   - Evaluative
       Factor II - Activity
       Factor III - Potency

HRM Program "should be"
       Factor I   - Evaluative
       Factor II - Activity
       Factor III - Potency

A point to be kept in mind is that in order to properly analyze
and label the factors, the entire combination of variables ta-
ken together must be considered not each variable separately.
In the case of the program "should be," the factors were la-
beled in the same manner as the program "as is" due to the
realignment of the variables.

    Once the crucial step of labeling the factors was accom-
plished and the index scores computed for each factor the
position in semantic space of each of the measured images

was graphically displayed. By plotting the "as is" and "should be" images in semantic space, a differential vector was obtained. This resultant or treatment vector is the focus of this study in that it not only provides the direction and intensity of change needed, but also a description through the variables of each factor. Figures 3 and 4 provide a graphic display of the HRM specialist images and HRM program images, respectively, as measured in semantic space.

It can be readily seen that in each case where the three dimensions intersect is the position of each image. The index score or intensity indicates the relative amount that each factor contributes to the image. The differences in intensity provide the areas to approach for emphasis or de-emphasis for change and improvement.

After examination of Figure 3 (HRM Specialist Semantic Space Images), the fact that the HRM specialist image needs to be improved was readily apparent. The Evaluative factor not only has the greatest desired change data (1.32), but also contains all the variables with the widest mean differences. Increased emphasis on the Evaluative factor is needed, particularly in the areas of Respected, Practical, Productive, Competent and Professional. A specific recommendation in this area is to ensure that high performers are assigned to HRM billets and that HRM specialists are promoted with their peers. This will not only add credibility, but

also clearly demonstrate the competitiveness of the HRM effort.

The Potency factor also resulted in a positive or increased emphasis direction although relatively small (.25). The variables Powerful and Competitive are components of the Potency factor and they have two of the smallest mean differences of the variables describing the HRM specialist. This supports the results that naval officers see the HRM specialist relatively close in terms of this factor under "as is" and "should be" conditions and very little emphasis is needed for change. The previous recommendation of ensuring the assignment of high performers to HRM billets, plus a concentrated effort directed at retaining personnel in the Navy after a tour in HRM would definitely add to the potency of the entire HRM effort. Through retention and promotion, the HRM system could change the perceived notion of a dead-end billet to one of success for all warfare specialties.

The third dimension of this treatment vector is the Activity factor and a negative change (-1.07) is needed to bring these images into greater consonance. The variables or components of this factor generally have a negative connotation and it was not surprizing to find that de-emphasis of activity is needed in this direction to improve the image. The variable Cold is a component of the Activity factor and it

EVALUATIVE

POTENCY

ACTIVITY

FACTOR	"AS IS"	"SHOULD BE"	DESIRED CHANGE*
Evaluative	2.74	4.07	+1.32
Potency	2.42	2.67	+ .25
Activity	2.38	1.31	-1.07

A - "as is" image

B - "should be" image

AB - Treatment vector

*   Treatment vector dimensions

Figure 3:   HRM Specialist Semantic Space Images

is one of the few variables that has a negative mean difference. Not only is a de-emphasis needed for improvement along this factor but increased emphasis to the opposite of these negative variables is in order. By ensuring that the HRM billets are filled with qualified high performers and obtaining a high if not 100% manning level within the entire HRM system, the genuine needs of the operational fleet units can be met. This could eliminate the problem of HRM specialists identifying the problems and concerns of individual units and not being able to provide maximum followup due to heavy required workloads and minimum personnel available to provide additional desired services. This would definitely aid in improving the HRM image along the lines of this factor.

Examination of Figure 4 (HRM Program Semantic Space Images) clearly shows that the HRM program image also needs to be improved. The Evaluative factor again had the greatest desired change data (1.58). This factor contains all the variables with the widest mean differences which indicates a definite need for increased emphasis; especially in the area of Effective, Successful, Efficient, Productive and Practical. This implies a basic overhaul and fine-tuning of the program while maintaining its fundamental qualities. A specific recommendation is to inform people of the program successes. This means informing organizational units as well as individuals of how past clients have utilized the HRM data results

FACTOR	"AS IS"	"SHOULD BE"	DESIRED CHANGE*
Evaluative	2.50	4.08	+1.58
Potency	2.43	1.91	- .52
Activity	2.79	1.45	-1.24

C - "as is" image

D - "should be" image

CD - Treatment Vector

* Treatment vector dimensions

Figure 4: HRM Program Semantic Space Images

and significantly improved their maintenance, availability, operational readiness or effectiveness. The concept of long term benefits at the expense of short term inconvenience must be emphasized.

The second dimension of this treatment vector is Potency which indicates that a small de-emphasis (-.52) is needed for image improvement. Specifics in this case concern the variables Competitive and Threatening. These variables have two of the smallest mean differences describing the HRM program while one is positive and the other negative. Competitive being positive and Threatening being negative presented an interesting combination. The indication is to improve the image in a manner that results in a slightly less threatening program image. The fact that the HRM data results are not a report card to higher levels must be positively emphasized. This goes hand in hand with the credibility established with each unit in assuring that no comparisons are made, unit against unit, with other similar type units.

Activity, the last factor indicates significant negative change (-1.24) is needed for image improvement. Two of the smallest mean differences are components of this factor. They are Unresponsive and Weak and both have negative differences. The other component Wasteful, also negative, therefore played a major role in describing this factor. This definitely is supported by the verbal and written comments

made by the respondents concerning the waste of time that
the HRM effort is. The implication here for image improvement
is to strengthen the program by making it more responsive to
fleet needs and simultaneously eliminating the waste of time
perception. By filling the HRM billets with high performers
and demonstrating the value of the HRM services by actually
responding to operational fleet units' concerns, the image
will improve in this particular area. Additionally, a sharper
emphasis on education at the required HRM courses, such as
at PCO/PXO school and at the Naval Postgraduate School, will
provide a clearer understanding of the intentions and goals
of the Navy's HRM effort.

The significance of these graphic displays of image
should be readily apparent. The reduction or addition of
emphasis on each factor can result in an improved image in
terms of the image as perceived by naval officers. A major
emphasis in the presentation of the HRM image should be in
bending the "as is" image toward the "should be" image.

VI. CONCLUSIONS

In this study two hypothesis concerning naval officers
attitudes toward the HRM effort were tested. Simply stated
the hypothesis indicated that naval officers' perceptions of
the present HRM image was the same as naval officers' per-
ceptions of what the HRM image should be. Both the hypothesis
pertaining to the HRM specialist and the HRM program were
rejected. There is a definite difference between how the
HRM image is projected and what naval officers think it
should be.

This difference indicates the presence of dissonance
with resulting psychological tension which provides an
explanation of the resistance toward the HRM effort. There
is an area of concern in that the need for HRM in the Navy
today is real and the potential for improvement of the organi-
zation with increased utilization and acceptance is tremendous.
Improvement of the image by decreasing dissonance will pro-
vide for greater acceptance.

The primary purpose of this study has been met. A
methodology was developed to measure naval officers' attitudes
or images in order to provide direction for written or verbal
communications toward a more accurate description of the ideal
image. The treatment vector from each semantic space pre-
sentation provides intensity, direction and a description of

ways to improve the images. Use of the factors describing this image to design a strategy will provide for direction of the Navy's presentation of HRM along the lines of the naval officer's perception.

The survey vehicle used in this research was demonstrated to be a generally effective method for measuring naval officers' attitudes and developing meaning toward an object or event. This methodology and instrument seems viable for determining areas that need improvement but only as a reference or starting point for further investigation into this area of concern. Recommendations for further research include repeating the procedure with a larger sample, re-evaluation of the lists of adjectives particularly in the HRM program section, rearrangement of word order vice alphabetical listing and possibly the addition of subjective questions or personal interviews to provide supporting and explanatory comments.

This research was considered a success, however it is but a starting point for reducing dissonance and the resistance toward the HRM effort. By reducing dissonance and resistance, the survival of the HRM effort and the larger organization could be assured in these changing times.

It is recommended that this study be followed by a much larger study of enlisted as well as officers using the same methodology. Presumably regional or fleet differences might be of considerable interest to the program sponsor and to the participants.

APPENDIX A

SURVEY QUESTIONNAIRE

The following questionnaire has been prepared as a project
leading toward completion of a thesis on attitudes. It is
requested that all items be completed and the questionnaire
be returned to SMC #1488. It will take approximately ten
minutes to complete and your cooperation is requested and
greatly appreciated. The interest of this questionnaire
is in determining your feelings in relation to the Navy's
Human Resources Management Program and your forthright re-
sponses will be gratefully used. As you can see, the question-
naire is anonymous. The results will be collated to protect
identities and the results forwarded to the Bureau of Naval
Personnel with recommendations for improving the Navy's Human
Resources Management effort.

The following questions contain a list of adjectives that
might be used to describe people and a system. Each question
contains two parts. The first part being descriptive of the
present, or "as is," and the second part being descriptive of
the future, or "should be." On both of the five-point scales
associated with each adjective, please circle the number that
best indicates how descriptive the adjective is and what you
think it should be.

For example: The Navy's HRM Program is:

	As is						Should be		
1	(2)	3	4	5	Expensive	(1)	2	3	4	5

Please place a circle in each scale for each adjective but do not spend too much time on any one item.

Preceding the adjectives there are 3 questions to be answered to assist in data refinement.

    1.   YOUR RANK_____   3. STUDENT_____ STAFF _____

    2.   DESIGNATOR_____

Please circle on the five point scales the extent to which the following adjectives apply to the HRM specialist (as is) and the extent to which they should apply to the HRM specialist.

AS IS						SHOULD BE				
VERY LITTLE		SOME-WHAT		GREAT DEAL		VERY LITTLE		SOME-WHAT		GREAT DEAL
1	2	3	4	5	CAPABLE	1	2	3	4	5
1	2	3	4	5	COLD	1	2	3	4	5
1	2	3	4	5	COMPETENT	1	2	3	4	5
1	2	3	4	5	COMPETITIVE	1	2	3	4	5
1	2	3	4	5	COOPERATIVE	1	2	3	4	5
1	2	3	4	5	DYNAMIC	1	2	3	4	5
1	2	3	4	5	EFFICIENT	1	2	3	4	5
1	2	3	4	5	HELPFUL	1	2	3	4	5
1	2	3	4	5	HOSTILE	1	2	3	4	5
1	2	3	4	5	IMPRESSIVE	1	2	3	4	5
1	2	3	4	5	INDUSTRIOUS	1	2	3	4	5
1	2	3	4	5	INFLUENTIAL	1	2	3	4	5

AS IS						SHOULD BE				
VERY LITTLE		SOME-WHAT		GREAT DEAL		VERY LITTLE		SOME-WHAT		GREAT DEAL
1	2	3	4	5	INNOVATIVE	1	2	3	4	5
1	2	3	4	5	IRRESPONSIBLE	1	2	3	4	5
1	2	3	4	5	METHODICAL	1	2	3	4	5
1	2	3	4	5	OPEN	1	2	3	4	5
1	2	3	4	5	OPINIONATED	1	2	3	4	5
1	2	3	4	5	POWERFUL	1	2	3	4	5
1	2	3	4	5	PRACTICAL	1	2	3	4	5
1	2	3	4	5	PRODUCTIVE	1	2	3	4	5
1	2	3	4	5	PROFESSIONAL	1	2	3	4	5
1	2	3	4	5	RESPECTED	1	2	3	4	5
1	2	3	4	5	RESOURCEFUL	1	2	3	4	5
1	2	3	4	5	RESPONSIVE	1	2	3	4	5
1	2	3	4	5	SERIOUS	1	2	3	4	5
1	2	3	4	5	STABLE	1	2	3	4	5
1	2	3	4	5	VALUABLE	1	2	3	4	5
1	2	3	4	5	VERSATILE	1	2	3	4	5
1	2	3	4	5	WASTEFUL	1	2	3	4	5

Please circle on the five point scales the extent to which the following adjectives apply to the HRM program (as is) and the extent to which they <u>should</u> apply to the HRM program.

AS IS						SHOULD BE				
VERY LITTLE		SOME-WHAT		GREAT DEAL		VERY LITTLE		SOME-WHAT		GREAT DEAL
1	2	3	4	5	ACCEPTABLE	1	2	3	4	5
1	2	3	4	5	ADAPTABLE	1	2	3	4	5
1	2	3	4	5	APPROPRIATE	1	2	3	4	5
1	2	3	4	5	COMPETITIVE	1	2	3	4	5
1	2	3	4	5	DYNAMIC	1	2	3	4	5
1	2	3	4	5	EFFECTIVE	1	2	3	4	5
1	2	3	4	5	EFFICIENT	1	2	3	4	5
1	2	3	4	5	HELPFUL	1	2	3	4	5
1	2	3	4	5	IMPORTANT	1	2	3	4	5
1	2	3	4	5	IMPRESSIVE	1	2	3	4	5
1	2	3	4	5	INNOVATIVE	1	2	3	4	5
1	2	3	4	5	PRACTICAL	1	2	3	4	5
1	2	3	4	5	PROFESSIONAL	1	2	3	4	5
1	2	3	4	5	PRODUCTIVE	1	2	3	4	5
1	2	3	4	5	RESPONSIBLE	1	2	3	4	5
1	2	3	4	5	SERIOUS	1	2	3	4	5
1	2	3	4	5	SUCCESSFUL	1	2	3	4	5
1	2	3	4	5	THOROUGH	1	2	3	4	5
1	2	3	4	5	THREATENING	1	2	3	4	5

AS IS						SHOULD BE				
VERY LITTLE		SOME- WHAT		GREAT DEAL		VERY LITTLE		SOME- WHAT		GREAT DEAL
1	2	3	4	5	UNRESPONSIVE	1	2	3	4	5
1	2	3	4	5	USEFUL	1	2	3	4	5
1	2	3	4	5	VERSATILE	1	2	3	4	5
1	2	3	4	5	VALUABLE	1	2	3	4	5
1	2	3	4	5	WASTEFUL	1	2	3	4	5
1	2	3	4	5	WEAK	1	2	3	4	5

Thanks again. Please fold this and drop it in SMC #1488.

APPENDIX B

RESPONDENTS' DEMOGRAPHIC DATA

DESIGNATOR	LIEUTENANT JUNIOR GRADE (02)	LIEUTENANT (03)	LIEUTENANT COMMANDER (04)	COMMANDER (05)
1100		7	3	
1110	12	44	23	4
1120		10	1	
1130			3	
1310		25	15	1
1317			1	
1320		20	3	
1410		1	2	
1440		2		
1460		10	4	
1510			3	
1520	1	1	1	
1610		4	1	
1630	1	6		
1800		3		
2300	1	3		
2302		1		
3100	1	15	14	
4100			1	
5100			1	1
5105		1		

One respondent rank and designator not indicated.

Total n = 252

APPENDIX C

DESCRIPTIONS OF OFFICER DESIGNATOR CODES

Officer Designator Code	Officer Description
1100	Unrestricted Line (UL) Officer
1110, 1160	UL Officer--Surface Warfare
1120	UL Officer--Submarine Warfare
1130	UL Officer--Special Warfare
1310, 1315, 1317	UL Officer--Pilot
1320	UL Officer--Naval Flight Officer
1410, 1440, 1460	Engineering Duty Officer (Ship)
1510	Aeronautical Engineering Duty Officer (Aeronautical Engineering)
1520	Aeronautical Engineering Duty Officer (Aviation Maintenance)
1610	Special Duty Officer (Cryptology)
1630	Special Duty Officer (Intelligence)
1800, 1805	Special Duty Officer (Geophysics)
2300	Medical Service Corps Officer
3100, 3107	Supply Corps Officer
4100	Chaplain Corps Officer
5100	Civil Engineer Corps Officer

APPENDIX D

TABLE I

HRM SPECIALIST

VARIABLE MEAN SCORES

	VARIABLE	"AS IS"	"SHOULD BE"	t
1.	CAPABLE	2.8056	4.3175	−21.29
2.	COLD	2.0833	1.6786	4.60
3.	COMPETENT	2.8214	4.4087	−20.56
4.	COMPETITIVE	2.4563	2.7183	− 3.07*
5.	COOPERATIVE	3.2222	4.2698	−20.64
6.	DYNAMIC	2.6825	4.0079	−16.01
7.	EFFICIENT	2.6071	4.1389	−20.23
8.	HELPFUL	2.8690	4.3492	−18.02
9.	HOSTILE	2.0278	1.1786	10.98
10.	IMPRESSIVE	2.4325	3.8214	−17.97
11.	INDUSTRIOUS	2.8333	4.0119	−15.82
12	INFLUENTIAL	2.4325	3.5398	−11.70
13.	INNOVATIVE	2.5040	3.9127	−18.11
14.	IRRESPONSIBLE	1.8532	1.1270	10.14
15.	METHODICAL	2.7540	3.1865	− 5.04
16.	OPEN	3.2857	4.1944	−11.01
17.	OPINIONATED	3.3492	1.8770	15.34
18.	POWERFUL	2.3849	2.5317	− 1.65**
19.	PRACTICAL	2.3413	4.0952	−22.43
20.	PRODUCTIVE	2.4722	4.0794	−21.73

TABLE I (Continued)

	VARIABLE	"AS IS"	"SHOULD BE"	t
21.	PROFESSIONAL	2.8333	4.3730	-20.28
22.	RESPECTED	2.2659	4.1746	-25.41
23.	RESOURCEFUL	2.6905	4.1310	-20.84
24.	RESPONSIVE	2.9246	4.3373	-16.73
25.	SERIOUS	3.3810	3.7063	- 4.01
26.	STABLE	2.9960	4.1032	-14.88
27.	VALUABLE	2.4603	3.9484	-18.15
28.	VERSATILE	2.5238	3.9484	-19.05
29.	WASTEFUL	2.5913	1.2698	14.26

all p $<$.001 except   * p = .002

                                  ** p = .101

TABLE II

HRM PROGRAM

VARIABLE MEAN SCORES

	VARIABLE	"AS IS"	"SHOULD BE"	t
1.	ACCEPTABLE	2.3849	4.0794	−21.22
2.	ADAPTABLE	2.5754	4.2500	−22.80
3.	APPROPRIATE	2.6786	4.0119	−16.36
4.	COMPETITIVE	2.2222	2.4802	− 2.82*
5.	DYNAMIC	2.4286	3.9365	−20.07
6.	EFFECTIVE	2.2500	4.3810	−29.83
7.	EFFICIENT	2.2659	4.2302	−24.87
8.	HELPFUL	2.5357	4.3929	−24.39
9.	IMPORTANT	2.7262	3.7421	−11.04
10.	IMPRESSIVE	2.0714	3.5476	−19.23
11.	INNOVATIVE	2.4643	3.9722	−19.64
12.	PRACTICAL	2.2897	4.1508	−22.36
13.	PROFESSIONAL	2.6905	4.3095	−21.02
14.	PRODUCTIVE	2.3056	4.2421	−25.49
15.	RESPONSIBLE	2.7897	4.1429	−17.66
16.	SERIOUS	3.2857	3.6905	− 4.76
17.	SUCCESSFUL	2.1746	4.1627	−26.54
18.	THOROUGH	2.5516	3.9881	−18.02
19.	THREATENING	2.6270	1.3333	13.62
20.	UNRESPONSIVE	2.5238	1.4484	12.00

TABLE II (Continued)

VARIABLE	"AS IS"	"SHOULD BE"	t
21. USEFUL	2.4881	4.1825	-23.48
22. VERSATILE	2.5278	4.0000	-20.06
23. VALUABLE	2.4802	4.0952	-21.42
24. WASTEFUL	2.9286	1.2857	16.01
25. WEAK	2.9087	1.6230	12.52

all p < .001 except * p = .005.

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TABLE I

HRM SPECIALIST "AS IS"

VARIMAX ROTATED FACTOR MATRIX

	VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3
1.	CAPABLE	.742	.017	.310
2.	COLD	.077	.670	.058
3.	COMPETENT	.830	−.033	.291
4.	COMPETITIVE	.435	.172	.507
5.	COOPERATIVE	.819	.130	−.062
6.	DYNAMIC	.697	.085	.357
7.	EFFICIENT	.737	−.131	.309
8.	HELPFUL	.770	−.031	.200
9.	HOSTILE	−.092	.705	.307
10.	IMPRESSIVE	.752	−.087	.388
11.	INDUSTRIOUS	.789	.081	.184
12.	INFLUENTIAL	.412	.160	.643
13.	INNOVATIVE	.725	.066	.204
14.	IRRESPONSIBLE	−.063	.797	.025
15.	METHODICAL	.621	.331	−.007
16.	OPEN	.734	.156	.070
17.	OPINIONATED	.098	.690	.367
18.	POWERFUL	.202	.313	.713
19.	PRACTICAL	.704	−.102	.344
20.	PRODUCTIVE	.758	−.074	.305

TABLE I (Continued)

	VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3
21.	PROFESSIONAL	.819	-.137	.215
22.	RESPECTED	.635	-.088	.501
23.	RESOURCEFUL	.803	.066	.253
24.	RESPONSIVE	.826	-.025	.101
25.	SERIOUS	.634	.402	-.013
26.	STABLE	.734	.159	.125
27.	VALUABLE	.672	-.127	.409
28.	VERSATILE	.790	-.038	.189
29.	WASTEFUL	-.006	.757	-.172

TABLE II

HRM SPECIALIST "SHOULD BE"

VARIMAX ROTATED FACTOR MATRIX

	VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3
1.	CAPABLE	.798	.186	.061
2.	COLD	.128	-.102	.682
3.	COMPETENT	.842	.177	.075
4.	COMPETITIVE	.341	.516	.111
5.	COOPERATIVE	.736	.069	.182
6.	DYNAMIC	.702	.315	.063
7.	EFFICIENT	.769	.135	.036
8.	HELPFUL	.856	.174	.030
9.	HOSTILE	.041	.328	.703
10.	IMPRESSIVE	.720	.218	-.022
11.	INDUSTRIOUS	.834	.238	.068
12.	INFLUENTIAL	.499	.534	-.167
13.	INNOVATIVE	.674	.421	-.092
14.	IRRESPONSIBLE	.072	-.076	.659
15.	METHODICAL	.523	.116	.225
16.	OPEN	.789	.186	.059
17.	OPINIONATED	.109	.619	.154
18.	POWERFUL	.367	.695	-.007
19.	PRACTICAL	.731	.132	.205
20.	PRODUCTIVE	.787	.148	.039

TABLE II (Continued)

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3
21. PROFESSIONAL	.824	.168	.048
22. RESPECTED	.737	.394	-.123
23. RESOURCEFUL	.859	.202	.111
24. RESPONSIVE	.822	.140	.081
25. SERIOUS	.642	.276	.096
26. STABLE	.722	.206	.132
27. VALUABLE	.681	.316	-.028
28. VERSATILE	.762	.166	.002
29. WASTEFUL	-.001	.403	.524

TABLE III

HRM PROGRAM "AS IS"

VARIMAX ROTATED FACTOR MATRIX

	VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3
1.	ACCEPTABLE	.687	-.107	.258
2.	ADAPTABLE	.715	.021	.087
3.	APPROPRIATE	.744	.006	.005
4.	COMPETITIVE	.350	-.034	.650
5.	DYNAMIC	.688	-.011	.311
6.	EFFECTIVE	.761	-.142	.137
7.	EFFICIENT	.748	-.072	.078
8.	HELPFUL	.804	-.106	.047
9.	IMPORTANT	.605	.000	.208
10.	IMPRESSIVE	.710	-.137	.304
11.	INNOVATIVE	.715	.034	.122
12.	PRACTICAL	.790	-.103	.166
13.	PROFESSIONAL	.810	-.013	-.053
14.	PRODUCTIVE	.828	-.102	.028
15.	RESPONSIBLE	.773	.068	-.119
16.	SERIOUS	.576	.444	-.089
17.	SUCCESSFUL	.663	.056	.061
18.	THOROUGH	.658	.212	-.025
19.	THREATENING	-.018	.408	.573
20.	UNRESPONSIVE	-.171	.589	.542

TABLE III (Continued)

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3
21. USEFUL	.826	-.079	.065
22. VERSATILE	.779	.092	-.078
23. VALUABLE	.824	-.089	.100
24. WASTEFUL	-.095	.807	.120
25. WEAK	.019	.752	-.011

TABLE IV

HRM PROGRAM "SHOULD BE"

VARIMAX ROTATED FACTOR MATRIX

	VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
1.	ACCEPTABLE	.342	.763	-.058	.156
2.	ADAPTABLE	.525	.466	.059	.115
3.	APPROPRIATE	.224	.799	-.145	.115
4.	COMPETITIVE	.153	.138	.088	.779
5.	DYNAMIC	.553	.258	-.030	.439
6.	EFFECTIVE	.594	.542	-.125	.010
7.	EFFICIENT	.861	.209	.055	.054
8.	HELPFUL	.703	.351	-.067	.043
9.	IMPORTANT	.351	.576	.019	.440
10.	IMPRESSIVE	.543	.289	.021	.449
11.	INNOVATIVE	.716	.172	.005	.345
12.	PRACTICAL	.608	.474	-.013	.086
13.	PROFESSIONAL	.831	.187	-.003	.148
14.	PRODUCTIVE	.762	.390	-.055	-.009
15.	RESPONSIBLE	.784	.144	.024	.136
16.	SERIOUS	.640	.239	.181	.241
17.	SUCCESSFUL	.540	.520	.045	.011
18.	THOROUGH	.703	.281	.125	.158
19.	THREATENING	.148	-.083	.550	.244
20.	UNRESPONSIVE	.032	-.281	.674	.132

TABLE IV (Continued)

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
21. USEFUL	.586	.594	−.026	.150
22. VERSATILE	.734	.252	−.009	.254
23. VALUABLE	.557	.622	−.052	.198
24. WASTEFUL	−.064	.135	.806	.005
25. WEAK	−.030	.003	.775	−.241

APPENDIX F

CUMULATIVE PERCENTAGE OF VARIANCE

	HRM SPECIALIST		HRM PROGRAM	
FACTOR	"AS IS"	"SHOULD BE"	"AS IS"	"SHOULD BE"
1	47.4	48.8	45.0	46.2
2	58.5	55.3	54.2	55.2
3	63.0	59.9	58.6	59.9
4	66.3	63.0	62.4	64.1
5	68.7	66.1	66.0	67.7
6	71.2	69.0	69.2	71.0
7	73.5	71.8	72.1	73.9
8	75.6	74.4	74.8	76.8
9	77.5	76.6	77.3	79.3
10	79.3	78.8	79.6	81.6
11	81.0	80.9	81.7	83.7
12	82.6	82.8	83.7	85.8
13	84.1	84.5	85.6	87.6
14	85.6	86.1	87.3	89.2
15	87.0	87.6	89.0	90.7
16	88.4	89.0	90.4	92.1
17	89.6	90.2	91.9	93.3
18	90.8	91.5	93.2	94.4
19	91.9	92.6	94.4	95.5
20	93.0	93.7	95.6	96.4

CUMULATIVE PERCENTAGE OF VARIANCE

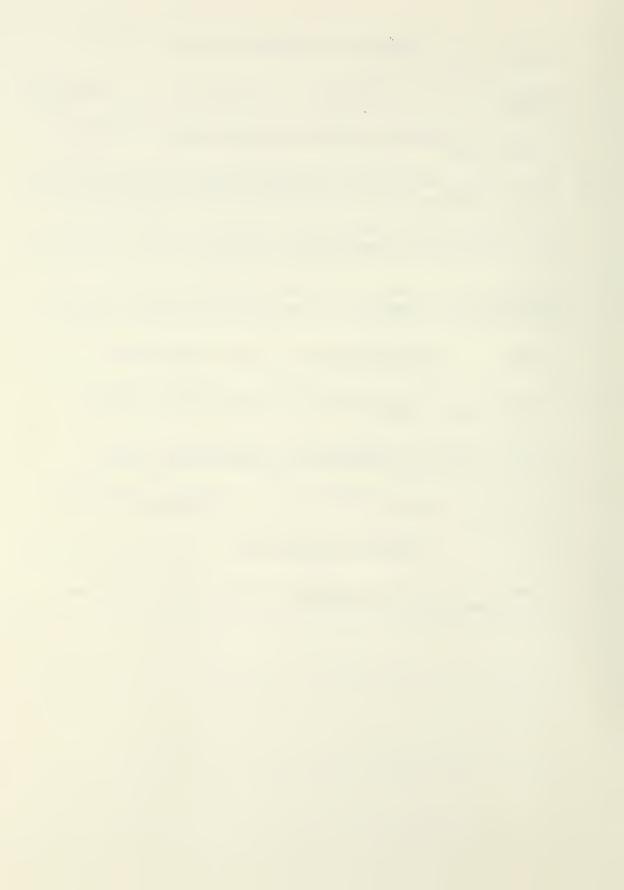| FACTOR	HRM SPECIALIST		HRM PROGRAM	
	"AS IS"	"SHOULD BE"	"AS IS"	"SHOULD BE"
21	94.1	94.7	96.7	97.3
22	95.0	95.6	97.6	98.1
23	95.9	96.4	98.5	98.9
24	96.8	97.2	99.3	99.5
25	97.6	97.9	100.0	100.0
26	98.3	98.5		
27	98.9	99.1		
28	99.5	99.6		
29	100.00	100.00		

BIBLIOGRAPHY

1. Abelson, R. P., and others, <u>Theories of Cognitive Consistency: A Sourcebook</u>, Rand McNally & Co., 1968.

2. Allport, F. H., <u>Theories of Perception and the Concept of Structure</u>, John Wiley & Sons, Inc., 1955.

3. Beisecker, T. D., and Parsons, D. W., <u>The Process of Social Influence</u>, Prentice-Hall, Inc., 1972.

4. Boulding, K. E., <u>The Image</u>, University of Michigan Press, 1966.

5. Broadbent, D. E., <u>Perception and Communication</u>, Pergamon Press, 1958.

6. Cohen, A. R., <u>Attitude Change and Social Influence</u>, Basic Books, Inc., 1964.

7. Deutsch, M. and Krauss, R. M., <u>Theories in Social Psychology</u>, Basic Books, Inc., 1965.

8. Edwards, A. L., <u>Techniques of Attitude Scale Construction</u>, Appleton-Century-Crofts, Inc., 1957.

9. Festinger, L., <u>A Theory of Cognitive Dissonance</u>, Stanford University Press, 1957.

10. Fishbein, M., <u>Readings in Attitude Theory and Measurement</u>, John Wiley & Sons, Inc., 1967.

11. Forbes, R. L., "Quo Vadis: The Navy and Organization Development," <u>Proceedings of the 5th Symposium on Psychology in the Air Force</u>, U. S. Air Force Academy, 8-10 April 1976.

12. Forbes, R. L., "A Cause Celebre: Organization Development in the United States Navy," A paper presented to a joint meeting of the Inter-University Seminar and the American Psychological Association, Washington, D.C., September 6, 1976.

13. Greenwald, A. C., Brock, T. C., and Ostrom, T. M., <u>Psychological Foundations of Attitudes</u>, Academic Press, 1968.

14. Hovland, C. I., Janis, I. L. and Kelly, H. H., <u>Communications and Persuasion</u>, Yale Univesity Press, 1953.

15. Insko, C. A., _Theories of Attitude Change_, Appleton-Century-Crofts, 1967.

16. Kiesler, C. A., Collins, B. E., and Miller, N., _Attitude Change_, John Wiley & Sons, Inc., 1969.

17. Lemon, N., _Attitudes and Their Measurement_, John Wiley & Sons, 1973.

18. Nie, N. H., and others, _SPSS-Statistical Package for the Social Science_, 2nd edition, McGraw-Hill, 1975.

19. Osgood, C. E. and Suci, G. J., "Factor Analysis of Meaning," _Journal of Experimental Psychology_, vol. 50, No. 5, 1955.

20. Osgood, C. E., Suci, G. J. and Tannenbaum, P. H., _The Measurement of Meaning_, University of Illinois Press, 1957.

21. Oskamp, S., _Attitudes and Opinions_, Prentice-Hall, Inc., 1977.

22. Sheehan, P. W., _The Function and Nature of Imagery_, Academic Press, 1972.

23. Siegel, Sidney, _Nonparametric Statistics for the Behavior Sciences_, McGraw-Hill Book Company, 1956.

24. Thurstone, L. L. and Chave, E. J., _The Measurement of Attitude_, University of Chicago Press, 1929.

25. Tyler, L. E., _Tests and Measurement_, Prentice-Hall, Inc., 1971.

26. Zumwalt, E. R., Jr., _On Watch_, Quandrangle - The New York Times Book Co., 1976.

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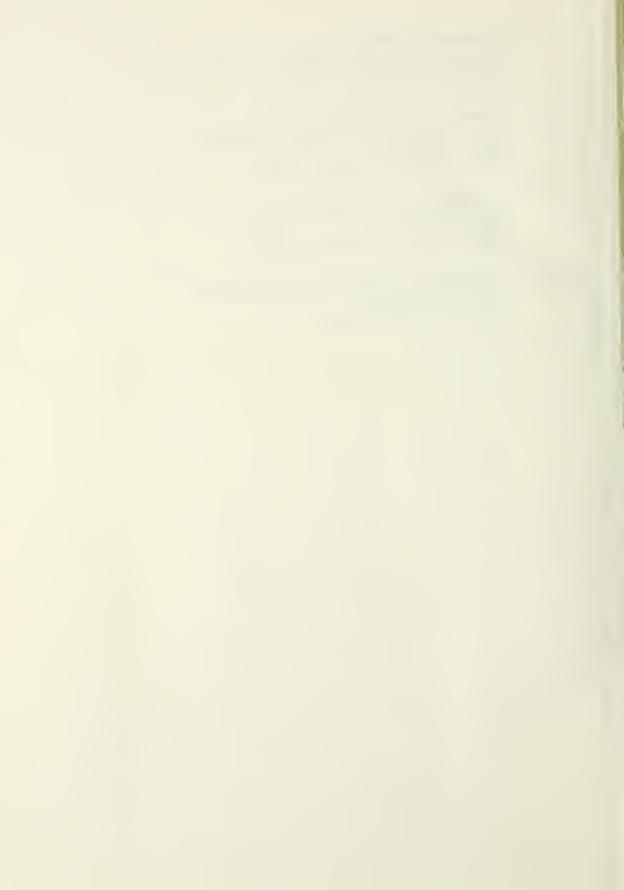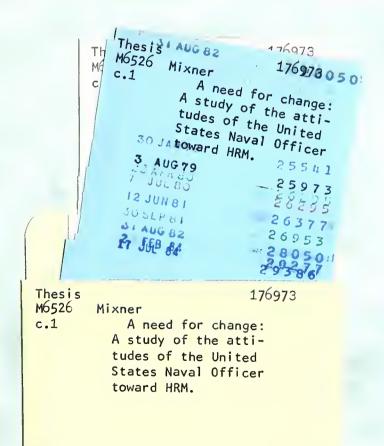
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