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⑥ JOB ENRICHMENT IN ANTISUBMARINE WARFARE.

by

⑩ Robert Emmett/DeLateur

⑪ June 1979   ⑫ 173 p.

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   Since the all volunteer force came into being, retention of military personnel beyond their first enlistment has become an increasingly important problem, especially for the U.S. Navy. Yearly retention conferences have been held for the purpose of developing plans to reduce turnover. The results of the latest conference brought the focus of attention to better leadership and management training of U.S. Navy personnel.

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Among the techniques that deals with the problems of absenteeism and turnover is job enrichment. The main thrust of job enrichment is to increase retention by increasing work satisfaction. Job enrichment as a management technique focuses on the basics of employee motivation and work behaviors. It aids the managers in identifying the components which comprise a job, and enables them to determine satisfying components that can be enhanced and dissatisfying components that can be diminished or eliminated.

One of the rating groups in the U.S. Navy that poses a retention problem is the Antisubmarine Warfare Operator (AW). The purpose of this thesis is to 1) provide a history of the AW rate and to describe the extent to which the AW retention problem has improved; 2) provide a comprehensive background of literature on employee work motivation and job enrichment techniques for interested U.S. Navy Personnel; and 3) develop an organizational change strategy proposal, directed at the AW rate and at a specific AW community (Moffett Field, Ca.), using job enrichment as a technique to increase AW worker satisfaction and thereby retention. Further, examination of the risks, benefits and recommendations associated with this particular organizational change project are presented along with specific considerations for future application to other rates and communities in the U.S. Navy.

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JOB ENRICHMENT IN ANTISUBMARINE WARFARE

by

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Submitted in partial fulfillment of the
requirement for the degree of

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ABSTRACT

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of military personnel beyond their first enlistment has be-
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I. BACKGROUND

Since the all volunteer force came into being, retention
of military personnel has become an increasingly important
problem. In 1977 PERS-12 (Bureau of Personnel Retention
Analysis) and PERS-5 (Bureau of Personnel Enlisted Develop-
ment and Distribution), and PERS-OR (Scientific Advisor to
the Chief of Naval Personnel) developed a possible approach
to the problem of enlisted attrition and retention. Their
idea was to interest the Chief of Naval Personnel in job
enrichment as a way to increase worker satisfaction, and
consequently retention. They arranged for a meeting between
the Chief of Naval Personnel and Professor Richard Hackman
of Yale University on June 24, 1977. The topic was to be
"Job enrichment techniques and their impact on job satis-
faction and performance."

In that briefing Dr. Hackman pointed out the basic
problems involved in worker satisfaction/dissatisfaction. He
also presented the Hackman-Oldham model for job enrichment.
This model depicts job enrichment through task attribute
identification, and how the task attributes influence the
critical psychological states which in turn produce specific
work outcomes. These outcomes involve motivation, satisfac-
tion and quality of work performance.

At the close of the meeting PERS-12 recommended that
Dr. Hackman visit U.S. Navy units for more information. This

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visit would be followed by another meeting before setting
up a job enrichment/organizational change project.

On May 8, 1978 Dr. Hackman visited Moffett Field, Ca.,
a fixed wing anti-submarine patrol plane base, and North
Island, San Diego, Ca., a base for shipboard, helicopter
and fixed wing squadrons. These bases, with the exception
of bases in Hawaii, house the Pacific fleet's anti-submarine
warfare operations (AW's).

The purpose of the week long visit was to take a pre-
liminary look at the AW rating as a target job which might
be improved through a work redesign project. The stated
goals as reported by Hackman and his associates were:
1) to gain an understanding of what the AW job consists of
and the environment within which it operates; 2) to identify
major issues that impact on the problems of retention and
satisfaction of AW's; and 3) to develop proposals and alter-
natives for improving the AW job.

On June 17, 1978 a meeting was held at Commander Patrol
Wings Pacific (COMPATWINGSPAC), RADM Prindle's headquarters
at Moffett Field. This meeting focused on the results of
Dr. Hackman's interview with AW's at Moffett Field, and at
San Diego. The purposes of the meeting were reported to be
to obtain a common understanding of Dr. Hackman's proposal
for a job redesign project; to determine RADM Prindle's
intentions and desires regarding the possible outcomes and
to identify methods and resources that would be available.

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Initially, measures to be adopted were indicated to be items that would influence job satisfaction, motivation, team work, state of training and retention. These measures would be applied to all rates with special, but not exclusive, attention given to the AW rate.

The criteria outlined for the proposed project are stated below:

a) Some guidance about what needs to be accomplished clearly stated by COMPATWINGSPAC.

b) Development of an internal Navy capability to be built into the project, i.e., PERS-6 or a Human Resource Management Center/Detachment.

c) The research component to include evaluation by the Navy Personnel Research and Development Center, San Diego, Ca.

d) Competent people to assist with the change process. (Navy Postgraduate School personnel, HRMC/D personnel or outside organizational development experts.)

e) Bureau of Personnel support and continuing contact.

As a result of the meetings, an agreement was reached that COMPATWINGSPAC would submit a written proposal covering the nature and scope of the project. This proposal would provide definition for further action.

In October of 1978, senior chief Mel Fadness, AW training, COMPATWINGSPAC staff, was contacted by Lt. Robert DeLateur, Naval Postgraduate School, (NPS) Monterey, Ca. The possibility of including Lt. DeLateur in the Hackman job enrichment project to compile data for a thesis project was discussed. A meeting was arranged for Lt. DeLateur and Chief Fadness to

determine whether Lt. DeLateur's involvement in the job enrichment task would be beneficial.

It was brought to the attention of Lt. DeLateur that a survey to measure AW satisfaction had been given to 159 of the 300 AW's at Moffett Field. No statistical analysis had been done on the survey results to that date. The survey was intended to measure motivation, satisfaction with the AW job, and the reenlistment intention.

Lt. DeLateur returned to NPS to analyze the survey data. These analyses ranged from compilation of simple descriptive statistics to the use of multiple regression and factor analysis.

In November 1978 Lt. DeLateur returned to Moffett Field to brief the Readiness Training Officer, Capt. Winter, and other members of the COMPATWINGSPAC staff on the results of the analysis. Further, he provided recommendations and ideas in regards to certain areas that could be used for an initial job enrichment project. One of the outcomes of the meeting was a decision that Lt. DeLateur return on December 11 and 15 to facilitate meetings with senior and junior AW chiefs respectively, to help set up an AW advancement program, one of the areas of AW dissatisfaction, that would be acceptable to all concerned. These meetings were accomplished successfully and a final meeting with Capt. Winter and Cdr. Munch, the Assistant Readiness Training Officer, was held on 20 December 1978 to discuss the results.

At present the job enrichment project has not yet
begun at either Moffett Field or North Island, San Diego,
California.

A. HISTORY OF AW

The antisubmarine warfare operator (AW) is a relatively
new occupational rate in the U.S. Navy. This rate was first
formalized in 1968 because the airborne submarine detection
devices were becoming increasingly sophisticated. Prior to
1968 other rates such as Aviation Electronics Technician (AT),
Anti-Submarine Warfare Technician (AX) and Aviation Electrician
(AE) were operating these sophisticated devices, along with
their regular jobs of inflight repair work and radio oper-
ation. These same people were required to do two separate
jobs, and to have an allegance to two different bosses.
When flying or doing required training, the AT, AX or AE
would be responsible to the Operations Officer but when he
was needed for maintenance on the aircraft the Maintenance
Officer would be his supervisor.

It became evident that demands for the time of these
individuals would pose somewhat of a problem. In discussing
this problem with individuals who worked both jobs, they in-
dicated that conflicts in fact did occur.

Creation of the AW Rate

In June of 1968 an all volunteer program was launched to
create the AW rate. At this time individuals in the other

rates who wished to change to the AW rate could do just
that. After one year, the program that allowed other rates
to change to the AW rate was cancelled. Thereafter recruit-
ing and retention programs were expected to keep the rate
filled. /Renner, 1979/

Initial Training and Assignment

A typical non-reserve individual in the AW rate completes
the AW "A" school at the Naval Air Technical Training Com-
mand, Memphis, Tennessee. He then progresses through the
Fleet Airborne Electronic Training at either Norfolk, Virginia
or San Diego, California (the electronic training requirement
was dropped in 1970). This individual is then assigned to
a training squadron for the type of aircraft that he will be
concerned with, either Patrol Plane (VP), Antisubmarine War-
fare Plane (VS) or helicopter (HS). Upon graduation from the
training squadron he is assigned to a fleet squadron.

The reservist, after completion of the AW "A" school is
assigned to the Reserve Antisubmarine Warfare (ASW) Tactical
School at either Willow Grove, Illinois (east) or Los Almitos,
California (west) and then to a reserve squadron.

There are two sub-specialities within the AW rate, the
acoustical operator and the nonacoustical operator. The
acoustical operator is concerned with sound related equip-
ment and techniques while the nonacoustical operator is con-
cerned with equipment and techniques which process signals
of a nonauditory nature, such as electronic impluses.
/Johnson, 1971/

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B. NATURE OF THE PROBLEM

Introduction - On 22 August, 1978, the Navy wide Retention Conference was held in Arlington, Virginia. The format of the meeting consisted of a day of plenary sessions, two days of workshops and a wrap up session.

The Chief of Naval Operations (CNO), Admiral Hayward, was the keynote speaker. In his remarks on attrition, the CNO pointed out that 33% of all first term enlistees leave the Navy by the time two years have passed, and that nearly 50% have left by the end of their four year commitment. Because of this, he indicated that people-related issues demand paramount attention in the Navy. The shortages in the petty officer ranks were said to number 7,000 and with an increase in billet requirements (new jobs) that shortage will be well over 30,000. Admiral Hayward said that with this type of shortage in existence today, it may result in new ships being tied up or being unable to meet their deployment (sea duty) commitments. Obviously, retention is a crucial issue.

Admiral Hayward cited his own experience as a Pacific fleet commander. He said that the Navy has to change in some fundamental ways. He further commented that the Navy has to learn how to make it possible for senior petty officers and junior petty officers to find satisfaction in what they and the Navy are doing. Concentration, he said, should be focused on the things that effect our people, and leadership is one of those crucial issues. One effort to help develop

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this leadership is the leadership, management, education and training courses (L.M.E.T.) that are being implemented at the present time. This program is being expanded rapidly.

It is the intention of this study to address the subject of retention by focusing on a particular rate, the Antisubmarine Warfare Operator (AW) rate. The objective is to develop a method to increase AW retention through an increase in job satisfaction. The subject of this study is the fixed wing patrol airplane base at Moffett Field, California.

The Problem - The retention rates for the AW are on a downward trend. This trend is readily apparent if one views the summary of the 1977 Bureau of Personnel Health and Welfare report as shown in Table I-1.

CNO Requirement	Total Inventory	Distribution Number	Percent Manned	Trend	CREO Grouping
		1977 Total			
2974	2855	2286	93	Decreasing	C
		1st Quarter 1978			
3010	2837	2254	90	Decreasing	C
		2nd Quarter 1978			
3103	2920	2252	90	Decreasing	C
		3rd Quarter 1978			
3103	2946	2152	85	Decreasing	B

CNO Requirement is the number required in rate estimated by the staff of Chief of Naval Operations.

Total Inventory is the total number of AW's in the service.

Distribution Number is the number of AW's that are actually on duty in performing status.

Percent Manned is the percentage the rate is manned.

CREO Grouping designates the following: A) rate manned less than 80%; B) rate manned between 80-90%; C) rate manned between 90-100% (creo is an acronym standing for Careerist Reenlistment Objectives.)

TABLE I-1. Summary AW Force Levels (Bupers Health and Welfare Report, 1977)

Table I-1 demonstrates that even though the percentage of AW billets that are manned is 90% and descending, this number does not reflect the number of petty officers needed for second term reenlistment. The summary table only indicates the total number of AW's available in that rate. In Fugure I-1, which portrays the AW retention and general career path, the difference in the number of second term petty officers needed and those who have actually reenlisted is illustrated. In the first enlistment, completed in four years, retention is approximately 29%.[1] At this point the AW has just completed his first tour at sea. /Renner, 1979/

In the Navy, duty may be divided between sea and shore tours in alternation. Sea duty consists of deploying aboard ship or with an aviation squadron from six to eight months, and also for shorter periods of time for operational fleet exercises close to home port when not deployed. The deployed operations are world wide and are at times extended beyond the normal six to eight months. The shore duty cycle does not have any deployment; the AW is usually assigned to a shore installation as an instructor or for other duties involving his rate. After shore duty, the AW faces another tour of sea duty.

Of those that completed their second enlistment, retention is 42% and at later reenlistment points it levels off

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[1] A first term retention of 29% indicates that 29% of those available for reenlistment at the end of a four year first enlistment do enlist.

at about 50%. This rate is calculated on the total number of people (AW's) available for reenlistment. At the end of his second enlistment the AW is a senior second class petty officer (E-5) and is very close to becoming a first class petty officer (E-6). If he decides to reenlist at the close of his second enlistment he may be viewed as a careerist.

Figure 1-2 emphasizes the shortage in junior petty officer ranks, E-4 through E-6, by depicting the reenlistments needed to keep the petty officer ranks manned enough to meet CNO manning levels. The lower line of Figure 1-2 indicates those numbers of individuals actually reenlisted.

RETENTION

100%
75%
50%
25%

4   8   12   16   20   24

Years of Service

Enlistment Number

1st   2nd   3rd   4th   5th   6th   7th

Type of Duty Sea/Shore

Sea   Shore   Sea   Shore   Sea   Shore   Sea/Shore   Sea/Shore

*Basic Training & "A" School

E-1 &
E-2-3   E-4   E-5   E-6   E-7   E-8   E-9

2   4.25   10.3 11.9   18.9   23
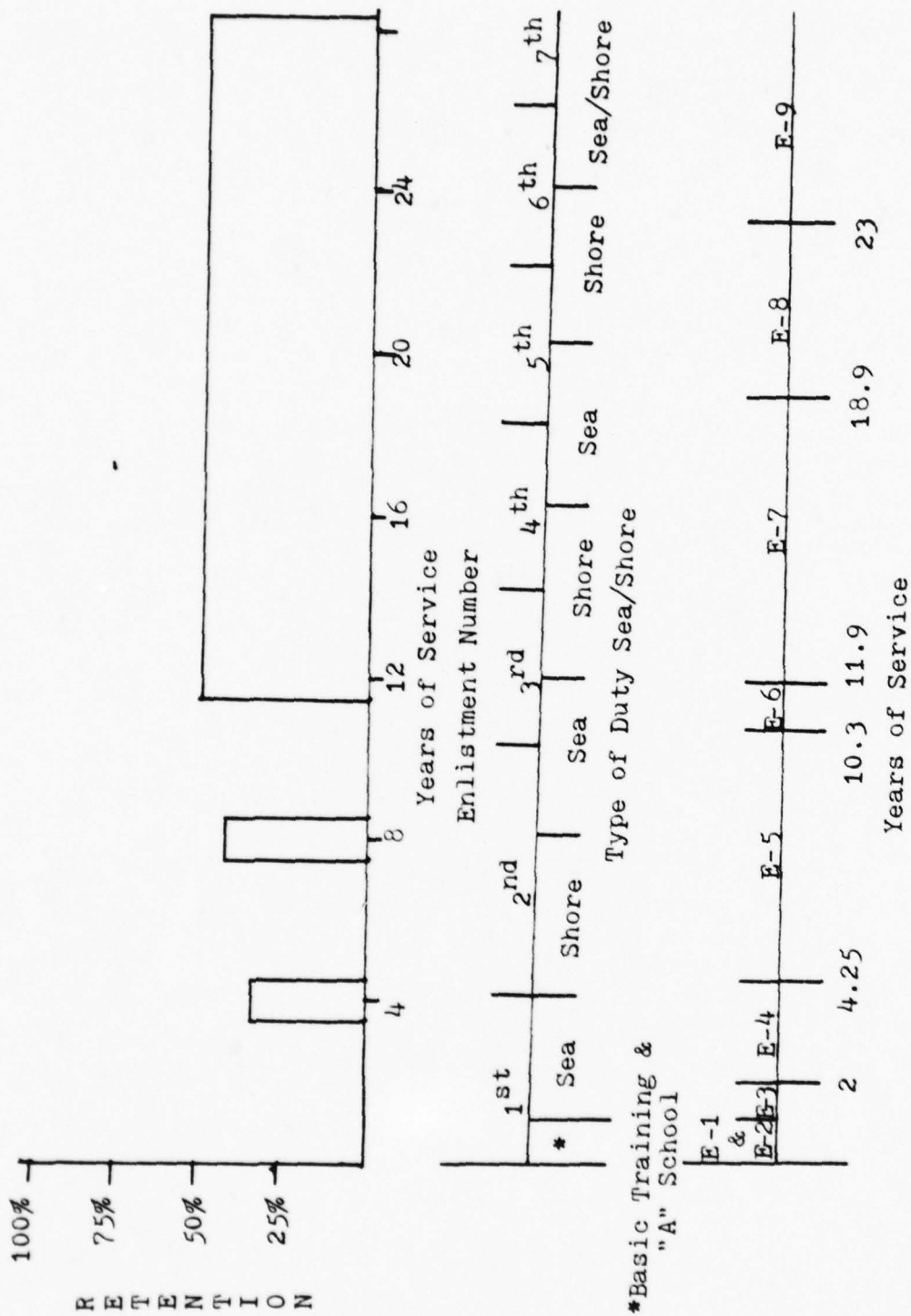
Years of Service

Figure 1-1. AW Retention/Career Path By rate, years of service and either sea or shore duty. Bureau of Personnel Health and Welfare Report.

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number
of

Individuals

250
200
150
100
50

needed

received - - - -

195

75 projected

Fiscal
1978

1   2   3   4
QTRS. PER FISCAL YEAR
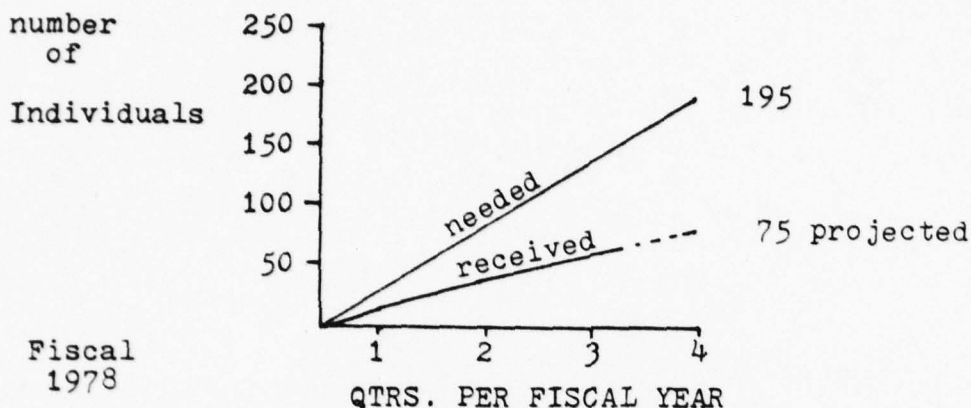
Figure 1-2:   Reenlistment Needed/Received
(Bupers Health and Welfare Report)

Further study of AW reenlistment figures from the patrol
plane squadrons stationed at Moffett Field indicates that of
those individuals that were eligible to reenlist on comple-
tion of first enlistment, only 34.6% elected to remain. At
the end of the second tour, of those eligible to reenlist,
40% reenlisted.

According to the retention figures obtained from
Lt. Jim P. Hopkins, the Assistant for Enlisted Retention,
OP-136DIA, the present Navy-wide retention rates for AW's
completing their first term is 40.8%, while second tour
retention rates are at 64.5%.[2] Navy-wide reenlistment

[2]The Navy-wide retention figures are computed by dividing
actual reenlistment plus extension by those eligible for re-
enlistment plus extension. This figure is admittedly in-
flated due to the inclusion of those individuals who have
extended their enlistment.

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figures for all rates are 40.3% for first enlistees and 47.3% for second term enlistees. Although AW retention may be better than retention for many other rates, it is still substantially below requirements needed to maintain mission readiness.

C. THE AW RETENTION SURVEY

As a means of trying to develop a more accurate and timely picture of the AW retention intention at Moffett Field, a survey was administered to 158 of approximately 300 AW's located there in August of 1978. The survey was divided into three parts: 1) motivation/utilization; 2) training; and 3) retention intention. The data collected from the survey was subjected to statistical analysis. The survey results are explained below.

The Sample Demographics

Of the 158 AW's who completed the survey, 10.1% were AWC or higher; 21.5% were AW1; 25.3% were AW2; 11.4% were AW3; and 29.7% were non-rated AW's. Further, 76% of the total surveyed were reported to be in their first or second enlistment (typically non-rated through AW1).

Motivation/Utilization

One of the questions in the survey that dealt with motiv-ation and utilization inquired why the individual became an AW. The responses indicated that 31.6% simply wanted to fly; 25.3% were looking for a job that was challenging and

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satisfying, and 12.7% felt that being an AW offered them a good career opportunity. Another question asked the rank that each respondant had set as a goal for himself. Approximately 80% had set petty officer first class or higher as their goal.

Training

In regards to the present squadron training programs (i.e., PQS, NATOPS, Acoustic and Nonacoustic Aircrew Training), roughly one half of the AW's surveyed felt that the training was either too time consuming and repetitive or that it was missing important points vital to performing their job.

Retention Intention

The responses to intention to reenlist revealed that 58.2% would not reenlist while 27.2% responded that they would reenlist and 14.6% remained undecided.

Stepwise Multiple Regression

One of the procedures, a stepwise multiple regression, indicated those areas that had the strongest relationship with the AW's intention to reenlist. There areas are: 1) pay; 2) a promise of schooling for reenlistment; 3) advancement opportunity; 4) job satisfaction; 5) reenlistment bonus; and 6) job dissatisfaction. According to the survey, these areas need to be addressed to increase AW intention to reenlist.

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The above results are complemented by a memo from the commanding officer of Patrol Squadron Six which states:

"Efforts to enhance the appeal of the AW career pattern by providing greater opportunities in an expanded warrent officer program are supported as is the initiative to gain an increase in enlisted aircrew flight pay. Success in either of these areas would certainly improve AW career incentives.

It is in the area of AW job satisfaction that I believe the greatest lasting gains in AW career motivation can be achieved. Job satisfaction in a rating whose professional effectiveness is so directly dependent upon a continuous, repetitive training program is difficult to attain and has not been successfully addressed."

The problem, then, is to increase retention in the AW rate by improving the AW's satisfaction with his job. This can be done by using certain organizational development techniques that are specifically aimed at providing the worker increased satisfaction levels through work redesign and job enrichment.

In Chapter II, worker motivation is discussed as it pertains to understanding perceptions that lead to performance on the job. In Chapter III job enrichment is studied through two viewpoints; Motivational Hygiene Theory and Task Attributes. Each viewpoint deals with increased worker satisfaction as a means for reducing employee turnover and absenteeism.

The final areas of discussion in Chapter III are goal setting plus job enrichment and physical location of working groups. With job enrichment and goal setting, worker

productivity is increased while change of physical location of employees to more natural working task groups provides increased satisfaction through a feeling of belongingness. All of these, then, will help to develop a proposal for a job enrichment project in the AW rate at Moffett Field, California.

II. MOTIVATION

Introduction

Intensified interest in human behavior during the past thirty years has wrought significant innovations in the theory of practice of management. The following review of motivational and organizational theories and techniques is presented to enhance the reader's background in the specific areas of employee motivation and worker satisfaction.

Chapter II - Motivation deals with why the employee works and what induces the employee to expend effort while on the job. It also attempts to explain the thought processes that the individual makes when accepting any assigned task. The moderating effects on effort that lead to the degree of individual performances is also discussed. Further, a model of individual performance in an organization is developed as a means to increase and clarify this effort-performance relationship.

In Chapter III, various theories and techniques of job enrichment and job design are presented. They are: 1) work simplification; 2) job enlargement; 3) job enrichment and Herzberg's two factor theory; 4) task attributes and job redesign; 5) job enrichment and goal setting; and 6) job enrichment and nesting. Discussion of specific job enrichment projects and their designs will illustrate the various techniques.

Individuals in today's Navy are interested in the content
of their jobs as well as their pay. They expect a job to be
not only satisfying, but challenging as well. The management
techniques presented here should enable the Navy manager to
increase his knowledge of worker motivation and the condi-
tions that are necessary to increase the level of job satis-
faction. It is hypothesized that these techniques, correctly
applied, would result in increased productivity and would
lower turnover due to increase in worker satisfaction.

A. ALDERFER'S NEED THEORY

C.P. Alderfer elaborated on Maslow's classic need theory
(Aldag and Brief, 1979) by introducing his theory of Existence,
Relatedness and Growth. Alderfer's theory /Alderfer, 1972/
is less rigid than Maslow's theory and recognizes the poten-
tial for frustration, that is, the inability to satisfy a
need. It also recognizes regression, which is the movement
to a less frustrating need. For example, if one attempts
to fulfill growth needs and this proves to be frustrating,
then relatedness or existence needs become more important
needs to fulfill. Alderfer's version of human needs are
described below:

Ia. Existence. The need for existence is a need for
material existence goods, such as food, water, pay and
fringe benefits.

Ib. Relatedness. Relatedness is the need for maintaining

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interpersonal relationships with friends, family and super-
visors, co-workers and subordinates.

Ic. Growth. This is the need for personal development.
It is a need to enhance one's creative or productive poten-
tial /Aldag & Brief, 1979, Alderfer, 1972/.

Using Alderfer's Need Theory, the following model illus-
trates the employee's motivation to work.

IV. Employee Receives
    Need Satisfaction of

I. Employee Needs   III. Work Outcomes
   a) Existence   a) Wages
   b) Relatedness   [MOTIVATION]   b) Energy Expen-
   c) Growth   diture
                                          c) Production of
                                             goods &
                                             services
                                          d) Social
                                             Stature

Effort   II. Employee Exhibits
                     Job Behaviors
                     To Produce   Performance

Figure 2-1.   Outcomes of Work
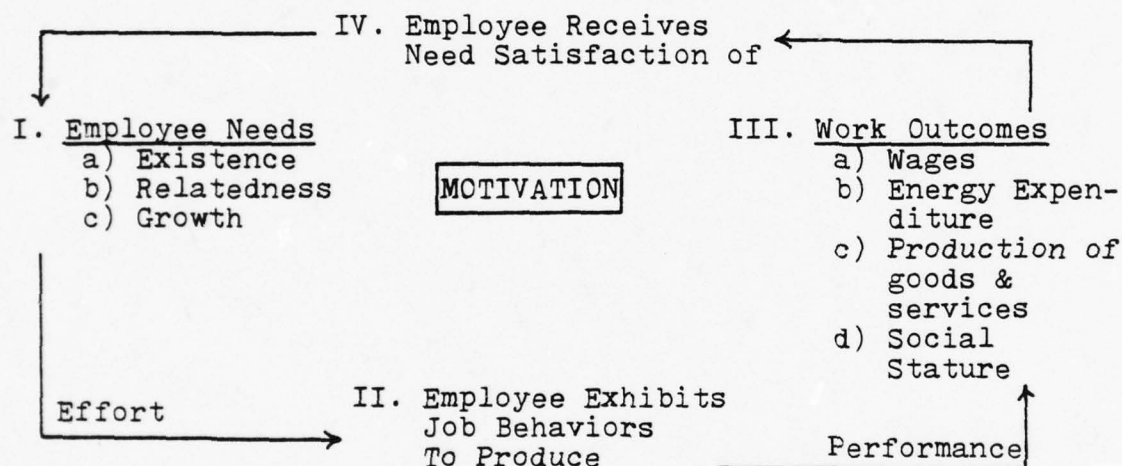   /Aldag & Brief 1979, p. 11/

II. The job behaviors produce work outcomes to satisfy
needs.

IIa. Wages satisfy existence needs for food, water,
clothing, etc., and also can act as a gauge of personel de-
velopment when used as a measuring device (growth). Wages
can also satisfy relatedness needs by increasing the
employees ability to frequent social gatherings. Wages may,

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in part, satisfy ego needs in relation to how much one has or spends as compared to others.

IIIb. Energy expenditure, both physical and mental, is an outcome of work that enhances personal worth and adds to the feeling of accomplishment during the work day.

IIIc. This energy expenditure produces goods or services that are perceived to be of some worth or value, and may be viewed by the individual as a positive contribution to society. Energy expenditure, through the production of goods and services, is a means of fulfilling the growth needs /Aldag and Brief, 1979/.

IIId. Social interactions refer to the physical location of the worker to the other employees and can be viewed as restrictive or permissive. For example if an employee works in close physical proximity to a group in a certain work area, he will have more time to get to know and socialize with his fellow workers (permissive). The opposite is true of the restrictive work setting. Social interactions both on and off the job satisfy the relatedness need but are moderated by the degree that the individual has contact with others on the job and desires this interaction /Aldag and Brief, 1979/.

As shown in Figure 2-1, need fulfillment is the basis for motivation. Need fulfillment induces this effort that produces performances that are exhibited as job behaviors.

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B. EXPECTANCY THEORY OF EMPLOYEE MOTIVATION

In order to understand the nature of inducement it is
assumed that before the employee exerts any effort on a
particular job, a rational decision-making process takes
place /Aldag and Brief, 1979/. This process has been de-
veloped into the model of "expectancy" or "instrumentality
theory of employee motivation" /Aldag and Brief 1979,
Alderfer 1972, Hackman and Oldham 1975/. The model has
three basic parts, Expectancy, Valence and Instrumentality
/Aldag and Brief 1979/.

Expectancy. Expectancy is a perceived effort - perform-
ance association. It is the perceived estimation of individ-
ual capability of achieving some performance goal (can I do
it with any degree of success?).

Valence. Valence is most associated in the feelings
about a certain work outcomes. It may be viewed as the level
of satisfaction or dissatisfaction an employee expects to
experience after attaining a particular work outcome, and can
be measured in strength of an employee's desire or aversion
for a given work outcome. Valence therefore can be either
positive or negative, depending on individual perception.
As an example, a promotion to sales manager may be viewed
as positive to the company but may be viewed as negative to
the salesman receiving the promotion because it may cause him
to have to move to a new location when he likes where he
lives now. (If I do it, is it good or bad for me?)

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Instrumentality. Instrumentality is the perceived like-
lihood that performance will in fact lead to a particular
outcome. (If I think I can do it, and I do do it, will they
give me what I want?)

As shown in the model in Figure 2-2 this rational de-
cision-making process will lead to the degree of effort
put forth on a particular job. Motivation that leads to
effort is therefore a function of expectancy miltiplied by
the sum of the valences for all potential work outcomes,
each weighted by its corresponding instrumentality. To
increase an employee's motivation, a manager would want to
increase the effort-performance linkages (expectancies),
the array of outcomes the employee can anticipate as being
satisfying (valences) and the performance-outcome linkages
(instrumentalities) /Aldag and Brief, 1979, p. 20/.

$$\text{EFFORT} = \left[\text{Expectancy } X \sum (\text{Valence X Instrumentality}) \right]$$

Figure 2-2.   The Expectancy Model of
Employee Motivation
/Aldag and Brief, 1979 p. 21/

C. EFFORT PERFORMANCE RELATIONSHIP

To produce total job behavior there must be a link be-
tween effort and work outcomes. This link is performance.
Performance depends on 1) aptitude skills and ability,
2) role perception, 3) technology, and 4) certain other
factors. Without these factors effort could be applied,

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but there would be no performance. Aptitude skills and
ability are cognitive, motor and physical proficiency at-
tributes which enable an employee to accomplish a task.
The degree of performance is contingent upon the limiting
attributes an individual possesses /Aldag and Brief, 1979/.

Role perceptions are how an employee views or defines
his job. This may be altogether different from the way the
company or organization defines his job. It also may be
the amount of effort and level of performance that he feels
is necessary to complete the job. Again, there may be great
differences between his perception and management's /Aldag
and Brief, 1979/.

Technology may be viewed as another limit to performances.
Operation, materials and knowledge to produce a good or
service have to be developed to be performance enhancing.
For example, without increased technology no degree of physi-
cal effort or flapping of man's arms could make him fly.

Certain other factors act as motivators to the effort
performance relationship. These factors are market demand
and the social structure of the work place /Aldag and Brief,
1979/. Market demand limits performance to that which is
needed to be produced by the demand during a given period.
The social structure of the work place may limit performance
because of the need to maintain group interpersonal relation-
ships. Figure 2-3 shows how effort leads to performance
through the moderating factors previously discussed.

EFFORT → PERFORMANCE

ABILITIES AND SKILLS

ROLE PERCEPTION

TECHNOLOGY

ACTOR FACTORS
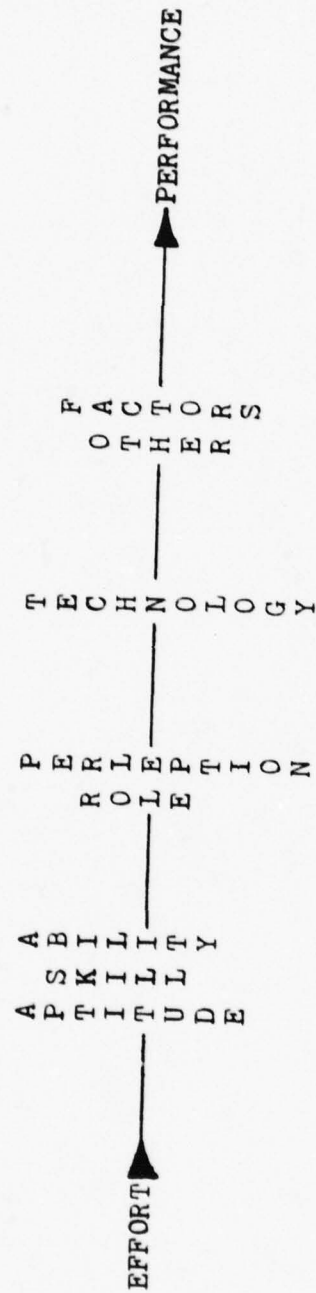
Figure 2-3. The Effort Performance Relationship /Aldag and Brief, 1979/

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D. INTRINSIC AND EXTRINSIC MOTIVATION

In regards to work outcome as related to instrumentality
(If I think I can do it, and I do it, will they give me
what I want or deserve?), it should be noted that people
are motivated extrinsically or intrinsically. Extrinsic
motivations are job behaviors that address the work outcomes
which are derived from sources other than the work itself.
These outcomes would, for example, be like an individual who
works at a job because it gives him/her a lot of time off
so that the individual may pursue other endeavors. Intrinsic-
ally motivated individuals gain their satisfaction from the
work itself. This satisfaction can be viewed as benefits
that are provided as part of the job, such as challenge,
novelty and excitement /Organ, 1972/.

E. INDIVIDUAL PERFORMANCE IN AN ORGANIZATION

A model of individual performance in an organization is
presented in Figure 2-4. This model and following explana-
tion is meant to clarify further the effort-performance re-
lationship and how the previously discussed factors impact
on work behaviors. The upper section of the diagram depicts
organizational contributions of the individual performer.
The behavioral process itself moves from left to right across
the diagram. At the beginning, are displayed perceived or-
ganizational outcomes which result from individual work
behavior. There are six stages that describe the various

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states in the behavioral process. These stages are explained below /Porter, Lawler and Hackman, 1975/.

Stage I - Perception and Appraisal of Organization Demands. Work behavior may be instigated by the organization, by its managers and supervisors communicating to the employee the expectations, or demands regarding work behavior of the employee (Circle B, Figure 2-6). The organization generates these demands from the goals of the organization and from the needs that the organization has to develop a high degree of coordination among its members, to differentiate among functions individual employees perform, and to encourage those behaviors which enable the organization to survive. (Circle A, Figure 2-6)

However, when a supervisor of the organization communicates an objective demand or expectation to an individual, it must be perceived and appraised before the individual can act upon it. These demands may be dictated unconsciously at this state to render them more personally acceptable or meaningful to the receivers. In otherwords, the demands are made to fit with the performer's needs and values (Box I, Circle E).

Stage II - Task Redefinition. After an individual has perceived, understood and appraised an organizational demand, he may decide to redefine it before accepting it as a personal endeavor (Box II). Again this process which is now more conscious and deliberate than in Stage I, is dependent

upon the personal needs, values and goals of the individual performer.

The tasks that a person accepts for himself do not all originate from the organization. A person may generate self tasks that may not be congruent with the demands of the organization.

The critical point in making decisions of whether to accept any tasks, organizational or personal, are the expectations the individual has about the nature of the consequences of accepting versus rejecting each of the demands which he is experiencing, and the valence the individual has for those outcomes (Circle F). In reviewing expectance theory, it is proposed that the individual during the decision process, will reject or redefine those demands which have the lowest expected payoff for himself.

Stage III - Developing a Behavioral Plan. Once the individual has determined what he is going to attempt to do in the course of his organizational activities, he must develop a plan for how he will behave to accomplish those tasks. In most jobs the worker has a certain amount of latitude in how he performs his job. He may have to make a decision as to the performance strategy and the amount of effort he may expend in task accomplishment. Again expectations and valences play a significant role in the decision process.

Stage IV - Work Behavior. Work behavior (Box IV) is moderated and limited by the skills, energy capacities and level of psychological arousal of the performer (Circle G). Even a well-executed plan of attack on an organizational task may be doomed to failure if the individual does not have the skill or energy for successful performance, or if his psychological arousal is not appropriate for effective work behavior.

Stage V - Obtaining Outcomes. Work behavior leads to some set of outcomes, both performance outcomes, such as work quality and quantity, and personal outcomes, such as satisfaction, as shown in Box V. Outcomes are jointly determined by the work behavior of the individual and by the task and organizational contingencies which are relevant to the performance situation (Circle D). These contingencies are characteristic of the situations which determine what kinds of outcomes result from various patterns of work behaviors.

The degree to which such behavior-outcomes contingencies are clear cut, reliable, and visible varies from organization to organization. Pay, for example, may be by the hour or by the performance displayed by the individual. The contingency therefore becomes the individual's perceived understanding of what he does and what he gets.

The major point is that for most organizational resources, there is some set of behavior-outcome contingencies which

determine when those resources (i.e., pay, advancement, etc.) become available to the individual.

Finally, it should be noted that the outcomes of work behavior act as a test for the individual's earlier expectancies about the organization and the environment (Circle F). The outcomes permit the individual to determine the degree to which those expectancies about behavior-outcome contingencies were realistic.

Stage VI - Feedback. As indicated in Figure 2-6, work outcomes provide feedback to organizational needs and goals; to personal needs, values and goals; to behavior outcome contingencies and valences and expectancies. Feedback to valences, expectancies and behavior contingencies were discussed earlier. Feedback to the organization of work outcomes, provides the organization with a gauge to measure its effectiveness in meeting its goals and needs. It may also be used as a measure of employee effectiveness on the job. In either case, the information provided by the feedback loop helps the organization determine what new or different strategies may be needed to insure its survival in an uncertain environment.

Feedback provided to the individual of his work outcome enables him to evaluate his own performance in such a way as to adjust his personal values and goals to be more in line with the organization if he desires to continue to work there. The feedback loop provides a necessary function

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in reassessment of one's position in regards to personal
and organizational well being.
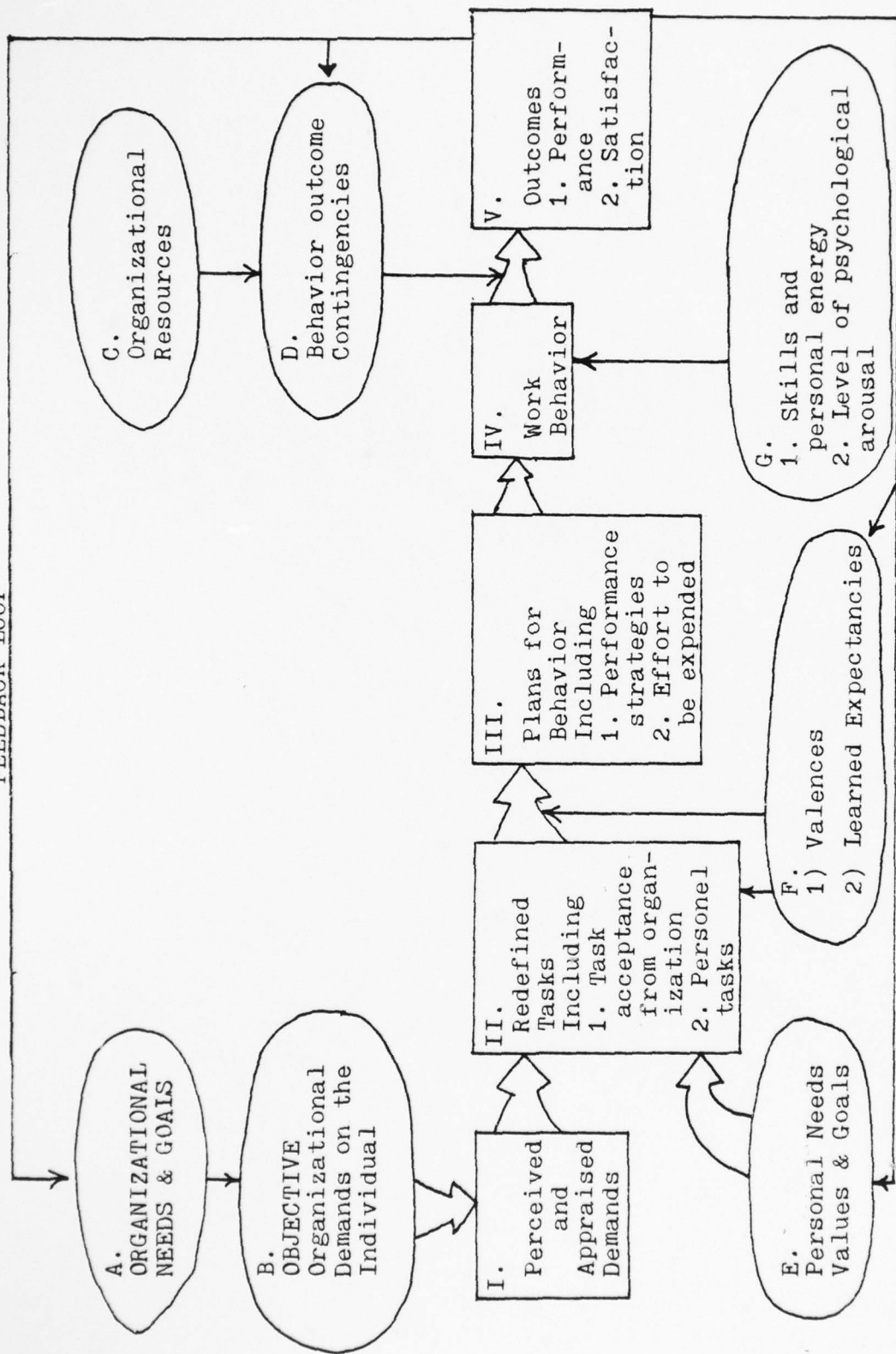
Figure 2-4. A Model of Individual Performances in Organizations /Porter, Lawler and Hackman, 1975, p. 121/

III. JOB ENRICHMENT AND JOB DESIGN

A. THE CONSEQUENCES OF WORK SIMPLIFICATION

Intrinsic motivation has been addressed by theoriests many of whom have tried to increase intrinsic motivation by increasing satisfaction through job redesign. For example, Frederick W. Taylor dealt with selecting, training and compensating employees, designing the employee's job and tools, and assigning management the responsibility for taking initiative that was previously vested with the employee /Aldag and Brief, 1979, Alderfer, 1972/. Time and motion studies were performed to discover and set down standards for exact employee behavior. In essence, all employees were required to perform the same job and use the same techniques and procedures. Work was simplified and standardized to conserve time, money and energy /Aldag and Brief, 1979/. There are consequences that are associated with work standardization and simplification /Golembiewski, 1965/. These consequences are summarized as follows:

1) The worker loses control, as when paced by a machine or assembly line.

2) The simplification of work reduces the possibility of the employee developing skills that can lead to his advancement.

3) The simplification of work also depersonalizes work in that skill content tends to be reduced and equalized, thus undermining the hierarchy of skills that, for example, can constitute a promotion ladder and can give social meaning to work.

4) The simplification of work reduces the degree to which the individual can meaningfully participate in organizational affairs through his work.

5) The simplification of work often prevents the individual from completing a task that is meaningful to him.

6) The routinization of work implies monotony.

7) The routinization of work often requires that the individual work alone, or at least, there are few positive incentives for individuals in separate organizationl units to integrate their contributions into a continuous smooth flow of work.

Along with the above consequences, there are negative employee behavior consequences that are associated with work that is made routine and mundane. The behavior consequences are presented in Figure 3-1.

Stimulus
Condition   Perception   Affective
                                           Response   Behavioral
                                                                 Response

Simplified, Low ⟶ Monotony ⟶ Boredom, Job ⟶ Absenteeism,
Skill level,   Dissatisfaction   Turnover,
Short cycle jobs   Restriction
                                                       of output
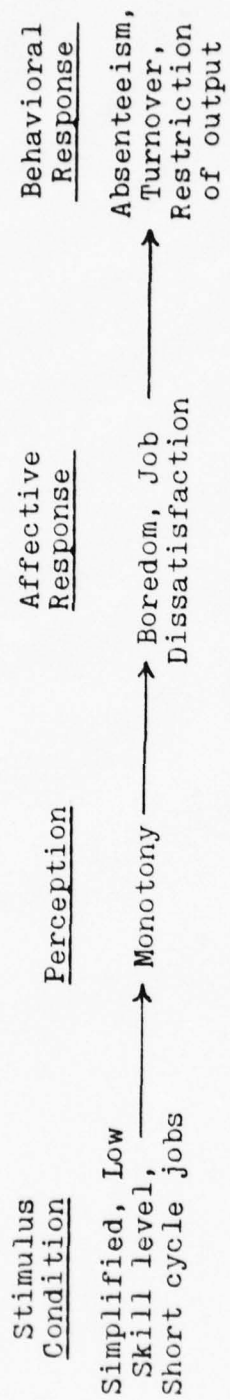
Figure 3-1. The Behavioral Consequences of Work Simplification
and Standardization /Aldag and Brief, 1979, p. 41/

As shown earlier, just because work is designed to be
efficient and productive for the employer, costs associated
with worker dissatisfaction, i.e., absenteeism, restrictive
output or high rates of turnover, may prove quite the oppo-
site. Increased study in the area of worker satisfaction and
productivity has led to techniques of job enlargement, job
enrichment, job redesign and job enrichment combined with
goal setting.

B. JOB ENLARGEMENT

Job enlargement is the horizontal expansion of job con-
tent to include a wide variety of tasks. This includes the
responsibility for checking the quality and adds discretion
in use of a particular method /Kilbridge, 1960/. The
specific elements of job enlargement are:

1) Increase the number of tasks.

2) Increase the variety of tasks.

3) Allow for self determination of work pace.

4) Increase responsibility for work quality.

5) Increase discretion over work methods.

6) Allow for completion of an entire work unit.

Although the studies in job enlargement seemed to be
weak, positive results have been reported /Aldag and Brief,
1979/.

C. JOB ENRICHMENT

In the 1960's, before the results of job enlargement had

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been completely studied, job enrichment was introduced. One
of the pioneers of job enrichment is Frederick Herzberg.
Dr. Herzberg studied the results of over two hundred engineers
and accountants responding from nine different companies.
These respondants were asked to recall specific events that
had occurred and caused them to feel exceptionally "good" about
their jobs. They were also asked to recall those events that
resulted in negative feelings. Each individual was asked to
give as many anecdotal reports as he/she could /Herzberg,
Manusener and Snyderman, 1959, Herzberg, 1966, Tannehill, 1974/.

Content analysis of the interviews generated two distinct
areas that were independent of one another. Those that led
to job satisfaction were called motivation elements, and those
that lead to dissatisfaction were called hygiene factors.
The motivation and hygiene factors are listed below:

Motivation Factors   Hygiene Factors

Achievement   Company Policy and Administration
Recognition   Supervision
Work Itself   Relationship with supervisor
Responsibility   Work conditions
Advancement   Salary
Growth   Relationship with peers
                             Personal life
                             Relationship with subordinates
                             Status
                             Security

Hygiene factors are explained in more detail below:

Company Policy and Administration. These areas include
policy procedure involved in running an organization and
contain reactions to how the organization is managed,

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possible problems in communication, inhibitions caused by limiting policies or problems created by the absence of appropriate policies and procedures. Problems in these areas surface as the way that things are done and procedures for getting things done.

Supervision. Included in this catagory are the technical competencies of the individual's supervisor and the general management style of that immediate boss. Situations included here are the supervisor's willingness to delegate responsibility and his fairness when dealing with subordinates.

Relationship with Supervisor. This catagory includes interpersonal relationships, both on and off the job.

Work Conditions. These responses had to do with the physical conditions on the job, including the availability of, and the efficiency of tools, working space and physical facilities that include light, heat and ventilation.

Salary. This area includes compensation and the way in which pay is administered to the individual.

Relationship with Peers. This catagory deals with the events where the individual interacts with his fellow workers. This may be strictly social or may take place at work.

Personal Life. Relocation of family due to job requirements dominates this catagory, but other personal problems caused by the job, such as irritability, are also key factors.

Relationship with Subordinates. This is another catagory
dealing with interpersonal relationships and is relevant to
situations where the individual felt dissatisfaction with his
interpersonal behavior with subordinates.

Status. Events related here were associated with status
symbols such as the dimensions of the desk, the type of
car driven, carpeting in the office and an expense account.

Security. The areas included in this catagory are the
perceived stability or instability of the organization, those
events related to seniority and those situations that may
threaten the actual security of the job.

Motivators are related to job satisfaction. Below they
are dealt with in more detail.

Achievement. In this catagory individuals completed a
job, solved a problem, or in some way had experienced accom-
plishment. In these events an individual can see for himself
that he had accomplished something worthwhile and definitive.

Recognition. In this area an individual received
specific recognition for his performance by another person.
Acknowledgement of actual performance is a key factor here.

Work Itself. The specific content of the job is the
essential ingredient in this catagory. Specific questions
asked here are whether or not the work is routine; does it
have some intrinsic interest to the individual or is it
boring; is it challenging enough to call for a creative
effort on the part of the job holder?

Responsibility. The degree of autonomy of the work is
addressed in this section. The individual's actual control
over how the job gets done is of strong significance and
leads to increased job satisfaction.

Advancement. This is the degree to which people have
upward mobility and a chance for promotion.

Growth. This catagory included events related to oppor-
tunities people felt they had in their jobs for learning more
and increasing their skills and abilities further. This
also includes learning for potential advancement in the
organization /Tannehill, 1974/.

D. MOTIVATION HYGIENE THEORY

The Herzberg theory of job satisfaction (motivation-
hygiene theory) states that certain factors surrounding the
job, called hygiene factors, if present in proper form, will
tend to eliminate dissatisfaction. But their presence will
not necessarily produce job satisfaction or motivation.

Other factors called motivators will, if present in
proper form, cause job satisfaction and/or motivation. The
maximum motivation at work will therefore occur when both
hygiene factors and motivators are present in proper form in
the work situation /Herzberg, Mausner and Snyderman, 1959,
Tannehill, 1974/.

In other words, the Herzberg view is that the fulfillment
of the motivator factors can lead to positive satisfaction on

the job, and the fulfillment of the hygiene factors can prevent dissatisfaction but cannot contribute to positive satisfaction. Job satisfaction and dissatisfaction should not be considered at opposite ends of the same continuum, but rather as different factors /McCormick and Tiffon, 1974/. Therefore the opposite of satisfaction is no satisfaction where as the opposite of dissatisfaction is no dissatisfaction /Whilsett and Winslow, 1962/.

The support of Herzberg's two factor theory comes from a number of studies /McCormick and Tiffon, 1974/. One study carried out at Texas Instruments (TI) followed the Herzberg procedures. TI interviewed 282 subjects (including 52 females) in various occupational groups. Although the results were generally consistent with what would be predicted from Herzberg's theory, there were some differences in the specific motivator and hygiene factors that were dominant in the responses of individuals in the different occupational groups /Meyers, 1964/.

On the other side of the coin, there have been numerous studies that have been interpreted as not supporting the two factor theory /House and Wigdor, 1962/. In one study over 500 people in six occupational groups describe both previously satisfying and previously dissatisfying job experiences by choosing among thirty six preselected, analyzed and sealed statements presented to them on cards. Such statements were worded both positively and negatively so that they could be

used to describe either a satisfying or a dissatisfying job event.

Responses to these statements were used in deriving "scores" on each of twelve factors that corresponded essentially with those of Herzberg. The scores reflected the importance of each factor as related to each situation being described /Dunnette, Campbell and Hakel, 1967/. The findings essentially were that certain hygiene factors were found to characterize both satisfying and dissatisfying situations /House and Wigdor, 1967/.

Therefore, some motivators (such as achievement, responsibility, recognition and advancement) frequently were used to characterize dissatisfying situations and certain hygiene factors were used to describe satisfying situations /House and Wigdor, 1967/. It is as though there is a cross-over effect that is dependent upon the situation that the individual is reporting or describing.

In reviewing the literature on job enrichment, the controversy about Herzberg's two factor theory should not inhibit understanding of the basic components of job satisfaction and dissatisfaction which compose the total of job enrichment. The purpose of job enrichment is increased humanization in work and consequently higher worker satisfaction, lower personnel costs and improved performance.

Job enrichment, then, adds increased humanization in work to enhance psychological growth. The worker is responsible

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for the total job cycle from planning and organizing to re-
porting and evaluating the final results. Where job en-
largement expands the job horizontally, job enrichment adds
a vertical dimension to the job. See Figure 3-2.
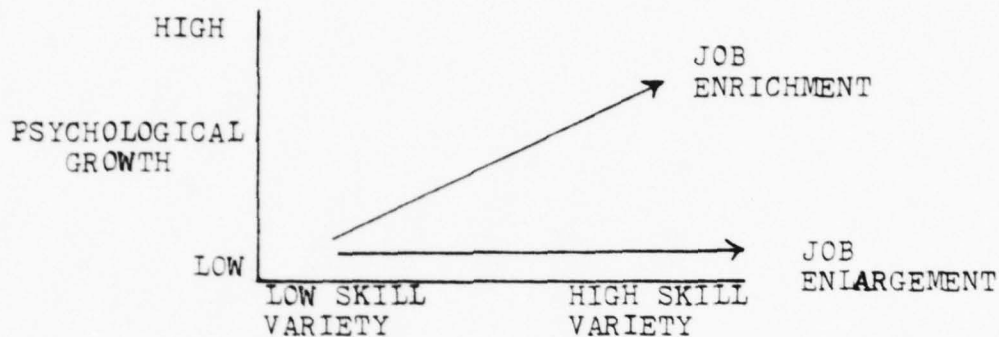
Figure 3-2.   Job Enrichment and Job
Enlargement Relationship

Work redesign to increase worker satisfaction through
work humanization is the main thrust of job enrichment
/Herzberg, 1974/. Work redesign enhances the individual's
personal growth needs in terms of what he can learn, what he
can accomplish, and how he can develop /Herzberg, 1977/.

E.   ORTHODOX JOB ENRICHMENT

The Herzberg approach to job enrichment in the military
was best typified by an orthodox job enrichment (OJE) project
that was conducted at Hill Air Force Base, Ogden, Utah
/Herzberg, Refalko, 1975/. Sixteen key men were selected on
their managerial ability and received 120 classroom hours on

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orthodox job enrichment. These managers continued to study while on their job for an additional eight months before they were considered proficient in job enrichment techniques. These key men operate as internal consultants and coordinators of OJE training in their respective divisions. Upon completion of initial training, the 16 key men selected 11 pilot projects. Each project followed a similar pattern of job enrichment.

The first step in the job enrichment process was the formulation of the implementing and coordinating committees. The implementing committee is a group of four to eight members, composed of supervisors of the area to be enriched, first and second level supervisors, and specialists to help develop the strategy for implementation of job enrichment principles. The coordinating committee is of a similar size and includes middle and upper level managers over the areas under consideration. The coordinating committee is charged with removing obstructions to implementation.

The key men direct the implementing committee in brainstorming techniques as a means to generate ideas for implanting motivators into the jobs under evaluation. This is the green light process. The green light list is then evaluated. This process is called red lighting. If certain jobs to be enriched contain too many hygiene problems then the hygiene are to be fixed before trying to enrich the jobs /Rafalko, 1975/. (See appendix for OJE Handbook.)

The results of the Hill Air Force Base OJE project were a savings of $1.75 million in two years. The cost of implementation was $500,000 of which 95% was a one time cost only. The $1.75 million in savings was the result of employee reduced sick leave, lower turnover, less overtime and rework, and reduction in man hours and material savings /Herzberg, 1968, Herzberg and Rafalko, 1975, Rafalko, 1975/.

The reported savings prompted a Government Accounting Office letter to Secretary White, Assistant Secretary of Defense (Manpower Reserve Affairs and Logistics) which in summary cautioned against accepting any claims of cost savings using job enrichment where there has not been a good evaluation program using control groups. The comments made in the letter were qualitative in nature. The quantitative data used in evaluating cost savings claims were collected and reported by the United States Air Force Auditing Agency at Wright Patterson Air Force Base. Their findings, after taking a sample of orthodox job enrichment projects across the Air Forace, were that 23% of all claimed savings could be substantiated, 44% were rejected and 33% could not be substantiated. The only benefits considered were those that were trangible and measureable. The quality of work life and worker satisfaction claims were not measured due to their intangible nature /Lloyd, 1979/. The satisfaction measurements collected by the experimentor are presented in the following paragraphs.

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The employees, of whom 98 were sampled, reported the following changes in satisfaction:

Factors	Increase	No change	Decrease
Recognition for achievement	20	75	3
Achievement	66	29	3
Work itself	67	29	2
Responsibility	78	18	2
Advancement	61	33	4
Growth	71	27	0
Change in satisfaction	74	19	5

Table 3-1. Results of Hill Air Force Base Orthodox
Job Enrichment Project on Satisfaction Levels
/Herzberg, 1968, p. 60/

Throughout the entire Hill Air Force Base OJE project, top management was involved and lent its support, and had ownership of all the phases of change that were to take place /Rafalko, 1975/. It seems that for any specific change to take place that change must be planned, organization wide and managed from the top for increased organizational effectiveness. A planned intervention such as orthodox job enrichment that uses behavioral science knowledge as its base must have this ingredient for success /Huse, 1975/.

F. TASK ATTRIBUTES

The identification of task attributes by Authur Turner

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and Paul Lawrence of Harvard University represented a radical departure from the job enrichment and job enlargement research. Their hypothesis was that a specific set of task attributes directly and indirectly influences the affective and behavioral responses of the employee to the job /Aldag and Brief, 1979, Turner and Lawrence, 1965/.

Using a previously designed classification system they were able to identify specific sets of task attributes. These sets were encompassed in two general groups, the elements of behavior and the elements of task. The elements of behavior include activities - what people do on the job; interrelations - contact between people for the purpose of physical or social exchange; and mental states - attitudes, feelings, awareness, cognition, etc. /Aldag and Brief, 1979/.

The two elements of task are identified as prescribed - the part of the task behavior that is predetermined by the defined role of that job in the organization; and discretionary - that behavior that is at the descretion of the individual /Aldag and Brief, 1979/.

The task attributes that emerged were called Requisite Task Attributes (RTA) because they were viewed as required by the intrinsic nature of the job. Those attributes are: 1) variety - the number of different activities that can be developed by various job designs; 2) autonomy - the amount of discretion the worker is expected to have in carrying out assigned activities; 3) required interaction - the

amount of necessary interdependence in which direct face-to-face communication is needed to perform the task properly;
4) optional interaction - the amount of voluntary communication feasible given the technology (machinery, layout or noise) employed; 5) knowledge and skill required - the degree of mental preparation or learning that can be presented as essential in order to perform the job adequately; and
6) responsibility - the unprogrammable but necessary level of felt accountability required for task performance.

Six Associated Task Attributes (ATA) were also identified. The ATA are task identity, pay, working conditions, level of machinization and capital investment.

To test the theory, Turner and Lawrence measured 47 jobs over a wide range of technologies, company sizes, community sizes and regional setting. In addition, 470 job occupants completed a job attitude survey which included measures of job satisfaction and perceived task attributes. Their findings indicated that perceived task attribute scores from the job incumbants were positively related to the more objectively measured requisite task attribute scores and to levels of job satisfaction. The requisite task attribute scores were also positively related to attendance /Aldag and Brief, 1979/.

G. JOB REDESIGN

Additional work in the area of task attributes was done by J. Richard Hackman and Edward Lawler III. They investigated the task attributes of: 1) variety; 2) autonomy;

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3) task identity; 4) feedback; 5) dealing with others; and
6) friendship opportunities. All of these attributes flow
directly from the work of Turner and Lawrence /Aldag and Brief,
1979, Hackman and Lawler, 1971/. Their study consisted of
administering a questionnaire to 208 individuals employed by
an eastern telephone company. The employees occupied thirteen
different jobs ranging from directory assistance operators to
central office repairmen. The general findings indicated
that the greater the degree of variety, autonomy, task identi-
ty and feedback that employees perceived in their jobs, the
higher was employee motivation, satisfaction, performance and
attendance. It was found that the factors of working with
other people and opportunities for friendships were unrelated
to employee motivation and performance /Aldag and Brief, 1979,
p. 49/.

Approximately four years later J. Richard Hackman and
Greg Oldham developed a strategy for job redesign. This was
based on three years of collaborative work and designed as a
set of tools for diagnosing existing jobs and setting down
guidelines for translating the diagnostic results into speci-
fic action steps for change /Hackman and Oldham, 1975/. The
basic desire for action was to get people involved in their
work.

In Figure 3-3 the Hackman-Oldham model is presented with
implementing concepts. The implementing concepts will be
discussed later. The core job dimensions that led to the

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critical psychological states are explained in further detail below:

Skill variety. The degree to which a job requires the worker to perform activities that challenge his skills and abilities. The job appeals to the "whole" person when more skills are involved.

Task identity. The degree to which the job requires completion of a whole and identifiable piece of work; doing a job from beginning to end with a visible outcome.

Task significance. The degree to which the job has a substantial and perceivable impact on the lives of other people, whether in the immediate organization or the world at large.

Autonomy. The degree to which the job gives the worker freedom, independence and discretion in scheduling work and determining how he will carry it out. The individual responsible for success and failure of work.

Feedback. This is the degree to which a worker, in carrying out the job, gets information about the effectiveness of his efforts /Hackman and Oldham, 1975/.

Growth need strength is a moderator in the model. It is hypothesized that people high in growth need strength tend to respond more readily to job redesign than those with little or no growth need strength.
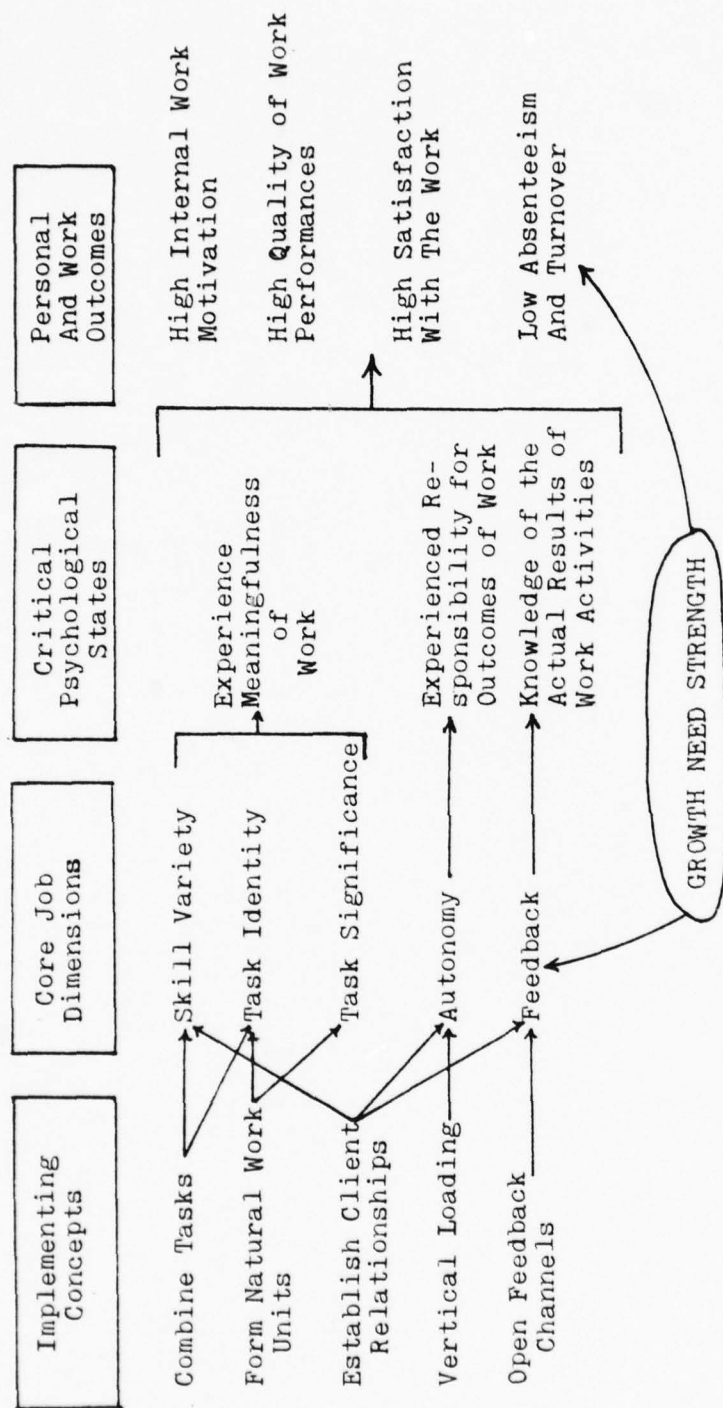
Figure 3-3. Hackman, Oldham Job Redesign Model
/Hackman and Oldham, 1975, p. 58/

Implementing Concepts

Core Job Dimensions

Critical Psychological States

Personal And Work Outcomes

Combine Tasks

Form Natural Work Units

Establish Client Relationships

Vertical Loading

Open Feedback Channels

Skill Variety

Task Identity

Task Significance

Autonomy

Feedback

Experience Meaningfulness of Work

Experienced Re-sponsibility for Outcomes of Work

Knowledge of the Actual Results of Work Activities

GROWTH NEED STRENGTH

High Internal Work Motivation

High Quality of Work Performances

High Satisfaction With The Work

Low Absenteeism And Turnover

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H.   JOB DIAGNOSTIC SURVEY

To implement job enrichment in the Hackman/Oldham style, a job diagnostic survey (JDS) must first be given to the employees on the job to be enriched. The JDS, as developed by Hackman and his associates, measures: 1) the overall level of motivation and satisfaction of employees on the focal job; 2) the overall motivating potential of the job and if the job is realistically open to improvement; 3) the readiness of employees for change. It also identifies what areas of the core job dimensions that are specifically in need of improvement /Hackman and Oldham, 1975/. A copy of a typical JDS is enclosed in the Appendix. The job diagnostic survey produces a motivating potential score (MPS) based on the formula in Figure 3-4. The MPS is a single summary index of the degree to which the objective characteristics of the job will prompt high internal work motivators /Hackman and Oldham, 1975/.

$$MPS = \left[\frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3}\right] \times \text{Autonomy} \times \text{Feedback}$$

Figure 3-4.   Motivation Potential Score Formula
/Hackman and Oldham, 1975, p, 160/

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In using the MPS as an index, studies have shown that people who have jobs that are high in the core job dimensions also have scores that are high on the MPS index. The reverse is true for those jobs that are low on core job dimensions.

The five implementary concepts are: 1) forming natural work units; 2) combining tasks; 3) establishing client relationships; 4) vertical loading; 5) open feedback channels. These implementary concepts are described in greater detail below:

Forming natural work units. To form natural units of work, elements of the task are distributed in a logical way. The employee does not have a piece of the product, as in an assembly line. Instead he has a whole identifiable body of work that gives a sense of ownership upon completion.

Combining tasks. Existing and fractionalized tasks should be put together to form new and larger modules of work to increase skill variety and task identity.

Establish client relationships. There are three steps in establishing client relationships. They are 1) identify the client; 2) insuring the most direct contact possible between client and worker; 3) the client must be willing and able to judge the quality of the product services he receives.

Vertical loading. Vertical loading gives the job holder greater discretion in completing the assigned work unit. To increase vertical loading the employee is given greater discretion in planning and controlling work, evaluating and reporting the results.

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Open feedback channels. Feedback channels must be open
to help the worker learn about his performance either directly
from the work by completion of a job, or by the client-re-
lated feedback. The job provides more immediate and private
feedback than client/supervisor-related feedback /Hackman
and Oldham, 1975/.

In Figure 3-3 the implementary concepts and the effect
on the core job dimensions are depicted.

Will the Hackman-Oldham job enrichment model work in
every circumstance? It depends in part on the psychological
needs of people and whether or not the job may be modified.
Figure 3-5 depicts the moderating effect of employee growth
need strength upon the influence of the core job dimensions.

As was stated previously, the higher the growth need, as
measured by the job diagnostic survey, the greater chance
of significantly positive results when undertaking a job
enrichment project using the Hackman-Oldham model.

RESULTS

High Internal Motivation
High Growth Satisfaction
High Quality of Performance
Low Absenteeism and Turnover

Employees with High
Growth Need Strength

PRESENCE
OF THE
CORE JOB
DIMENSIONS

Employees with low
Growth Need Strength
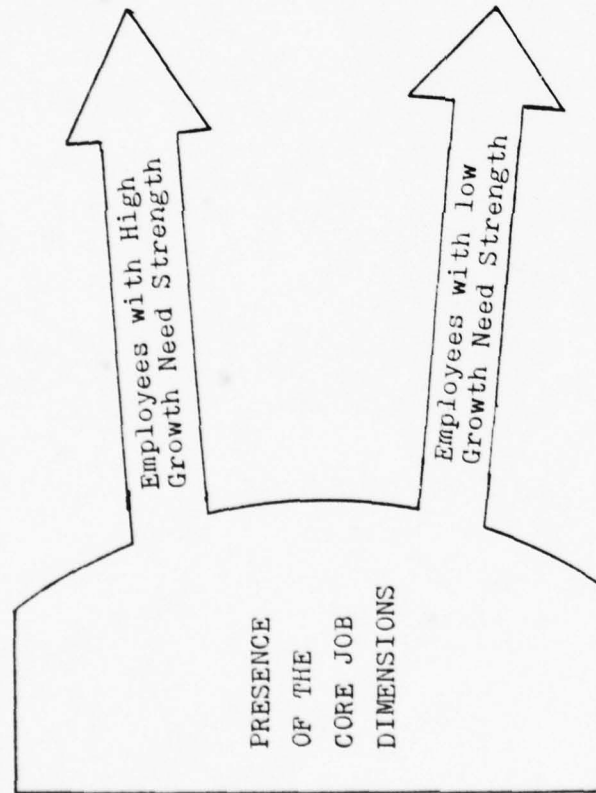
Risk of Over Stretching
the Individual

Possible Balking at the
Job

Figure 3-5.   The Moderating Effect of Employee Growth Need Strength
/Hackman and Oldham, 1975, p. 60/

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I.   JOB ENRICHMENT AND GOAL SETTING

It has been hypothesized in the previous literature
∕Hackman, 1975, Herzberg, 1968⁄ that increased worker satis-
faction led to increased quality of performance, internal
motivation and low absenteeism and turnover. These in turn
increased profits or savings but evidence of increased pro-
ductivity seems to be lacking.

The addition of goal setting theory to job enrichment
would, it is hypothesized, increase satisfaction and pro-
ductivity ∕Umstot, Mitchell and Bell, in press, Umstot and
Rosenbach, 1976⁄. Denis D. Umstot and William E. Rosenbach
tested the hypothesis that job enrichment is related to goal
setting. Umstot and Rosenbach used a combination of the
Hackman and Herzberg job enrichment techniques and E.A. Locke's
goal setting theory. Hackman's model has previously been pre-
sented. Locke's goal setting theory states: 1) specific
goals result in greater output than a general goal like
"do your best"; 2) a difficult goal results in greater output
than an easy goal; and 3) goals serve to moderate performance
only if they are accepted ∕Locke 1968, Umstot, Mitchell and
Bell, in press⁄.

Further, where job design refers to the deliberate purpose-
ful planning of the job, including all of its structural and
social aspects, goal setting is the process of developing and
formalizing targets or objectives that an employee is respon-
sible for accomplishing ∕Umstot, Mitchell, and Bell, in press⁄.

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The effect of goals on a job are:

1) They provide direction for all work activities.

2) They create a sense of challenge that enhances the significance and meaning of a job.

3) They facilitate increased feedback from the job.

4) They enable the manager to give the employee more freedom to get the job done.

5) They allow a closer match between the individual and the organizational goals. Goals further enhance role clarity for the job holder /Umstot, 1977/.

Umstot, Bell and Mitchell developed a two-phase research project to investigate the effect of job enrichment and goal setting on employee productivity and satisfaction in a well-controlled, simulated job environment. The first phase consisted of two conditions of goal setting (assigned goals vs. no goals) and two conditions of job enrichment (enriched vs. unenriched). The results indicated that job enrichment had a substantial impact on job satisfaction but little effect on productivity. In contrast goal setting had a major impact on productivity and a less substantial impact on satisfaction. In the second phase of the experiment, those that were in the unenriched jobs worked under enriched conditions and those that previously had no goals were assigned goals. The results were the same as with the first phase of the experiement /Umstot and Rsenbach, 1976/.

Due to the results of the Umstot, Bell and Mitchell experiment there seems to be conclusive evidence that goal setting and job enrichment can be combined without creating any adverse effects. A further explanation of how goal setting interacts with job characteristics is given in Table 3-2. It should be noted that in almost all cases the job attributes are enhanced.

Job Characteristics	Predicted Effect of Task Goals on the Job Characteristics
Skill variety	No change
Task identity	Enhance
Task significance	Enhance
Autonomy	Enhance if participation used
Feedback on the job	Enhance
Role clarity	Enhance
Challenge	Enhance
Individual and organizational goal congruence	Enhance

Table 3-2. The Interaction of Goal Setting with Job Characteristics /Umstot, Mitchell and Bell, in press/

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J. JOB ENRICHMENT INTERVENTION DESIGN

The intervention design proposed by Umstot and Rosenbach
for their experiment seems to be a combination of the Hackman
and Herzberg job enrichment techniques. The initial phase
would be to obtain top management support and then adminis-
ter the job diagnostic survey. Education in job enrichment
techniques /Hackman and Herzberg7 of those involved in the
project is the second phase. This helps those involved to
have ownership of the project and increases the likelihood
of success. This group is then divided into two smaller
groups to brainstorm the area to be enriched or focal job,
for motivators and non-motivators (e.g., vehicle maintenance
activity). Key supervisors then evaluate the findings and
feed back the results to the groups for implementation of
the job enrichment process. A followup is made at periodic
intervals to insure proper implementation and feedback /Umstot
and Rosenbach, 19777. (See Figure 3-6.)

The Umstot Rosenbach Model for goal setting and job en-
richment was developed from previous experiments and job
enrichment studies by Hackman and Oldham and goal setting
studies by Locke /Hackman and Oldham, 1975, Locke, 1968,
Umstot, Mitchell and Bell, in press, Umstot and Rosenbach,
19767. The model and its moderators are presented in
Figure 3-7.

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```
        ┌─────────────────────┐
        │    Obtain Top       │
        │ Management Support  │
        └─────────────────────┘
                  │
                  ▼
        ┌─────────────────────┐
        │    Administer       │
        │     Pretest         │
        └─────────────────────┘
                  │
                  ▼
        ┌─────────────────────┐        ┌──────────────────────┐
        │   Educate Those     │        │ Herzberg             │
        │  Involved in Job -  │◄───────│ Hackman & Oldham     │
        │   Enrichment and    │        │ Implementing         │
        │ Management Techniques│       │ Concepts of Job      │
        └─────────────────────┘        │ Enrichment           │
                                       └──────────────────────┘
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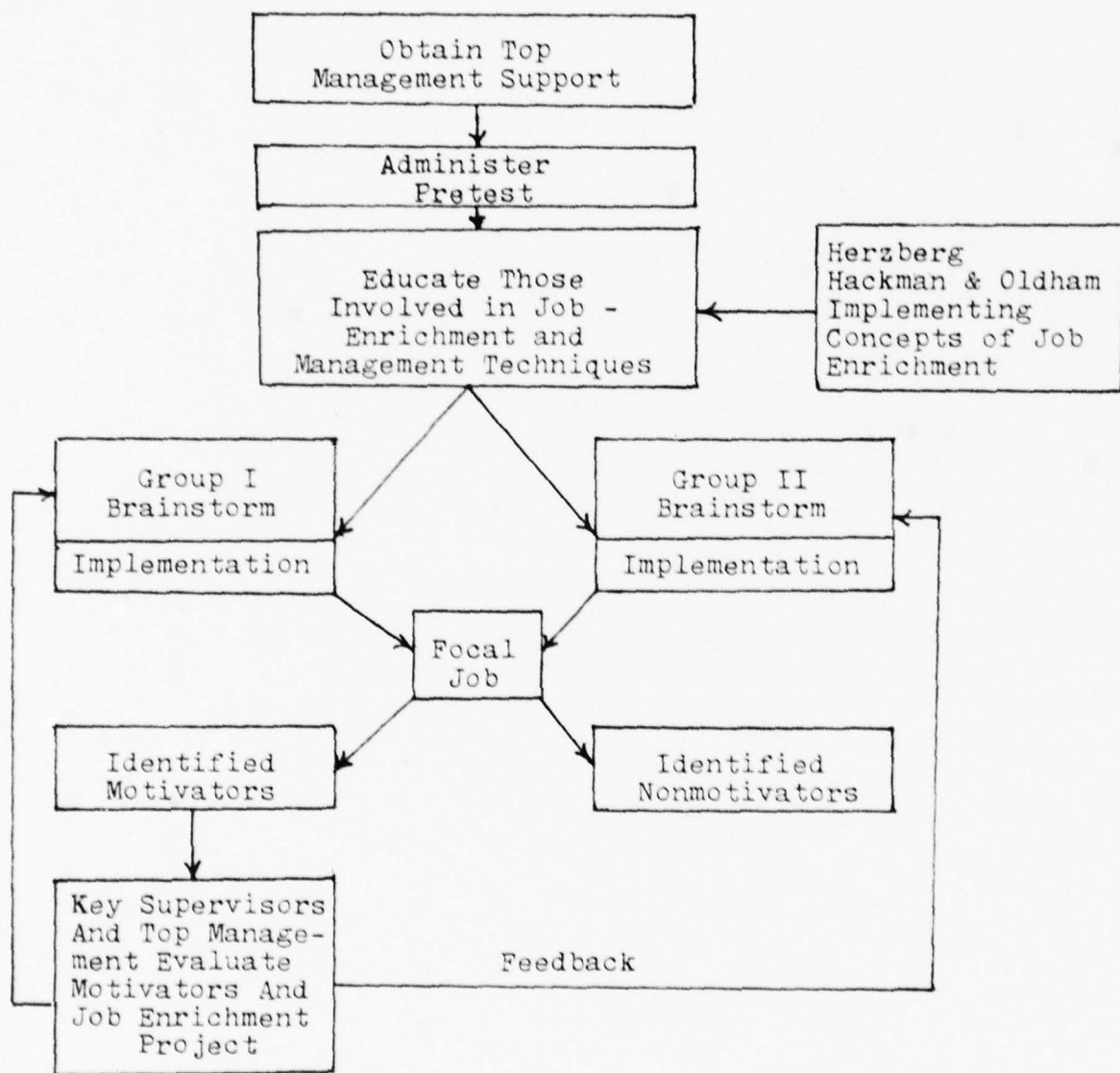
Figure 3-6. Job Enrichment and Goal Setting
            Intervention Strategy for a longi-
            tudinal Field Experiment
            /Umstot and Rosenbach, 1977/

69
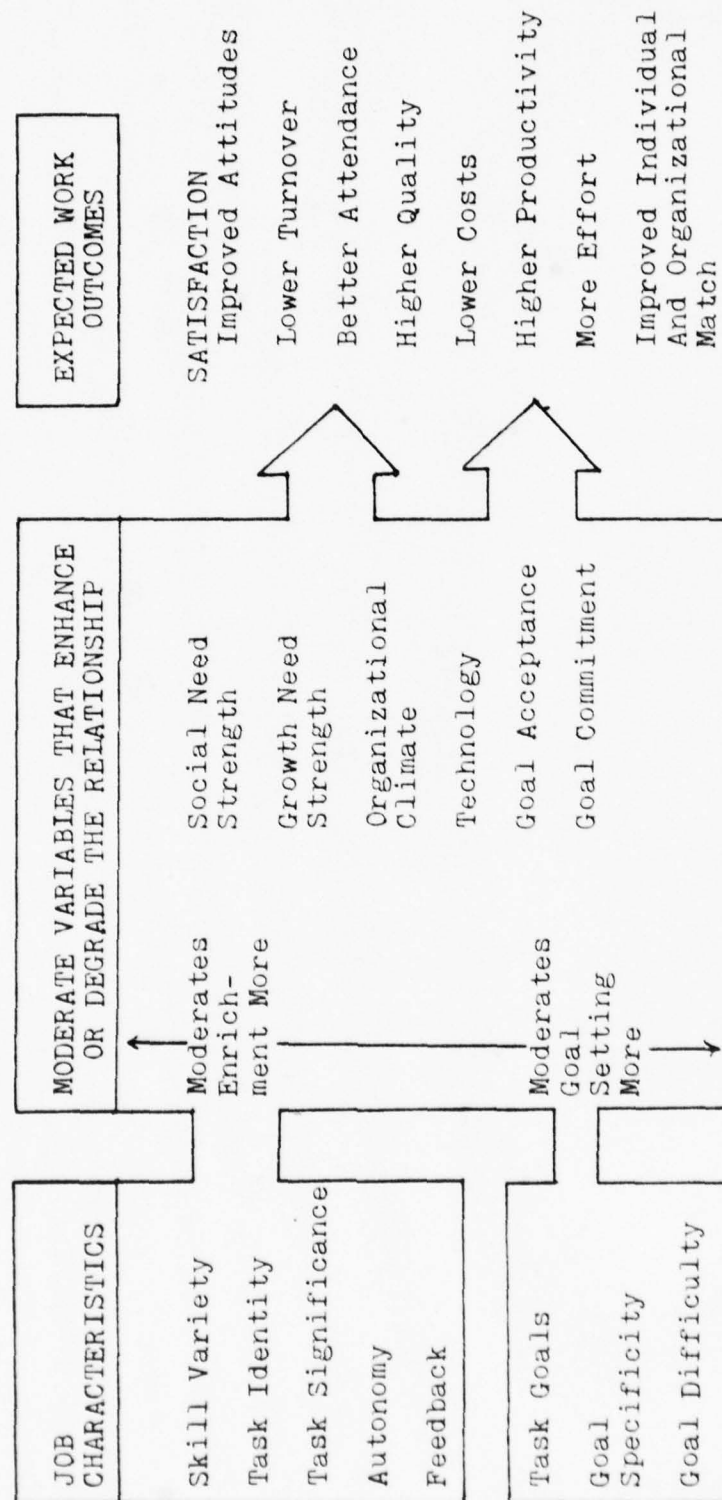
Figure 3-7. Goal Setting and Job Enrichment Model
/Umstot, Mitchell and Bell, in press,
Umstot and Rosenbach, 1977/

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A final note should be interjected in regards to goal
setting in the work environment. According to results of
studies of a West Coast utility project by R.M. Steers, the
individual differences of needs for achievement, affiliation
and autonomy moderate the goal usage process. If an individ-
ual's need for achievement is high the individual will react
adversely to goal setting but conversely if his affiliation
need is low he will react favorably to goal setting. A
highly autonomous individual will react favorably to goal
setting provided that the means to accomplish the goal are
under the individual's control. The reverse is also true for
those individuals with a low need for autonomy /Steers, 1975,
Steers, 1976, Umstot, Mitchell and Bell, in press7.

K. JOB ENRICHMENT AND THE PHYSICAL SETTING

In his article "Job Enrichment Lessons from A.T.&T."
/Ford, 19737 Robert M. Ford describes a job enrichment tech-
nique to bolster employee motivation in white and blue collar
jobs. Ford visualizes going beyond high-level concepts as
"self actualization," "need for achievement" and "psycholog-
ical growth." He favors a strategy that can be broken down
into three aspects of improving work through systematic
changes in: 1) the modules of work; 2) control of the modules;
and 3) the feedback signaling whether something has been
accomplished.

The module of work refers to a complete set of work. In
the control of the module, the supervisor turns over more and
more responsibility as the worker gains in experience and
ability. Feedback signaling gives the employee direct
knowledge of the results as the job is accomplished /Ford,
1973/.

According to Ford to improve or enrich an already exist-
ing job, the parts must first be rearranged. Prework, such
as planning, and later work stages, such as reporting and
evaluating, are put back into the job. Responsibility for
the work module is obtained from upper echelons. Work that
does not belong in the work module after rearrangement is
pushed down to other job classifications or automated. See
Figure 3-8.

```
                    Pull Down Responsibility
                         From Above
                              │
                              ▼
Pull "Prework"        To Improve this Job        Pull Later
into the job   ────▶  Rearrange the Present ◀──  work stages
                              Parts              back into job
                              │
                              ▼
                    Push Work on Down to Lower
                      Job Classifications or
                       Automate Completely
```
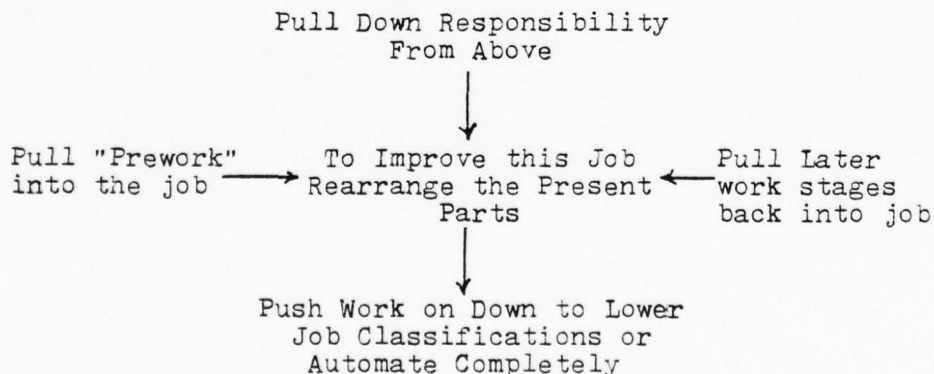
Figure 3-8.   A.T.&T.'s Steps in Improving the Job.
               /Ford, 1973, p. 101/

A.T.&T. has established that job enrichment works to their satisfaction. Now they are studying ways to enrich a number of jobs by a technique called "nesting." /Ford, 1973/.

Nesting essentially changes the physical location of a number of related jobs in a given office space to provide complete work modules, and easily identifiable work groups which are involved in getting a specific task or a typical days work completed. Nesting can be shown by a typical office floor plan. An example is given in Figure 3-9 below.

Unit "A" Manager	T T Typing Pool T T	Unit "B" Manager
Unit "A"		Unit "B"
Boss Boss		Boss Boss
E E E		E E E
E E E		E E E
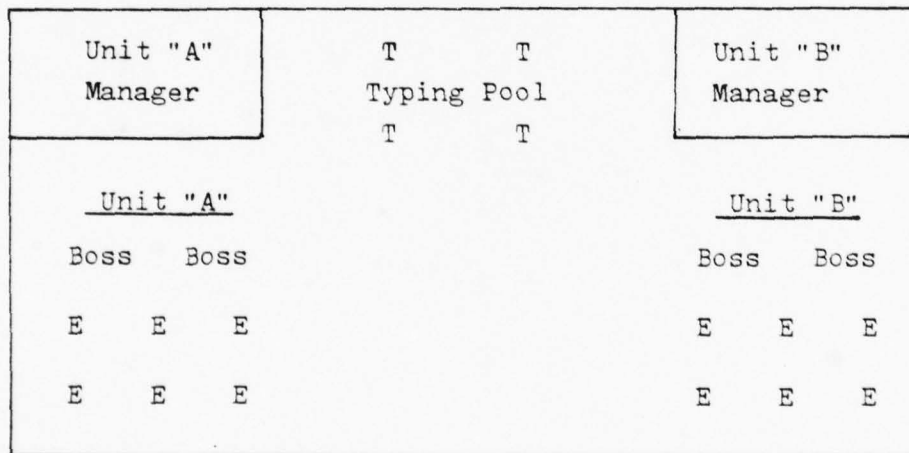
Figure 3-9. Plan "A" - Typical Office Floor Plan
          Without Nesting

By this oversimplified depiction, it can be seen that a typical organizational hierarchy exists. Indirect channels of communication and a lack of identity with the existing work of each unit is prevalent. Further it should be noted

that the typists (T) are secluded from the identifiable work
group. There is quite a contrast between "A" and "B" (Fig-
ure 3-10.).
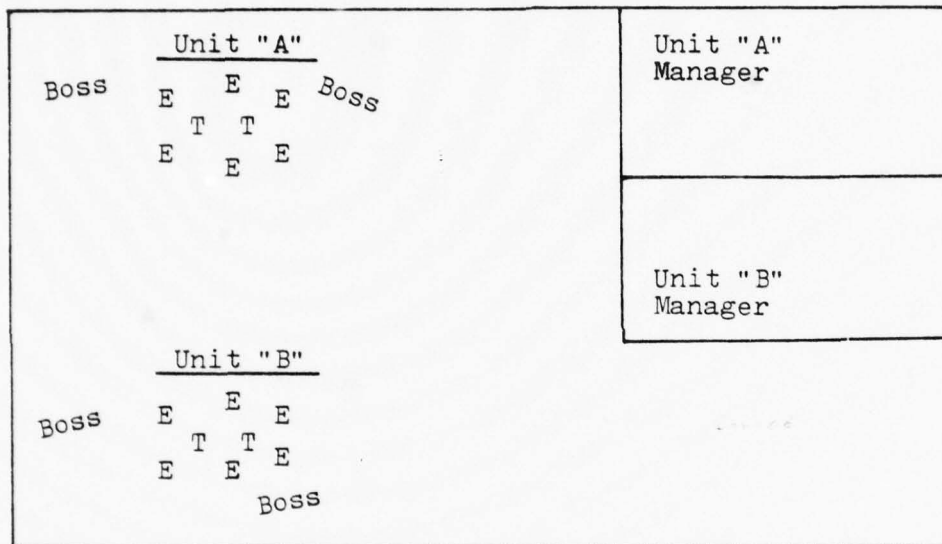
Figure 3-10. Plan "B" - Office Plan
With Nesting

Plan "B" floor plan shows typists (T) that can be identi-
fied in working with a specific unit. They became familiar
with work and essentially became part of that specific unit.
They share in the feedback and the productivity of their re-
spective units. Again, this is an over simplification of the
nesting procedure described by Ford, but it reflects the
main ingredients. With this technique it is possible to en-
rich many jobs at the same time.

L. SUMMARY AND IMPLICATION FOR THE NAVY

In summary, the previous discussion has highlighted the dymanic variables related to job satisfaction. The three general areas defined were: 1) the characteristics of individual work motivation; 2) the nature of the job; and 3) the management of work. The specific variables for each general catagory are:

A) The characteristics of individual work motivation

1) The employee's need satisfaction.
2) The development of work outcomes.
3) The expectancy, valence and instrumentality of the worker.
4) The effort-performance relationship of the worker
5) Identifying the moderators of the motivation to perform.
6) Role perceptions and their relationship to the organization's expectations.
7) The performance of an individual in an organization.

B) The nature of the job

1) The effect increased work simplification has on worker behavior.
2) An increase in skill variety by enlargement of the task horizontally.
3) The increase of psychological growth on the job through job enrichment.
4) The identification of the attributes that make up a task and their relationship to worker satisfaction and motivation to perform.
5) The moderating effects of growth need strength.

C) The management of work

1) The addition of goals to existing jobs and their effect on productivity and satisfaction.
2) The rearranging of existing parts of a job into a more meaningful whole.
3) The rearranging of physical office or work space to provide natural working groups.

All of these variables can be used in existing Navy
organizations when managers interact with subordinates during
the daily routine of work. Using the expertise that has
been developed by noted theorists, small initial job en-
richment projects may be developed by Navy managers to
enhance the productivity and worker satisfaction within
their particular spheres of influence.

IV. ORGANIZATIONAL CHANGE STRATEGY PROPOSAL

A. AW JOB DESCRIPTION

In viewing the "job" of the individual Antisubmarine
Warfare operator, it must be realized that it is, in reality,
two jobs. These jobs can be described as; 1) the antisub-
marine warfare flying job that consists of the search for sub-
marines by use of acoustic and nonacoustic sensor equipment,
and 2) the collateral duty job which consists of all other
duties necessary to help the squadron function on a day to
day basis.

The flying job is considered a crew function. The AW is
an integral part of a team of eleven to thirteen other in-
dividuals that process electronic data when patrolling the
ocean in search of submarines and other ships of interest.
It is the AW's job to interpret these data.

From the survey that was described in the problem state-
ment (see p. 22 of this thesis) it was learned that anti-
submarine warfare operational flights are the most satisfying
part of the AW's job. Searching for and finding submarines
has much of the enrichment necessary to sustain the critical
psychological states of experiencing responsibility, meaning-
fulness and knowledge of actual work outcomes.

According to the responses received to the survey question,
"What is most dessatisfying about your job?", the problem area
is in the second part of the AW's job. This part requires

the AW to be used as a "manpower pool," i.e., to wash aircraft, clean the hangar, and fly as an observer on pilot training flights and also includes his collateral duties of maintaining the AW shop records and training documentation.

It is important to identify all the functions in the AW job. Not realizing it has two distinct parts could prove to be fatal in a job redesign project.

B. FORCE FIELD ANALYSIS

As depicted in Figure 4-1, a force field analysis /Lewin, 1951/ could be used to signify how a meaningful change can take place. To increase satisfaction level, the project could recommend more submarine (VPSS) or out of area (OOA) flights. This may not be possible due to scheduling or other constraints, i.e., aircraft, fuel, submarines, etc. but it would give the AW less time on the ground to be used as a "manpower pool" and increase the portion of the job that is most satisfying. From the squadron's viewpoint, however, certain routine jobs must be completed. With the entire work force focused on VPSS or OOA flights there is little time for the chores necessary in the daily routine.

Another way to attack the problem would be to reduce dis-satisfaction through job enrichment. This idea would not be dependent upon aircraft, fuel or submarines, but instead would be dependent upon the people resources that are available to the squadrons and staff of Commander Patrol Wings Pacific (COMPATWINGSPAC) at the present time.
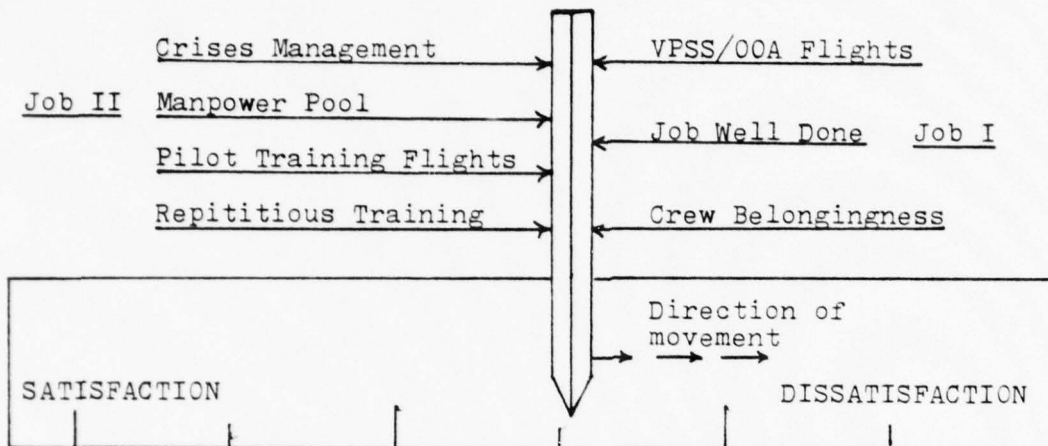
Figure 4-1. Force Field Analysis of AW Job[3]

The Proposed Change Strategy - The change strategy that
is proposed for Moffett Field is given in Figure 4-2. A
more detailed explanation of the parts of the strategy is
provided below.

C. IDENTIFICATION OF A NEED FOR A BEHAVIOR OF INTERVENTION

This is the beginning of the change strategy. Identifi-
cation of the need for a behavioral intervention may be
accomplished by reviewing records on turnover, individual
performance, absenteeism and squadron operational efficiency.
Low retention in a particular rate, such as the AW rate or
low scores in squadron efficiency may indicate low satisfaction

---

[3]The subjects presented in the force field analysis were taken
from the AW Retention Survey and individual AW interviews.

levels within a particular squadron. Other means of identi-
fication would be to give surveys to check the job satisfac-
tion levels of those involved in a particular job or rate
within the squadron. Hackman and Lawler proposed using a
job diagnostic survey (JDS) to find out if a job can be en-
riched. They also use the JDS to identify the portions of
the job that could be targets for enrichment.

An important moderating variable in the Hackman-Oldham
model of job enrichment is growth need strength. The survey
given should include, as the job diagnostic survey does,
questions that measure the employee's need for growth. The
employee's need for growth may be defined as the employee's
desire for self actualization through his exercising inde-
pendent thought and action while on the job /Bennis, Benne
and Chin, 1969/. High growth need strength scores could in-
dicate that a job enrichment project would be successful in
increasing the level of job satisfaction. Low growth need
strength scores could indicate that a job enrichment project
would have no impact on job satisfaction.

In any case, surveys and interviews should be conducted
to help the change agent gather data to determine the satis-
faction level of the individuals in the organization's jobs.
The survey could be of any type designed to measure the satis-
faction level of those in the organization that may be the
focal point of the job enrichment project.

Identification of a Need for a Behavioral Intervention

Selection of a Program Leader

Selection of a Key Organizational Person (KOP)

Determination of the Initial Feasibility of a Job Redesign

Creation of an Officer-Enlisted Job Redesign Task Force

Identification of Activities Comprising the Job

Identification of Job Activities Task Attribute Linkages

Specification of a Specific Job Redesign Intervention

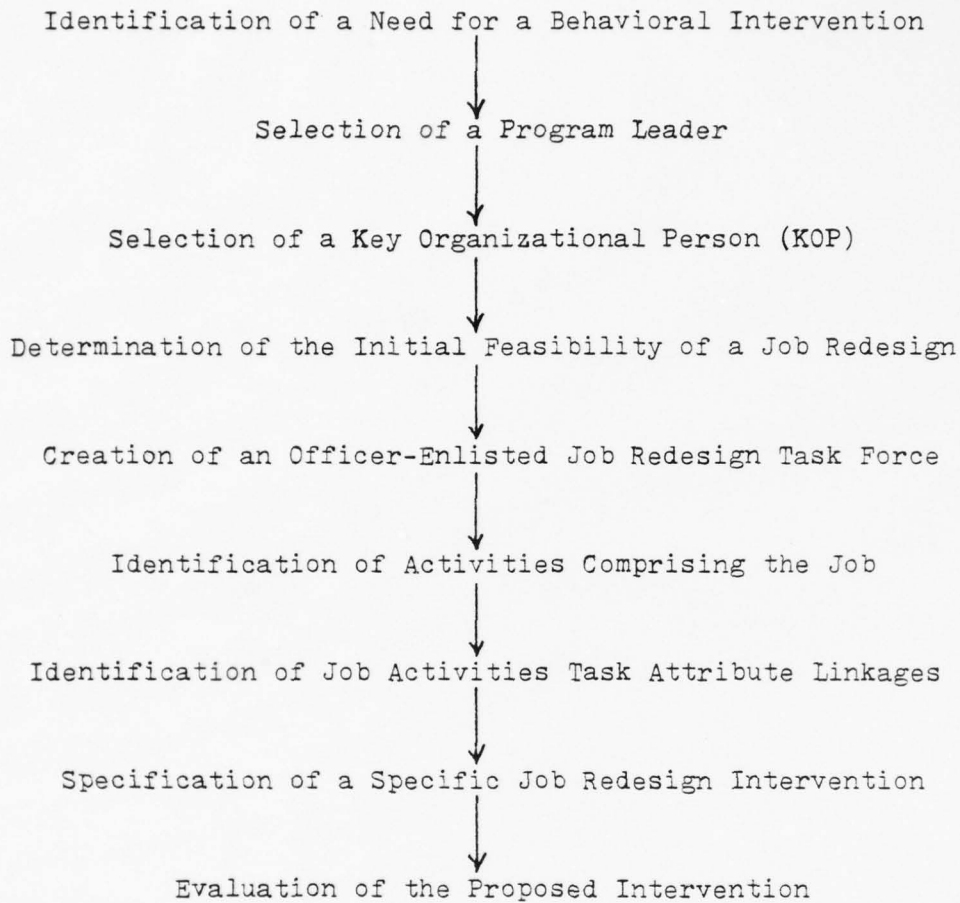Evaluation of the Proposed Intervention

Figure 4-2. A Proposed Job Redesign Strategy in the AW Rate /Adopted from Aldag and Brief, 1979, Alderfer, 1972, p. 76/

Squadron efficiency records absenteeism or turnover, and as in the case of AW's, reenlistment records, should be kept and reviewed from the onset for later evaluation of the job enrichment project.

D.   SELECTION OF A PROGRAM LEADER AND KEY ORGANIZATIONAL PERSON

The selection of a proper leader is extremely important in a job enrichment project /Huse, 1975/. The individual should have a broad knowledge and experience in the behavioral sciences, including motivational theory, as well as excellent knowledge of installing job enrichment programs. In most cases, organizations do not have in-house personnel to use and outside consultants may have to be called /Huse, 1975/.

The program leader would run the project, but would have help from a key organizational person. This individual would be someone who is familiar with the operation of the squadron at Moffett Field and would act as an interpreter to help with communication flows between the consultant and flag, staff and squadron personnel. Flag, staff and squadron personnel are defined in this case as: Rear Admiral C.O. Prindle, COMPAT-WINGSPAC (flag); COMPATWINGSPAC personnel (flag staff); individual squadron's commanding and executive officers and all officer and enlisted personnel who work for them (squadron personnel). A background in behavioral science would be essential, as well as a Navy background. A suitably qualified individual to fill the position of key organizational person might be found at the Navy Postgraduate School in

the Human Resources Management curriculum, or at HRM centers
or detachments.

E. DETERMINATION OF THE INITIAL FEASIBILITY OF JOB REDESIGN

Even though the survey results in the Appendix indicate
AW job dissatisfaction and the potential for the use of a
job enrichment project, there are other factors to consider.
Certain critical questions should be answered to the satis-
faction of the change agent (consultant) and the client
alike. These questions are:

1) Have we diagnosed all of the problems in the work
   systems?

2) Are the managers involved ready to deal with the prob-
   lems that are encountered when a major change takes
   place in an organization?

3) Is there a firm and complete commitment from top
   management?   /¯Hackman, 1975/

If these questions are answered in the affirmative and
the results of the surveys and interviews indicate that a
job enrichment project is needed, then the project would
seem feasible.

F. CREATION OF A LABOR MANAGEMENT REDESIGN TASK FORCE

In any change effort, the main ingredient for a success-
ful project is the degree to which the management and the
labor force support and change efforts. If commitment to
the project is only superficial the results will be less
than desired.

At the squadron level - In the AW rate job enrichement project, it will be essential to have the AW's, the branch and division officers, branch and division chiefs, department heads, executive officers and commanding officers all involved. Their commitment to the change effort will give support, accelerating implementation, and lend credability to the project. The management areas given above will be formed into a squadron job enrichment task force.

At the COMPATWINGSPAC staff level the AW training office should be involved in setting up training requirements that would be necessary for the AW's and in gathering retention data for the project evaluation.

G.   IDENTIFICATION OF ACTIVITIES COMPRISING THE JOB AND
     LINKAGES TO TASK ATTRIBUTES

Once the task forces have been identified, the change agent will set out to identify all of the activities that make up the job of the AW. These parts would be evaluated as to their ability to increase satisfaction, or to decrease dissatisfaction. The job parts would be further analyzed as to whether or not they could be linked with the task attributes of skill variety, task identity, task significance, autonomy and feedback by the use of a job diagnostic survey or by interviews.

H.   SPECIFICATION OF A JOB REDESIGN INTERVENTION

In approaching the proposed job enrichment project, it is important to outline a strategy for implementation and key areas for focus. At Moffett Field the consultant or change agent and his key organization person should approach the intervention from three levels. These levels are: 1) the flag level; 2) the staff level; and 3) the squadron level.

The main reason for this approach would be to: 1) involve all of upper and middle management and thereby increase project ownership at each level; 2) to increase credibility of the project in the eyes of the squadrons who are the target for the change effort by the interest generated from the Admiral and his staff; 3) to provide a means of communication to all levels about what the project is, what it intends to accomplish and what involvement or support is needed from each level; and 4) to insure that ultimate control of the project still lies in the hands of upper management.

At the flag level, the consultant would act as an advisor to the Commander of Patrol Wings Pacific on the job enrichment project. In the absence of the consultant the key organizational person would be responsible for clarifying specific stages of the job enrichment project. Therefore any questions that are generated could be answered completely and promptly and most of all, correctly. Keeping top management well informed will be vital to the project's success.

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At the staff level, the consultant and the key organizational person would set up plans for the job enrichment intervention. They, along with the AW training personnel, would analyze the AW rate by gathering data on dissatisfaction levels and report on problems and possible solutions.

Group problem solving sessions would be scheduled with the consultant and the AW's. These sessions would be used to get the individual AW's ideas on ways to solve problems within the rate and specifically problems they perceive at Moffett Field. Examples of problems that could be solved would be advancement and career paths and shortages of manpower in the AW rate. Potential solutions would be reported back to the staff.

Training of squadron and staff personnel in the job enrichment techniques would be provided by the consultant, and the key organizational person. Once initial training had been accomplished, ongoing consulting services would be provided as the project developed. Feedback from the consultant and the squadron to the staff would be increased by regular progress reports. These reports would be used to keep all informed of the project's well being and could help address areas of concern where direct intervention by the consultant may be necessary. As the project progresses, refresher or reeducation training would be scheduled. Figure 4-3 illustrates activities and functions at the flag and staff level diagrams.

```
COMPATWINGSPAC

                  STAFF ──────────▶ ┌─────────────────────────┐
                                    │       CONSULTANT        │
                                    │   Key Organizational    │
                                    │         Person          │
                                    └─────────────────────────┘
          AW Training Office           ·Brief          ·Advise

                                       ·Progress       ·Ongoing
          AW Training Chief             Report          Consulting

·Training              ·Planning          ·Coordinating

·Training on           ·Career Path        ·Group Problem
 Job                    Development          Solving
 Enrichment
                       ·HRMD Management
·Reeducation            and Leadership
 Program                Classes
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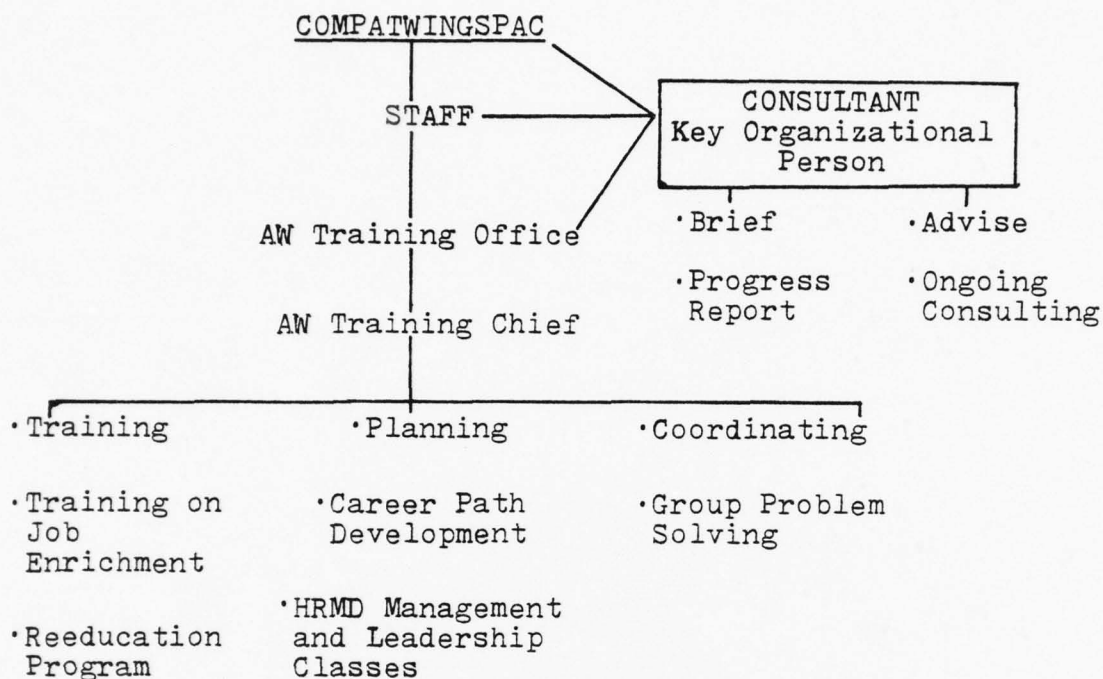
Figure 4-3.   Consultant, Flag and Staff Interactions

In summary the consultant or key organizational person
would be on hand to brief and advise on the effect that the
job enrichment project is having on the organization. He
also would conduct training in job enrichment, facilitate
group problem solving and help plan and coordinate the im-
plementation of the job enrichment project at the squadron
level.

Job enrichment at the squadron level - Since squadrons
deploy overseas once every year and a half, those squadrons
identified for job enrichment would start the project on their

return. Prior to returning however, the consultant and key
organizational person should visit with and brief the squadron's
commanding officer and executive officer. During this visit
detailed outlines on what is to take place over the next few
months would be presented. Further, those individuals that
would be needed as implementors and coordinators could be
identified and briefed. The purpose of the pre-visit is to
obtain squadron top management support.

After the squadron returns to Moffett Field, a pretest
or job diagnostic survey should be administered and inter-
views held. Education of the AW's, branch officers and
division chiefs on job enrichment concepts would begin. The
subjects covered would be motivation hygiene theory, the
Hackman-Oldham job enrichment model, implementing concepts,
job enrichment and goal setting and nesting. The department
heads, division officers and division chiefs would be in-
structed in the same concepts but from a coordinating group
viewpoint. In each of these management education classes on
job enrichment theory the consultant, or the key organization
person would be in charge.

The AW branch officer and branch chief along with the
first class petty officers would become the implementing
group. Once they finish their job enrichment training the
implementing group would "brainstorm" the focal job to identi-
fy the motivators. They would then develop implementation

strategies to enhance the job motivators. This session is commonly referred to as the "greenlight" session /Rafalko, 1975/.

The implementor's main task is to come up with ideas for providing the AW with more recognition, responsibility, growth and achievement and by doing so point out areas that may increase the level of satisfaction in that job. The only ground rules would be that no ideas are unacceptable and all ideas are recorded.

Once the implementing group has run out of ideas, the areas of concern should be placed in catagories of 1) maintenance items - job context factors (social, economic, physical); 2) road block items - constraints and limitations to a job (rules and regulations); 3) growth items - the ideas or tasks that require new learning and additional challenges by the AW in order to perform adequately; 4) recognition items - feedback that permits the employee to evaluate the results of his work and to determine corrective action without being overly dependent on supervising value judgement; 5) responsibility items - either vertical loading (assigning higher level responsibilities) or horizontal loading (extending the work process from either direction) in making a whole job; 6) module items - a natural unit of work that gives the employee a whole job or complete responsibility for a task (rearranging the job so that the individual performs the planning, doing and evaluating of the job). Until the group

gets into the swing of the operation the consultant may be needed to help facilitate the operation.

In the session called the evaluation, or "red light session," the implementing group discusses all of the ideas and labels them as either good or excellent. For those items deemed excellent, the group will develop implementation strategies. If the change cannot be handled at the AW shop level, then the idea and its implementation will go to the coordination group.

The coordinating group should be composed of upper and middle level managers in the organization. One of the main purposes for having a coordinating committee or group at the flag and staff level is to identify the squadrons that are to be the first to use job enrichemnt. Squadrons selection should be done with great care and with the aid of the consultant. Improper selection may cause failure of the project. An example of this would be a squadron that would be selected wit hout complete commitment or without any commitment from the selected squadron's commanding officer.

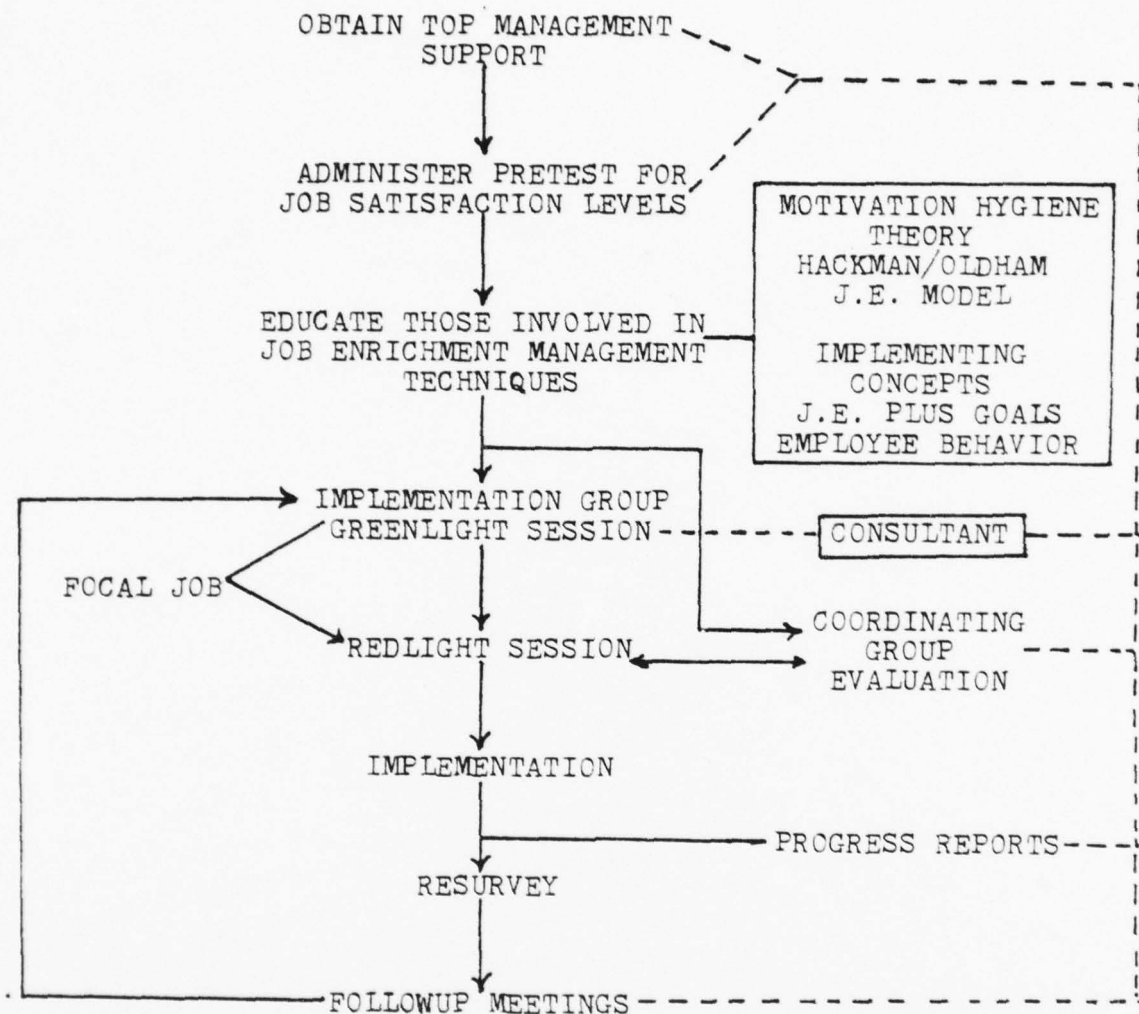At the squadron level the coordinating group would consist of the executive officer, the department head, the division officer and the division chief of the rate that is to be enriched. In the squadron, the purpose of the coordinating group would be to serve as a review board for the squadron on projects recommended by the implementation group /Herzberg and Rafalko, 1975/. The coordinating group would

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also have approval power over implementation projects. If
a certain project is disapproved, immediate, constructive
and honest feedback would be given to the implementation
group as to why the project cannot be approved.

It should be noted however, that it would be the duty of
the coordinating committee to try to enhance the project's
probability of success by reducing any roadblocks that may
stand in the way of implementation. After the "red light"
session, feedback would be obtained from the coordinating
group, the projects that are approved would be implemented.

The implementation group would be in contact with the
consultant throughout the project development as would be
the coordination group. After a certain length of time, may-
be a month or two, the consultant or his assistant develop
a progress report for COMPATWINGSPAC, his staff and squadron
commanders on what has been accomplished and what perceived
changes have taken place. Any changes or adjustments to the
existing project would then be brought out for review.
(A diagram of a squadron job enrichment project is provided
in Figure 4-4.)

The final stage of the job enrichment process that is
really ongoing is the followup meeting. This is where the
implementation group again meets in a green light session.
More areas are identified and the process begins again.

OBTAIN TOP MANAGEMENT
SUPPORT

ADMINISTER PRETEST FOR
JOB SATISFACTION LEVELS

MOTIVATION HYGIENE
THEORY
HACKMAN/OLDHAM
J.E. MODEL

IMPLEMENTING
CONCEPTS
J.E. PLUS GOALS
EMPLOYEE BEHAVIOR

EDUCATE THOSE INVOLVED IN
JOB ENRICHMENT MANAGEMENT
TECHNIQUES

IMPLEMENTATION GROUP
GREENLIGHT SESSION

CONSULTANT

FOCAL JOB

REDLIGHT SESSION

COORDINATING
GROUP
EVALUATION

IMPLEMENTATION

PROGRESS REPORTS

RESURVEY

FOLLOWUP MEETINGS

- - - -Indicates direct intervention by consultant

◄─── Indicates stepwise progression

Figure 4-4. A Diagram of a Proposed Squadron Job
Enrichment Project

It should be noted that the ultimate authority over all phases of the job enrichment project within a squadron rest with the squadron commanding officer. The consultant, co-ordinating and implementing groups advise him as to the phases of the project and any change strategies that would be developed.

I. EVALUATION OF THE PROPOSED INTERVENTION

An evaluation of the job redesign project is the measure of success it obtained in achieving the goals it identified at the onset. In the case of the AW, it would be increased retention and increased job satisfaction. The best way to verify if we are successful is to review the AW retention figures in the squadrons over time and see if any change can be identified between the enriched and the unenriched squadrons.

After six to eight months a Job Diagnostic Survey is given or other surveys that measure satisfaction levels would again be administered. The changes in satisfaction level would help to determine if any meaningful change has occurred.

J. AREAS FOR CONSIDERATION

In setting up any job enrichment project it is imperative that those involved understand the theory of job enrichement and its implementing concepts. One must also identify and be in tune with why employees are working in the first place. Essential information to the squadron supervisor would be to

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find out why an employee is motivated to work, what he expects from his work and what needs are being satisfied by his working.

If an individual's performance is low, is it because his aptitude, skill and ability is lacking or is it just because his role perception of what he is to do and the supervision or organization's role perceptions are not compatible? Another basic consideration is, has the organization provided the proper tools to enable the individual to perform up to expectations? Once these basic questions have been addressed and answered the problem of enriching a job can begin. (See Review of Literature, Section 2.)

Job enrichment failures are often caused by poorly diagnosed problems in the work system /Mirvis, Berg, 1977/. The job and the people should be studied in depth to avoid faulty initial assumptions that may doom a project from the start.

When studying jobs, it should be realized that given the existing technology, some jobs may be as good as they ever will be /Hackman, 1975/. In this case job enrichment may add complexity, destroy worker relationships and make the job even more unbearable than it already is.

Targeting a job redesign project for what is desired as an acceptable outcome is another consideration. Is the target higher worker satisfaction, low turnover or increased productivity?

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Job enrichment is not a cure-all for all that ails an organization. Sometimes instituting job redesign without sufficient regard for the spin-off effects may prove disruptive and reverberations may be felt throughout adjacent parts of the organization /Hackman, 1975/.

In adopting job redesign or job enrichment, are we actually changing the job, or are we merely changing titles? /Hackman, 1975/. Jobs can be relabeled and still they remain routine, repetitive and without feedback. To change a job, the previous dissatisfying qualities must be reduced or eliminated and the satisfying qualities of increased feedback, skill variety, task identity and significance and autonomy must be enhanced.

Finally, the changes developed in an organization must come from within. A top down approach often leaves employees with the feeling of being uninvolved /Hackman, 1975/. Timely worker involvement with the help of facilitations and education in the theories surrounding job enrichment will help to insure a lasting change takes place for the betterment of the organization.

V. CONCLUSION

The increasing retention problem in the AW rate is per-
ceived to be due in large part to the AW's dissatisfaction
with his lot in life. Areas of high concern to the individ-
ual AW are pay, reenlistment bonuses, advancement opportunity
and personal growth through training. Job dissatisfaction
also plays an important role in his intention to reenlist.

A. EMPLOYEE WORK ATTITUDES

A problem facing the U.S. Navy is one that employer's
throughout the nation are trying to solve, this is a marked
change from previous generations in employee work attitudes
/Witkin, 1979/. A whole series of factors have come into
play to change work attitudes; our country has a higher level
of education than ever before, and a higher standard of liv-
ing; young people are more sophisticated and anxious to throw
off parental shackles and get away from school discipline;
and of course, more of today's young people have had no con-
tact with economic adversity as severe as the Depression of
the 1930's. As a result of all this, the younger workers
feel that they have the right to be self assertive on the job,
and therefore are more vocal about situations that are not
to their liking. If today's young worker is unhappy with
his job, he is likely to pick up his marbles and walk away
/Witkin, 1979/.

Workers today are far more interested in personal satis-
faction /Witkin, 1979/. Although pay is a factor, as long as
it is adequate, employees are motivated by far more complex
tasks than job holders of a generation ago. Many workers of
today want to be challenged and this need for challenge is
modified by the workers' growth need strength.

The need for self esteem is another factor that comes
into play. Everyone needs to feel good about himself and if
he doesn't he may not only turn in a poor job performance but
in addition he may keep others from doing their best. Workers
of today refuse to submit to conditions that they feel are
unfair or demeaning /Witkin, 1979/.

With the change in work attitude, it is important that   .
the managers in todays Navy learn more about what motivates
workers and keeps them satisfied. It may not be enough to
merely learn about employee motivation. Navy managers should
try to do something about the problems of dissatisfaction that
they are faced with.

B.   THE PURPOSE OF THE THESIS

The purpose of this thesis, therefore, is to: 1) address
the AW retention problem; 2) to provide an exhaustive back-
ground of literature on employee motivation and techniques of
job enrichment; 3) to develop an organizational change
strategy using job enrichment as a means to increase employee
job satisfaction, and increase retention in the AW rate;

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and 4) have that change strategy tailored to a specific
U.S. Navy community.

C.   RISKS AND BENEFITS

There are certain risks associated with any change
strategy. With the strategy proposed for Moffett Field, the
following are areas of concern:

1)   The degree of resistance to change. If there is a
high resistance to the change process, either at the flag,
staff or squadron level, then the project may prove to be
a worthless exercise. Although the degree of commitment is
important at the flag and staff level, the area of highest
concern is the support for the project provided at the squad-
ron level where the change process will have the most impact.
If upper management at squadron level is indifferent or
resistant, then efforts to increase satisfaction through job
enrichment techniques will be stymied.

2)   A poor or faulty diagnosis of organizational problems.
Before the change effort is begun, extensive data gathering
on the AW's job and his perceived satisfaction levels should
be gathered. After the information has been compiled, a
careful diagnosis of the results should be undertaken. If
the diagnosis is based on faulty assumptions, then the change
strategy may be misdirected which may lead to results that
are undesirable.

3) The setting of unattainable goals. If the expected
results of the proposed intervention are unrealistic, then
the chances for success are diminished. For example, if the
goal set for retention is to move from 40% to 100% retention,
the chances for such a success are nil. Reasonable targets
and expectations should be identified prior to beginning
the project.

4) An increase of job complexity and worker dissatisfaction.
If the AW's job is poorly diagnosed and the project is begun,
the possibility of adding to the complexity of the job exists,
with the ultimate result of increased worker dissatisfaction.
After studying the problem of AW retention, increased worker
dissatisfaction through the proposed job enrichment project
seems remote, however the possibility still exists.

Before discussing the benefits of the proposed change
strategy it should be clearly understood what change means
in an organization. Change is defined as resulting from
an alteration of an existing field of forces /Bennis, Benne
and Chin, 1969/. If the present state of affairs, that is
the present force fields, are unacceptable and are causing
organizational problems, then a change in the existing forces
should be undertaken. When focusing on the AW retention
problem facing the U.S. Navy, it becomes obvious that a
change, if the proper one, may benefit the organization.

The benefits associated with the change process through the use of job enrichment in the AW rate are hoped to be:

1) Improved performance and mission effectiveness

2) Lower absenteeism

3) Increased retention

4) Increased organizational training in management techniques, i.e., job enrichment and employee motivation.

5) High internal work motivation

6) Organizational problems identified, that may have gone unnoticed through increased communication and information flow

D. ROCOMMENDATIONS

In viewing the change strategy from the staff level, a number of suggestions that may help to increase satisfaction in the AW rate come to mind. A summary of these follows:

1) The development of an AW career path program. This career path would have the benefits of providing the AW with the ability to proceed up the ladder to limited duty officer (LDO) or Warrent Officer (WO) or to remain in the AW rate if desired. This increases the motivational value of the AW rate (cf. p. 31). To date the AW rate has no specific career path that maps out a detailed progression in training and development from the time he enlists to becoming an AW chief, LDO or Warrant Officer. Part of the career path should include options to change rates at the end of each enlistment. If the career path program works well in the AW rate, then future consideration should be given to its adoption in other rates as well.

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2) Increasing electronic training in the AW "A" school.
"A" school is where the AW learns to decipher the electronic
signals that are received on his equipment while he is flying.
With this proposal, increasing electronic training would pro-
vide the AW with the ability to develop a greater skill
variety. Once in the squadron, a greater understanding of
electronics would increase the AW's ability to trouble-shoot
the equipment he works with in case of break downs. Also
this increases motivational expectancy (cf. p. 31). A greater
capability with electronics will also give the AW a chance
to develop a closer working relationship with other personnel
in the squadron who perform maintenance on the equipment that
the AW operates while flying. By increasing daily contact with
other rates, the AW would continue to build expertise along
with friendships by lending a helping hand where it is needed.

3) The rescheduling of compartment cleaning and mess cook-
ing duties so that they are completed by the time the AW
joins a squadron. Compartment cleaning is the use of the
junior enlisted men for barracks cleanup duties. The enlisted
men, including the AW, are given tasks such as cleaning and
buffing floors, and general janitorial duties. When the AW
has mess cooking his duties involve kitchen help, such as
serving food, washing dishes, etc. At present the AW leaves
the training squadron for the fleet squadron and then is
assigned to compartment cleaning and mess cooking. This
project would call for reorganizing the present schedule so

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that once the AW leaves the training squadron he no longer would be used for these menial tasks. In this way, the individual AW would be able to concentrate on being an anti-submarine warfare operator, his crew activities and professional development while in the fleet squadron.

4) Increasing the use of group problem solving. Specific problems that affect the AW directly, such as the sonobuoy locker problem, for example, would be presented in large group meetings. The sonobuoy locker problem pertains to duty that each AW shop in the squadron takes a turn at performing. The job elements involve receiving, sorting, unpacking and storing sonobuoys. The AW's find this duty to be very dissatisfying, but to date no alternative solution has been successfully attempted. At the proposed group problem solving meeting the AW's would be split into sub-groups and asked to develop solutions to the problem. This meeting should be facilitated by an organizational development consultant. Once a reasonable solution is developed, the AW's would present that solution to COMPATWINGSPAC Staff for approval. In this way, ownership for the solution lies with those that are directly involved with the problem and increased commitment to the project solution is enhanced.

5) Increasing awareness of steps involved and requirements of LDO and WO programs. This project would provide the AW with increased knowledge of the steps necessary and requirements to fulfill to be eligible for selection to the LDO or WO program.

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6) Development of a meaningful training program. According-
ing to the survey results discussed in Chapter I, unmeaningful
or repetitive training is a source area of AW dissatisfaction.
The AW training provided should be stimulating and thought
provoking. It is recommended that training be scheduled
bi-monthly, but great care will have to be taken in order to
avoid repetition.

The preceding recommendations all touch on the motivation
factors Herzberg identified in his research. These motiva-
tion factors are achievement, work itself, responsibility,
advancement and growth. The ideas for these projects were
derived from interviews with selected AW's and the survey
results discussed in Chapter I, page 22.

E. FUTURE CONSIDERATIONS

The scope of the project does not have to be limited to
the AW rate, nor does it have to be limited to one specific
locale. Each job enrichment project, though, should be
tailored to the host organization, to the specific target
group, and to the environment in which it operates. The
strategy presented herein is not one that will work for every
organization, environment or group. One should not assume
that the problem of one organization will be the same for
all organizations. The characteristics of each individual
job are also different and must be studied as unique entities
to enable proper and correct diagnosis of the effects of

job enrichment and whether or not job enrichment is an appropriate strategy to use.

The opportunities for job enrichment in the Navy may be found where worker dissatisfaction is prevalant. These areas may be small work groups such as flight crews or maintenance teams, they may be large organizational entities, such as ships or squadrons, or they may be specific occupational rates within the organization as a whole. Identification of target job enrichment opportunities can be made by checking for high turnover rates and/or low efficiency and performance.

This study raises such additional questions as: what is the effect that job enrichment may have on the Navy; what effect will job enrichment have on leadership and management skills in the Navy; will an increase in worker satisfaction reduce turnover in the AW rate, or any rate, when better wages lure the worker away from the Navy; and will the project of job enrichment, if adapted by the Navy, have a lasting effect on the organization, or will it's effectiveness diminish with time. These questions strongly indicate further study of job redesign approaches within the U.S. Navy.

Air Force Logistics Command
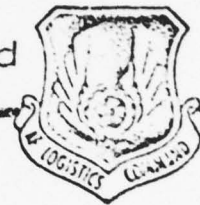
ORTHODOX
JOB ENRICHMENT™
Handbook

✳ to be efficient and to be human

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* "To Be Efficient and To Be Human" is the
subtitle of The Managerial Choice by
Frederick Herzberg, published by Dow Jones-
Irwin, 1976.

"Orthodox Job Enrichment" and "OJE" are
trademarks of Herzberg and Associates

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INTRODUCTION

This handbook is intended to give the reader a modest overview of the development of the Orthodox Job Enrichment Program in the Air Force Logistics Command. It is written to give supervisors, middle management, executives, and other interested parties a chance to become familiar with the program.

This AFLC handbook will briefly cover the theory of OJE, how and why we started an OJE program, how we implement or apply the theory, and how we measure the results.

Each section is written as independently of the others as possible, thus allowing the reader to peruse only the section(s) of particular interest.

A glossary of terms is also included.

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WHAT IS ORTHODOX JOB ENRICHMENT ?

In discussing what is Orthodox Job Enrichment, as a first step, it is best to separate the "orthodox" from the "job enrichment". "Orthodox" has the connotation of traditional, conventional, and in this case, original. Dr Frederick Herzberg, distinguished Professor of Management, College of Business, University of Utah in Salt Lake City, Utah, is the originator of the job enrichment philosophy, concepts, and management strategy. As such, programs in job enrichment that utilize his approaches and techniques are referred to as Orthodox Job Enrichment Programs. Other approaches to organizational improvement may use job enrichment as a large or small part of their strategy. Examples of such alternatives are sociotechnical systems, participative management, industrial democracy, and organizational development. In AFLC, we have pursued and applied job enrichment with Dr Herzberg's advice; hence, we have Orthodox Job Enrichment.

A Strategy and A Process

A second point to clarify is that job enrichment is both a strategy and a process. As a strategy, it involves theory, concepts, and views on the nature of man and direction for management. OJE provides a strategy which incorporates the tactics of human relations, communications, wage and salary administration, etc., which we have used for years. As a process, it involves putting the theoretical to practical use. The process of implementing OJE is discussed under "How Is OJE Done in AFLC?" In discussing "What OJE Is", we will cover the theory and key concepts in a brief narrative. We must emphasize that only the highlights will be covered and the reader is strongly encouraged to seek out further insights and explanation in the sources listed in the back of the handbook. Where a certain source is particularly pertinent to an area under discussion, we have made direct reference to it.

The Dual Nature of Man

The theoretical basis for job enrichment begins with a particular view of the nature of man. Though man exists at all times as a unity, conceptually we view him as having two distinct natures. Further, each nature has its accompanying need system. One nature

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of man is concerned with escaping from or avoiding pain.[1] As such, man is an animal. He doesn't want to hurt, or put differently, he wants not to hurt. Now, by avoiding this pain, both physical and psychological (cold, heat, hunger, thirst, sickness, danger, loneliness, inferiority, etc.), he does not achieve positive meaning in his life. He merely avoids being uncomfortable. As an animal, man is able to find infinite sources of things that make him miserable in an infinite variety of ways [2] (too cold or too hot; food that is too spicy or too flat; and an office that is too small, too noisy, too dull, or too crowded; a partner that is too passive or too aggressive).

The second part of man's make up is directed toward experiencing psychological growth.[3] Man has a need to grow psychologically. This want makes him distinctly human and separates him from the other animals on this planet. Where the animal nature of man is characterized by avoidance behavior (he may be seeking shelter but the motivation is to avoid the rain), the human side of man is characterized by approach behavior. In this posture, man seeks ful-fillment or growth as he does certain things. He gains from experience that provides psychological growth. If he doesn't have these ex-periences, he isn't worse off nor does he incur a deficit. He merely doesn't gain anything.

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1 Frederick Herzberg, _Work and The Nature of Man_ (New York: World Publishing Company, 1966)
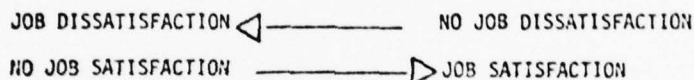This is referred to by Herzberg as the Adam nature.

2 Frederick Herzberg, _Motivation: The Management of Success_, Tapes 1-10 (Elk Grove Village, Illinois: Advanced Systems Inc) Tape 8

3 Frederick Herzberg, _Work and The Nature of Man_ (New York: World Publishing Company, 1966)
This is referred to by Herzberg as the Abraham nature.

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The important point about these assumptions concerning the nature of man and the thrust of the theory is that man exists on two continua. From this concept of the duality of man's nature comes the motivation-hygiene of people at work. Simply stated, this theory says that items, policies, or actions that deal with the environment or the surroundings of the job serve a hygienic function, of keeping people from being unhappy with their job. This is equivalent to satisfying the pain avoidance nature of man or placating his animal nature. Herzberg refers to these factors as hygiene because, if managed properly, they prevent unrest or dissatisfaction among workers (they keep them from experiencing pain), much as a vaccine prevents a person innoculated from being stricken with a disease. Other authors talk in terms of maintenance factors. [4] Note though, that regardless of the adequacy of the hygiene, it is of no value in meeting the psychological growth of the worker.

The need system associated with the human part of the worker is served by the elements of the job itself. These factors that lead to growth for the worker are termed motivators. Those items make the worker want to do his job because it meets his human need to grow psychologically. Meeting these needs are by far more challenging; but, when met, they pay big dividends for the organization and the worker. This graphic is a conceptulization of the two distinct continua:

JOB DISSATISFACTION ◁———————— NO JOB DISSATISFACTION

NO JOB SATISFACTION ————————▷ JOB SATISFACTION

Traditionally, management has placed total or almost total concern with meeting the maintenance needs of the worker. One reason for this has been that management has concentrated on moving their employees rather than motivating them. The distinction between these two may be subtle, but it is crucial. When we move an employee, we entice him to do something he wouldn't ordinarily do by using

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[4] Robert N. Ford, *Motivation Through the Work Itself* (New York: *American Management Association, Incorporated, 1969*). *Ford calls these maintenance factors because these things keep the "human machine" in order and available for use.*

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either a reward or a threat. We are motivated to get the job done
and we move the employee. When someone is _motivated_ to do a job,
he does it for something that is contained in the job. _A motivated_
employee has an internal generator that doesn't need to be charged
by the manager. [5] There are many other reasons for the tradi-
tional concern with hygiene, but they are not important here. What,
is important is that the growth needs of man typically have not
been met in the work place and everyone has been the worse because
of it. What is needed is to restructure jobs so that they are
endowed with motivators. This process, which previously has occur-
red as coincidental to other management strategies, may be denoted
as job enrichment.

Managing Hygiene

Now we will examine some of the implications of the motivation-
hygiene theory for the management of hygiene and the management
of motivators. When discussing hygiene or maintenance, we must
keep in mind that the goal for the management of hygiene is to
eliminate dissatisfaction. The ultimate would be that there
exists no dissatisfaction within the work force. This is, of
course, an impossibility because, as we already know, people find
infinite sources of frustration and we cannot hope to resolve all
of them. We find ourselves in a minimization problem where we
want to keep the total or level of dissatisfaction as low as pos-
sible.

Before getting further into how hygiene operates and how we
should manage it, it is appropriate that we list the factors con-
sidered as hygiene (remember that these are factors affecting
the environment or the surroundings of the job): company
policy and administration, supervision, relationship with
supervisor, work conditions, salary, interpersonal relations,
status, and security.[6]

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5 Frederick Herzberg, _Motivation: The Management of Success,_
Tapes 1-10 (Elk Grove Village, Illinois: Advanced Systems Inc),
Tape 2

6 Frederick Herzberg, _Work and The Nature of Man_ (New York:
World Publishing Company, 1966)

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In considering how best to deal with hygiene, the following points must be considered.[7] First, avoidance behavior is characteristic of hygiene problems (avoidance of feeling inferior or inadequate, or going hungry, etc). Second, hygiene is concerned with the condition, events and people around the job. Third, hygiene has a short-term effect and it must be continually reinforced. If you get a thousand dollar raise now, then you feel great; but pretty soon your new income level is your accepted base. Further, by next year at the same time, you will likely expect another increase and if it isn't at least a thousand again you will feel slighted. With these characteristics in mind, there are three basics to the management of hygiene. A manager should de-emphasize hygiene programs. He should give compensation, make better working conditions or improve the working environment and be quiet about it. Also, a manager gives hygiene or meets maintenance needs with the appropriate measure. Don't give someone a new parking space when he needs a new desk. Or, more concisely, the rules for hygiene management are: (1) Keep it simple. (2) Give it and shut up about it. (3) Be direct.

Managing The Motivators

The management of the factors that lead to motivation represents an entirely different challenge. In this area, our goal is to reap the rewards of motivated workers by providing them with enriched jobs. Here, we want to maximize the satisfaction of our employees. Rather than having no satisfaction from their job, we want to be able to fill their human need for psychological growth as much as possible in their work. In trying to do this, our basic task is to put into jobs as much of each of the following motivators as we can: achievement; recognition for achievement; responsibility; the work itself; advancement; and growth.[8]

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[7] Frederick Herzberg, *Motivation: The Management of Success*, Tapes 1-10 (Elk Grove Village, Illinois: Advanced Systems Inc), Tapes 8 and 10

[8] Frederick Herzberg, *Work and The Nature of Man* (New York: World Publishing Company, 1966)
These are listed as the motivators in the motivation-hygiene theory since they are the classes within which job satisfaction experiences were placed by Herzberg et al in his testing for interpretation of what these mean in the process of enriching jobs (see the section "How is OJE Done Here?")

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In contrast to hygiene, the motivators tend to be long lasting,
are available from limited sources, and do not need constant
reinforcement to be effective. For easy reference and comparison,
the following table contrasting the dynamics of hygiene and
motivators is provided:

DYNAMICS OF HYGIENE FACTORS	DYNAMICS OF MOTIVATION FACTORS
1. EFFECTS:	1. EFFECTS:
Dissatisfaction when at some low level. No job dissatisfaction at the high level.	Personal satisfaction through psychological growth when present.
2. TYPE OF BEHAVIOR	2. TYPE OF BEHAVIOR
Avoidance	Approach
3. SOURCE:	3. SOURCE:
Environment	Tasks or job content
4. NO. OF SOURCES:	4. NO. OF SOURCES:
Infinite	Finite or limited
5. TYPE OF FEELING:	5. TYPE OF FEELING
Less than someone else	More than one was before
6. DURATION:	6. DURATION:
Short Term	Long Term
7. PSYCHOLOGICAL FUNCTION	7. PSYCHOLOGICAL FUNCTION
Cyclical	Additive or cumulative
8. ZERO POINT:	8. ZERO POINT:
Escalating	Nonescelating
9. OVERALL ANSWER:	9. OVERALL ANSWER:
None -- pain built into your biology	More answer to meaning and contentment in life

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The Challenge

This summary provides most of the highlights of the theory supporting the job enrichment program. We iterate that for a complete understanding of the theory, the reader should consult the sources listed in the back of this handbook. One other point is that job enrichment is either not in the answer or will not be effective if motivation is not part of the question. Applying motivation to a job is a necessary but not sufficient condition for motivated performance. If the people hired to do a task are not skilled in the areas needed, then the most enriched job in the world won't get performance. Similarly, if the workers are "hurting" very badly, if there is excessive dissatisfaction, if we are pitifully managing hygiene, then we should not expect the worker to provide us with motivated performance. However, if the hygiene is at acceptable levels, and our people are competent, then a lack of performance is likely due to a deflated, unchallenging job, and job enrichment (or enlivenment) is the answer.

In summary, it is important to always keep in mind that the two continua are separate, distinct, and represent equally important noncompetitive need systems with unique dynamics. Therefore, our management approach to the two must be different and we must be careful not to confuse the two continua in our management actions.

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WHY OJE IN AFLC?

Continuing pressure to do more within existing resources led to an investigation of ways to increase employee productivity in AFLC.

At Ogden ALC, research and analysis of published literature, U.S. Government and industry programs, and past Ogden ALC programs, led to a proposal for a new approach to motivation. This proposal was presented to the Ogden ALC Commander and the Executive Council and approved on a conceptual basis in May 1973.

In September 1973, an ad hoc committee was established to further develop the proposed Ogden ALC program. In addition, contact was made with Dr Frederick Herzberg of the University of Utah in order to determine if he and/or his staff would be available for assistance to the program.

Dr Herzberg was receptive to their request and agreed to assist in the implementation of a trial program at Ogden ALC. So, in January of 1974, Ogden ALC contracted with Herzberg and Associates for extensive training in the motivation-hygiene theory and the application of Orthodox Job Enrichment. The next month, the initial keyman training started. Sixteen keymen representing the various directorates received 120 hours of training in the theory and application of Orthodox Job Enrichment. At the conclusion of the training, eleven pilot projects were selected for application of the principles of job enrichment.

Results from these projects were encouraging and 16 more projects were begun in June 1974. The program was increasingly successful over time. The following chart (Figure 1) reflects the growth of the program at Ogden.

In June 1976, the decision was made to apply OJE command-wide because it demonstrated consistent results and a universally applicable approach. A letter from General Rogers, 10 July 1976, reflected this decision and expressed his desire to apply OJE throughout the command. An implementation plan was prepared and published in September 1976. The plan calls for a time-phased expansion both in terms of when each base begins, and expansion within each base.

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OGDEN ALC OJE PROGRAM

	Apr 74	Jan 75	Jan 76	Jan 77
Projects	11	18	46	64
Keymen*	16	(4) 16	(4) 25	(25) 25
Cost	$ 70,000	$170,000	$654,000	$1,109,000
Benefits	$ 0	274,000	903,000	2,747,000
Workers Impacted	425	607	2152	3584

- Data is cumulative for the month indicated.

*Number of Keymen on board and number ( ) that have been rotated.

Figure 1

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The Need for OJE

There is one more aspect to answer "Why Orthodox Job Enrichment". It deals with the necessity for such a program. In the recent DOD experience of decreasing manpower with a relative increase in workload, there is obviously a need to be more efficient in the use of our resources. Job enrichment accomplishes increased efficiency in the work force in two ways. By providing more meaningful jobs for the workers, the organization is immediately better off because its work force is doing more and using more of their human abilities. Second, the organization profits by reaping the gains of a more motivated work force. That is, the same people provide more and better output per time period. The point that makes job enrichment so particularly exciting is that it also has big payoffs for the worker. Like the organization, he gets dividends because he now has a personally rewarding and meaningful experience at work.

Put another way, OJE gives us the means to reconcile two concerns previously thought to be diametrically opposed. The two are productivity and quality of work life. These two issues have become more and more important in recent years. The management principles of OJE bring these two issues together and indeed make it imperative that we treat these issues as interrelated and simultaneously solvable problems. Dr Herzberg does this when he describes the challenge of OJE as "to be efficient and to be human". The model in Figure 2 depicts this interrelatedness.

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ENCL 1

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ORTHODOX JOB ENRICHMENT

	EFFICIENT	HUMAN
MOTIVATORS	MOTIVATED PERFORMANCE	GROWTH
HYGIENE	FAIR DAYS WORK	DECENT TO BE DECENT

"TO BE EFFICIENT AND TO BE HUMAN"

Figure 2

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HOW IS OJE DONE IN AFLC

Interpreting theory to its practical application is always a difficult task. To do so, the interpreter must have a thorough understanding of the theoretical and also a unique ability to translate the theory into usable, applicable form. In this section, we are faced with the task of outlining how we make use of the concepts and ideas behind job enrichment. First, we will discuss how the theory translates into goals for the enrichment process; second, the process we follow in implementing job enrichment and the staffing that exists to sustain the effort; and third, we will provide an example of how the job enrichment process works.

The Real Life Terms of Enrichment

The goal of the job enrichment process is to enrich jobs. What does it mean to enrich a job? How can you tell if a job is enriched? How can you tell if a job is ailing? Theoretically, we would say: Does a job contain a large dose of the motivators, or is it lacking the motivators? Practically, we can zero in on certain elements of a job that are derived from the motivators but are easier to deal with in the real world and less ambiguous than terms such as opportunity for growth, achievement, responsibility, and advancement. Some of these are:[9]

a. Direct Feedback. The employee should know directly (not by way of one, two, three, or four supervisors) and as quickly as possible whether his performance is acceptable or not.

b. Client Relationship. The worker should have someone to serve besides making his boss happy or playing the regulations tune.

c. New Learning. A job should offer a person a chance to gain new learning. An important point here is that real growth occurs not from learning the same thing or similar things many times, but from learning new relationships and new concepts in new areas.

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9 Frederick Herzberg, "The Wise Old Turk", *Harvard Business Review* (September-October 1974)

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d. _Scheduling_. The opportunity to schedule his workload, as only he knows is best, is another key element.

e. _Unique Expertise_. Each worker has individual abilities; let's not make him like everyone else and everyone else like him by routinizing jobs down to the mirco second or micro movement.

f. _Control over Resources_. Place responsibility for costs, maintenance, etc., to the people who use the resources.

g. _Direct Communication Authority_. Allow the worker to deal directly with those people with whom he needs to work to accomplish his job.

h. _Personal Accountability_. In many instances, we have developed control systems or procedures that, in effect, serve to take any responsibility for performance away from the worker and put it on the system. Each person should be personally responsible and accountable for his or her performance.

The above "ingredients of a good job" are indicators that we should look for in our jobs and our employee's jobs. What we attempt to do in job enrichment is include as many of these ingredients as possible into each person's job.

A Conceptual Model of the OJE Process

Another way of viewing the implication of job enrichment theory for practical application is the following diagram which demonstrates the enriching process for a job as it currently exists. The concept displayed is the effort to give a worker a complete job or job module. Note how Figure 1 relates to the elements of an enriched job described above.[10]

10 Robert N. Ford, _Motivation Through the Work Itself_ (New York: American Management Association, Inc., 1969), page 157.

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```
┌─────────────────────────────────┐
│           PULL DOWN             │
│        RESPONSIBILITIES         │
│          FROM ABOVE             │
│                                 │
│  1.  PLANNING WORK              │
│  2.  GOAL SETTING               │
│  3.  QUALITY ASSURANCE CHECKS   │
│  4.  DECISION MAKING            │
│  5.  METHODS IMPROVEMENT        │
│  6.  PROBLEM SOLVING            │
└─────────────────────────────────┘
                 │
                 ▼
       ┌─────────────────────┐
       │    ENRICHED JOB     │
       │                     │
       │   ┌─────────────┐   │
       │   │ PRESENT JOB │   │
       │   └─────────────┘   │
       │                     │
       └─────────────────────┘
```

┌─────────────────────┐   ┌─────────────────────┐
│ PUSH EARLIER   │   │ PULL LATER WORK   │
│ WORK STAGES   │   │ STAGES BACK   │
│ INTO THE JOB   │   │ INTO THE JOB   │
│   │   │   │
│ 1. WORK PLANNING │   │ 1. INSPECTIONS   │
│ 2. SCHEDULING   │   │ 2. PROOF READING │
│ 3. WORK LAYOUT   │   │ 3. DECISION   │
│ 4. COORDINATING   │   │   MAKING   │
└─────────────────────┘   └─────────────────────┘

```
       ┌─────────────────────────┐
       │        PUSH WORK        │
       │   ON DOWN TO LOWER      │
       │   JOB CLASSIFICATION    │
       │                         │
       │   1.  CLEAN UP DETAILS  │
       │   2.  FILING            │
       │   3.  TYPING            │
       └─────────────────────────┘
```
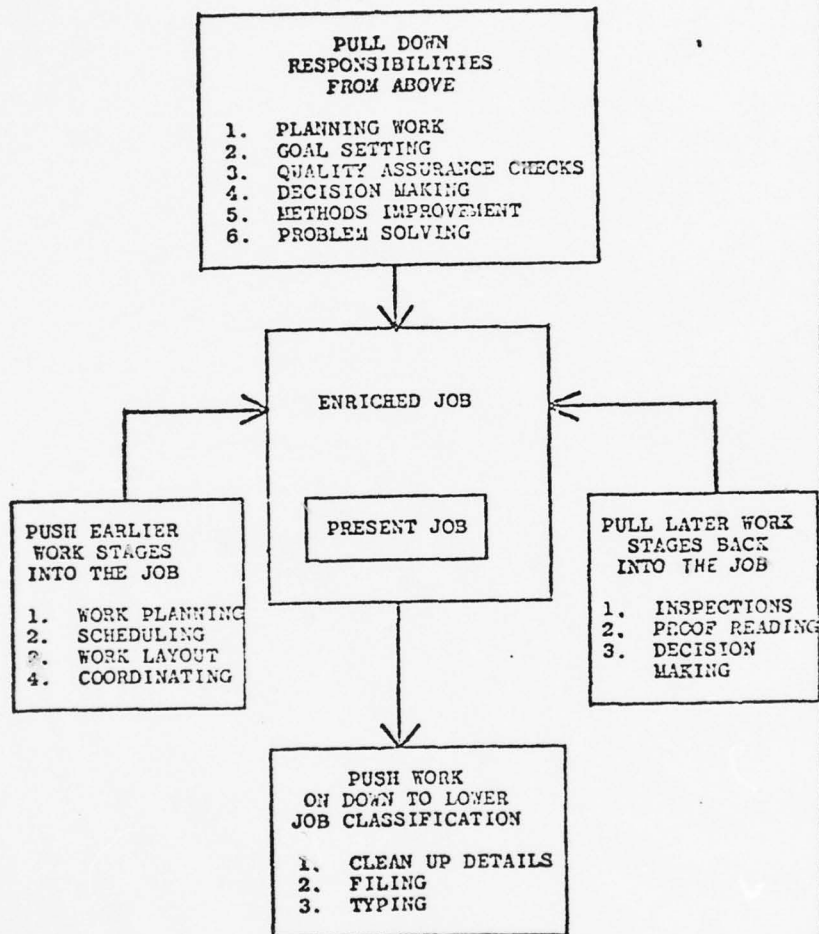
Figure 3

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Implementation of OJE

We have the challenge (increase motivation and obtain increased efficiency). We have the process (job enrichment). We know how to distinguish an enriched job from a poor one. Now, how do we implement job enrichment?

Unlike most approaches, the strategy of Orthodox Job Enrichment is to start at the bottom of the management pyramid and work up. First-line supervisors are involved in enriching the jobs of the line workers. Later, upper level management applies the OJE principles to the management of the first-line supervisors, and so on. This approach is necessary because enrichment of one level has an unavoidable impact on the jobs of the immediate supervisors. Additionally, the bulk of the work force is on the line and this is where the most deflated jobs exist.

A pivotal person in the enrichment process is the keyman. Each directorate has one or more keymen. Keymen are individuals from within the organization who have had extensive training in job enrichment theory and application and have a broad knowledge of the functions and operations of the directorate within which they operate. They serve as specialists and consultants to management in the implementation of OJE. In the OJE process, they are involved extensively at first, but to a decreasing degree as the approach becomes more of an accepted and adopted strategy.

Implementation is on a project basis. Projects are approved by directors, usually on recommendation of keymen, division chiefs, or line supervisors. The first phase in the project is the establishment of implementing and coordinating committees. The implementing committee is comprised of the supervisor of the area to be enriched (the key supervisor) and other first and second level supervisors who can be of assistance in the implementation of job enrichment. Size of the implementing committee varies from four to eight. The coordinating committee is made of middle and upper level management with which the unit involved interfaces. Typically, it consists of four to eight members. The keyman serves as advisor to both groups.

After selection of the committees, the keyman conducts training in the motivation-hygiene theory. Training usually consists of 30 to 40 hours of theory including classroom exercises to high-light the major points of the instruction.

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Following the training effort, the implementing group has the
task of enriching the jobs under consideration. The technique
used is called greenlighting and redlighting. Greenlighting, or
brainstorming, utilizes the concept of deferred judgment. The '
purpose is to generate as many ideas as possible about how to instill
motivators into the jobs. After a list of perhaps two to three
hundred has been greenlighted, the group enters a redlight session.
Here the ideas are evaluated to determine which will be considered
for immediate implementation, which will be kept for possible future
implementation, and which will be discarded.

The implementation of the accepted greenlight items is the area
where the coordinating committee can be most useful. Having been
trained in the theory, this committee can now understand the
strategy behind the changes suggested by implementing committee and
be of assistance in removing roadblocks to implementation. The
coordinating committee also develops the measurement plan for the
project. Important points to note in this process are the relation-
ships and roles of the keyman, the key supervisor, and upper level
management. It is the keyman's responsibility to train the key
supervisor and to offer him guidance as he adopts a new approach
to managing his people. The responsibility for running the unit
always rests with the supervisor in charge. The keyman serves in
a consultant role here as someone that offers sound, usable advice,
but is not responsible for the actual function of the unit. The
keyman serves another function as an impartial observer who often is
able to help those caught up in the day-to-day routine of the operation
see better ways to accomplish their missions. Upper level management,
as members of the coordinating committee, provide important assistance
to the project by making it possible for the key supervisor to make
the changes he has decided are needed. They will also need to make
adjustments to their management strategy as more and more of their
employees have their jobs enriched. The keymen, key supervisors,
and the key supervisors' managers form a team, each with his own role,
ability, and responsibility in the ongoing task of managing by this
new strategy.

An Example of A Project -- OJE in Action

This is the rough outline of how a project is run. To provide a
better feel for the real-world application, the following descrip-
tion of an actual project is provided:

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The Warehouse and Receiving Branch (DSEO) of the Installation
Equipment Management Division receives, issues, inspects, stores,
picks up, and delivers installation and individual equipment for
Ogden ALC. This branch was selected as a pilot project in February
1974. There are 24 people in the branch. This area was chosen as a
pilot because it was experiencing a high turnover rate, low pro-
ductivity, and processing problems. All of these are indicative
of sick jobs rather than unqualified people.

Besides the section chiefs of the two sections being enriched, the
implementing committee included a section chief from one of the
other warehouse divisions, the engineering standards representative
for the branch, the quality supervisor over the area, and a section
supervisor from another branch that has some impact on the branch
under study. The coordinating committee was made up of the Instal-
lation Equipment Management Division Chief, all three DSE branch
chiefs, a branch chief from Depot Supply whose branch performs a
similar function, and the classifier from Personnel for the area.

The keyman on the project provided both groups with 20 hours of
training on the motivation-hygiene theory utilizing video tapes
and guidebooks prepared by Dr Herzberg. After completion of the
formal training, a series of greenlight (brainstorming) sessions
were held to come up with as many ways as possible to instill
motivators into the jobs. Over 250 ideas were generated in these
sessions. After redlighting (evaluating) this list, the following
are some of the changes and their accompanying motivator(s) that
were proposed to be accepted by the coordinating committee:

ITEM	FACTORS
Redesigned work flow	Responsibility, growth, achievememt, work itself, internal recognition
Allowed workmen to do their own work scheduling	Responsibility, achievement
Allowed workmen to schedule their own break periods	Responsibility
Assigned individual drivers specific vehicles and assigned responsibility for first level maintenance, gas, and repair budgets	Responsibility, work itself, achievement, personal recog- nition

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ITEM	FACTORS
Established formal training and OJT in inspection principles and techniques	Growth and learning, work itself, responsibility, achievement
Gave equipment technicians and warehousemen/drivers inspection functions	Work itself, responsibility, achievement
In process of establishing career visibility through cross training	Growth, achievement
In process of establishing career progression, WG-4 to WG-8	Advancement opportunity

A conceptual tool to view the effect of OJE on the job is the use of a flow diagram which traces the progress of the work through the warehouse section. Figure 4 shows the work flow prior to the job enrichment effort and Figure 5 shows it after the effort. Notice how the worker now has much added responsibility, personal accountability, and challenge in his job.

This kind of effort to redesign jobs according to OJE principles is not without payoff to management and to the worker. Based on projections resulting from reassignment of two inspectors and one warehouseman, this project will save the branch approximately $38,000 yearly. Not a bad return on the $8,500 investment in salary for the keyman and supplies used in the project. As for the worker, well, these comments about how he views his job now are typical:

> "Before OJE, this job was boring and unchallenging. Now that I have some real responsibility and a real job to do, it's a lot easier to get up in the morning. Also, when the IG comes through to inspect the records, I know they will find them all in order and that means something to me."

In summary, we have seen how we implement, what the goals of implementation are, and a real live example of a project. We have seen how, when done correctly, OJE gives the worker a job to do that provides him with the motivation to work because the job provides

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JOB BEFORE REDESIGN

Figure 4

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JOB AFTER REDESIGN

DSFOW WAREHOUSE   ISSUE/RECEIPT

WAREHOUSEMAN/DRIVER

DOCUMENT
CONTROL
CLERK

LOG IN → DETERMINE PRIORITY SCHEDULE → PULL MATERIAL → DELIVER OR RECEIVE → INSPECT/CLASSIFY
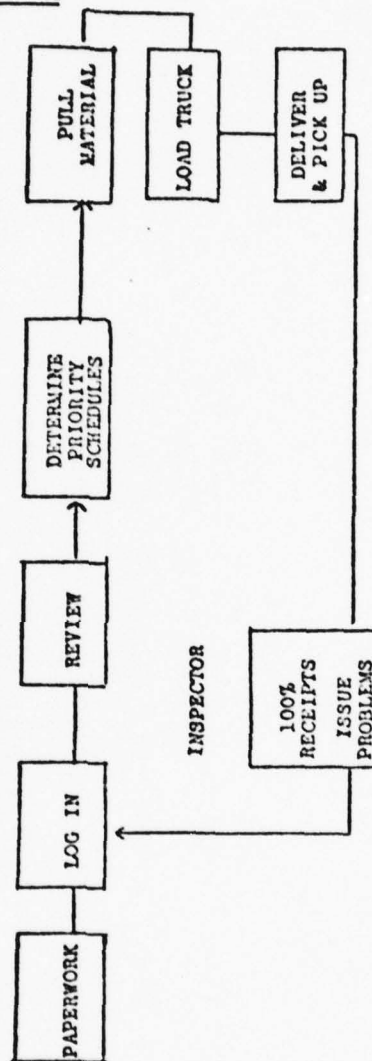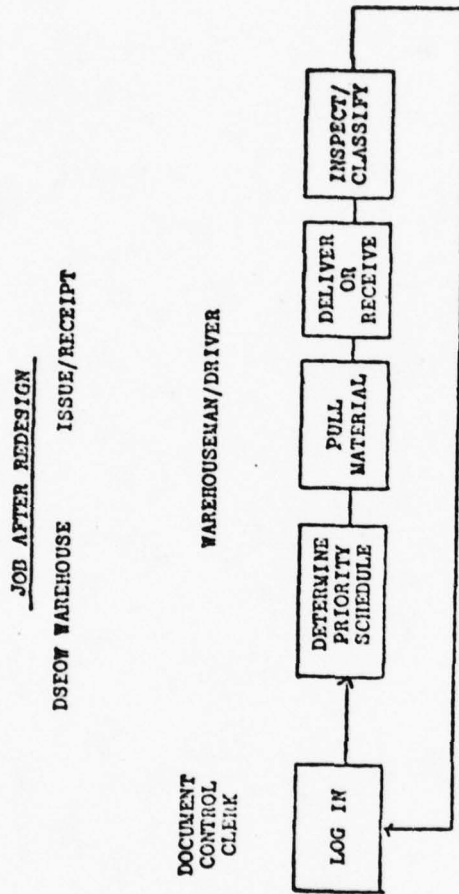
Figure 5

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a means to meet his human need of psychological growth. The
supervisor now is able to return to doing supervisory functions
and get away from babysitting functions. He is managing a dynamic
group of workers who have responsible jobs. The supervisor now
can differentiate between things that prevent unhappiness and things
that can offer satisfaction to his employees. Higher levels of
management reap the benefits of motivated performance from worker's
and lower levels of management. Their own jobs are enriched as
they find more time available for executive level functions and
leave the lower level functions to lower level management. It
all sounds nice, and it is; but we would be remiss if we didn't
leave you with some frank statements of what OJE is not. OJE is a
powerful tool and a necessary management strategy, but it is limited.
The following statements serve to place OJE in its proper perspec-
tive and point out some of the constraints and difficulties in
applying OJE:

a. OJE is not a panacea for all of management's ills.

b. Orthodox Job Enrichment is not easy. It is work.

c. It is not effective if there is not a healthy workload
and a real desire by management to be efficient. You cannot
motivate people to do nothing or meaningless work.

d. The purpose is to better utilize people's talents, not
to find excess positions.

e. OJE is not a program for building grades or organizations;
to the contrary, it is meant to provide more complete and stronger
position structuring. Misuse of the program must be avoided.

f. It is not a duplication of other planning, industrial
engineering, or management analysis functions, it is a new approach
to management to be adopted by the supervisor and manager.

g. You cannot apply a cookbook solution to the problem of
motivation.

h. Orthodox Job Enrichment must be accepted by the supervisor
as his own management philosophy, not as an installation program.

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APPENDIX A

HOW OJE IS MEASURED

In order to have feedback for ourselves on how successful our OJE projects are, to be able to assess our progress, and to have a sound basis for reenforcing top management, it is necessary to measure the impact of our projects and the program as a whole. In this section, we will highlight the organization and procedures established for measurement, including appropriate examples of these areas and levels.

Measurement Guidance

Direction for measurement efforts is basically provided through two sources. As part of their initial three-week course, the keymen are given training on techniques for measuring. Also, they are briefed on previous projects, including what indicators were used in these projects to measure the impact of the OJE effort. A second source of direction is policy on measurements, as expressed in DPCJ letter, Project Measurement, published by the AFLC OJE Office. These documents map out a commonality of approach to measuring OJE results and define the parameters used to evaluate the program in each directorate and for the ALC. Integral parts of the training and policy are an emphasis on being as scientifically valid as feasible, and the placement of responsibility for a measurements plan in the hands of the coordinating committee for each project.

Level and Areas of Measurement

In measuring the effect and value of the OJE effort, there are two levels to consider. One level is the project, or micro, level. Here we are concerned about indicators that show us if we have made any progress as a result of the changes from job enrichment. At the overall program, or macro level, we are interested in assessing the development of the program and in comparing all enriched areas with the rest of the ALC.

Within each project, we look for change to be reflected in three areas:

a. Quality of work life for the employee.

b. Productivity of the employee and/or unit.

c. Quality of the work produced.

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Quality of work life for the employee is measured by such indicators as sick leave usage and trends, turnover rates, job satisfaction audits and testimonials from both workers and supervisors.

Increases in productivity are often associated with OJE projects. In general, any information system that provides accurate productivity data for the unit may be used to track changes in productivity. Some of the productivity increases in various projects noted to date are flow time, reduced overtime, number of units produced, and decreased use of manpower.

Quality of the product put out by the unit is measured by such indicators as customer quality surveys, rework rates, material usage, and numbers of errors or discrepancies.

Evaluation of the total OJE Program is accomplished by looking at progress towards institutionalization, comparison of enriched areas with the rest of the ALC and comparison of costs with benefits.

Institutionalization is achieved as OJE is accepted as the management strategy for dealing with people and work flow across the ALCs. Indications of this include improvement in ALC macro measures, more utilization of keymen as consultants, former keymen as functional managers, and more humane hygiene practices evidenced in part by fewer grievances and complaints. Sick leave usage and trends, critical incident surveys and numbers of disciplinary actions are areas where enriched units as a composite are compared with the rest of the ALC. Total costs and total benefits of the program are aggregated monthly.

By utilizing the above approaches and measures, we are able to track and evaluate the success and progress of our OJE effort at all levels. Specific information in this area is available from directorate keymen and the ALC OJE Office.

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GLOSSARY OF TERMS

The following terms are defined according to their meaning when used in conjunction with Orthodox Job Enrichment:

Abraham: An archetype used by Herzberg to represent the "human" side of man's nature, the nature of man that responds to the motivators.

Adam: An archetype used by Herzberg to represent the "animal" side of man's nature, the nature of man that responds to the hygiene or maintenance factors.

Coordinating Committee: A group of middle and upper level managers who expedite changes proposed by the implementing group and remove roadblocks to implementation of job enrichment.

Dissatisfiers: Factors surrounding a job that lead to employee dissatisfaction or cause unhappiness. The removal of these dissatisfiers cannot lead to job satisfaction.

Greenlighting: A technique of generating ideas for job restructure by utilizing the concept of deferred judgment (brainstorming). Used by implementing committees to come up with ways to instill motivators into jobs.

Hygiene: Refers to factors that affect the job surrounding or the environment of the job. Called hygiene because it is necessary to keep workers from becoming unhappy but does not lead to any satisfaction (see maintenance factors or dissatisfiers).

Implementing Committee: A group consisting of mostly first line management and other specialists who have the responsibility to develop and implement changes to the worker's jobs.

Job Enrichment: A motivation theory aimed primarily at restructuring jobs to provide employees with work that is in and of itself rewarding, stimulating, and therefore motivating. Job enrichment may be pursued through several strategies (see Orthodox Job Enrichment).

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KITA: Stands for kick in the "pants". Refers to a traditional carrot-and-stick approach to management, when the motivation to work is some intrinsic reward or threat. KITA comes in either psychological or physical varieties and may be doled out in positive or negative flavors.

Less Than/More Than: This is roughly equivalent to feeling inferior or superior to someone. For instance, many people feel "less than" their neighbors because they have a smaller house or car.

Maintenance Factors: Factors affecting a job which keep the workers going. They are not part of the actual job, but keep the worker in a posture to do the meaningful work (see hygiene or dissatisfiers).

Motivation: Providing the employee with his own internal generator. Giving the employee a job he wants to do because doing the job is a meaningful and important goal to him.

Motivation-Hygiene Theory: The theoretical basis for Orthodox Job Enrichment. The theory centers on a concept of man having a dual nature and states there are motivation and hygiene factors that are distinctly separate.

Motivators: Factors affecting a job that are concerned with the work itself. These items may lead to satisfaction or happiness for the employee on his job. If not present, the employee is deprived of satisfaction and also motivation (see satisfiers).

Movement: Threatening or bribing an employee to do his job using something external to the job itself. Using the carrot or stick to get employees to perform.

Orthodox Job Enrichment: The management strategy and process of job enrichment as developed by Dr Herzberg. The strategy uses all levels of management in planning and implementing job changes.

Psychological Growth: This relates to the Abraham, or the human, nature of man. The capacity for the seeking of psychological growth is the basis for the motivators in the motivation-hygiene theory.

Redlighting: The process of evaluating the ideas which come from greenlight sessions.

Satisfiers: Aspects of the job that provide satisfaction to the worker. These things are feedback in the work itself (see motivators).

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Video Tapes

Motivation: The Management of Success, Tapes 1-10, with Dr Frederick Herzberg; Advanced Systems Incorporated, Elk Grove Village, Illinois.

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The Motivation to Work: The Ingredients of A Good Job, with
Dr Frederick Herzberg and Roy Walters; Advanced Systems Incorporated,
Elk Grove Village, Illinois.

   Note: Both of the above have accompanying student
          and instructor guides.

OJE -- Ogden Style, with Major General Edmund Rafalko and
Dr Frederick Herzberg; USAF Film, VRD0869/5396CH (produced by
Ogden ALC).

OJE -- What Do Employees Think, with General F. Michael Rogers,
Major General Edmund Rafalko, and Dr Frederick Herzberg;
USAF Film VR677d (produced by Ogden ALC).

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APPENDIX B

Job - Attitude /
Job Diagnostic Survey

November 1977

APPENDIX B

PRIVACY ACT STATEMENT

THE NAVY IS VERY INTERESTED IN IMPROVING WORKING CONDITIONS WITHIN ITS COMMANDS, PROMOTING EXCELLENCE AND PERFORMANCE, AND INCREASING THE SATISFACTION OF PERSONNEL TOWARD NAVY LIFE. UNDER THE AUTHORITY OF 5750301, AS REFLECTED IN OPNAV NOTICE 5450 OF 17 APRIL 1975, INFORMATION IS REQUESTED REGARDING YOUR PERSONAL OPINIONS CONCERNING YOUR PRESENT JOB. THIS INFORMATION WILL BE USED FOR RESEARCH PURPOSES ONLY. IN NO CASE WILL AN INDIVIDUALS RESPONSES BE USED IN MAKING DECISIONS AFFECTING HIM/HER PERSONALLY. YOU ARE NOT REQUIRED TO PROVIDE THIS INFORMATION; YOUR PARTICIPATION IS VOLUNTARY.

JOB ATTITUDE/DIAGNOSTIC SURVEY

This questionnaire was derived from the following two instruments:

1. JOB ATTITUDE SURVEY - UMSTOT/ROSENBACH, 1977

2. JOB DIAGNOSTIC SURVEY - HACKMAN/OLDHAM, 1974

The purpose of this survey is to help determine how jobs can be better designed by obtaining information about how people react to different kinds of jobs.

On the following pages you will find several different kinds of questions about your job. Specific instructions are given at the start of each section. Please read them carefully. Please move through the questionnaire quickly.

The questions are designed to obtain your perceptions of your job and your reactions to it.

There are no "trick" questions. Your individual answers will be kept completely confidential. Please answer each item as honestly and frankly as possible.

Thank you for your cooperation.

MAKE NO MARKS IN THIS BOOKLET. MARK ALL ANSWERS ON THE ANSWER SHEET PROVIDED.

For more information about this questionnaire and its use, please contact:

LIEUTENANT ROBERT B. PINNELL, USN
Human Resource Management Detachment
Naval Base, Building NH-46
Charleston, S. C. 29408
Phone: (803) 743-4461

MR. EDMUND D. THOMAS
Navy Personnel Research and Development Center
San Diego, CA. 92152
Phone: (714) 225-2396

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead, try to make your descriptions as accurate and as objective as you possibly can.

A sample question is given below.

A. To what extent does your job require you to work with mechanical equipment?

```
1--------2--------3--------4--------5--------(6)-------7
```

Very little; the
job requires almost
no contact with
mechanical equip-
ment of any kind.

Moderately

Very much; the job
requires almost
constant work with
mechanical equipment.

You are to circle the number which is the most accurate description of your job on the answer sheet.

If, for example, your job requires you to work with mechanical equipment a good deal of the time - but also requires some paperwork - you might circle the number 6, as was done in the example above.

If you do not understand these instructions, please ask for assistance. If you do understand them, turn the page and begin.

SECTION ONE

1. To what extent does your job require you to work closely with other people (either clients, or people in related jobs in your own organization?)

```
1--------2--------3--------4--------5--------6--------7
```

Very little; dealing with other people is not at all necessary in doing the job.	Moderately; some dealing with others is necessary.	Very much; dealing with other people is an absolutely essential and crucial part of doing the job.

2. How much autonomy is there in your job? That is, to what extent does your job permit you to decide on your own how to go about doing the work?

```
1--------2--------3--------4--------5--------6--------7
```

Very little; the job gives me almost no personal "say" about how and when the work is done.	Moderate autonomy; many things are standardized and not under my control, but I can make some decisions about the work.	Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

3. To what extent does your job involve doing a "whole" and identifiable piece of work? That is, is the job a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

```
1--------2--------3--------4--------5--------6--------7
```

My job is only a tiny part of the overall piece of work; the results of my activities cannot be seen in the final product or service.	My job is a moderate-sized "chunk" of the overall piece of work; my own contribution can be seen in the final outcome.	My job involves doing the whole piece of work, from start to finish; the results of my activities are easily seen in the final product or service.

2

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SECTION ONE

4. How much variety is there in your job? That is, to what extent does the job require you to do many different things at work, using a variety of your skills and talents?

1---------2---------3---------4---------5---------6---------7

Very little; the
job requires me
to do the same
routine things
over and over
again.

Moderate
variety.

Very much; the
job requires me
to do many different
things, using a
number of different
skills and talents.

5. In general, how significant or important is your job? That is, are the results of your work likely to significantly affect the lives or well-being of other people?

1---------2---------3---------4---------5---------6---------7

Not very significant;
the outcomes of my work
are not likely to have
important effects on
other people.

Moderately
significant.

Highly significant;
the outcomes of my
work can affect other
people in very important
ways.

6. To what extent do managers or co-workers let you know how well you are doing on your job?

1---------2---------3---------4---------5---------6---------7

Very little; people
almost never let me
know how well I am
doing.

Moderately;
sometimes people
may give me
"feedback";
other times
they may not.

Very much; managers
or co-workers provide
me with almost
constant "feedback"
about how well I am
doing.

3

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SECTION ONE

7. To what extent does doing the job itself provide you with information about your work performance? That is, does the actual work itself provide clues about how well you are doing—aside from any "feedback" co-workers or supervisors may provide?

```
1---------2---------3---------4---------5---------6---------7
```

Very little; the
job itself is set
up so I could work
forever without
finding out how
well I am doing.

Moderately; some-
times doing the
job provides
"feedback" to me;
sometimes it does
not.

Very much; the job
is set up so that
I get almost constant
"feedback" as I work
about how well I am
doing.

8. How clear and specific are the goals for your job? That is, do you know the specific goals you are expected to accomplish. (Goals or objectives are the end results that guide your job effort, such as repairing a certain number of components per day, completing an assigned project, etc.).

```
1---------2---------3---------4---------5---------6---------7
```

Not very clear;
I do not know
what the goals
are.

Somewhat clear;
although the goals
are not specific,
I think I know
what the goals are.

Very clear; I know
exactly what the
goals are.

9. To what extent are your goals or work objectives difficult to accomplish?

```
1---------2---------3---------4---------5---------6---------7
```

Very easy; I
can accomplish
the goals with
minimum effort.

Moderately
difficult to
accomplish.

Very difficult; the
goals are almost
impossible to
accomplish.

4

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SECTION ONE

10. To what extent do you accept the work objectives or goals for your job?

1---------2---------3---------4---------5---------6---------7

Very little;
I ignore the
goals and do
as I please.

Moderately,
I sometimes
accept the
goals.

Very much; I
accept almost
all goals.

11. To what extent do you have influence in the determination of your work objectives or goals?

1---------2---------3---------4---------5---------6---------7

Very little;
I have little
say in deter-
mining my goals.

Moderately;
I have some
influence in
determining
my goals.

Very much; I have
a great deal of
influence in
determining my
goals.

12. How much feedback and guidance do you receive concerning the quantity and quality of your work?

1---------2---------3---------4---------5---------6---------7

Very little;
I receive almost
no feedback
concerning my
goals.

Moderate
feedback.

Very much; I receive
constant feedback
concerning my goals.

5

143

SECTION TWO

Listed below are a number of statements which could be used to describe a job.

You are to indicate whether each statement is an accurate or inaccurate description of your job.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your job - regardless of whether you like or dislike your job.

Circle the appropriate number on the answer sheet, based on the following scale:

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

13. The job requires me to use a number of complex or high-level skills.

14. The job requires a lot of cooperative work with other people.

15. The job is arranged so that I do not have the chance to do an entire piece of work from beginning to end.

16. Just doing the work required by the job provides many chances for me to figure out how well I am doing.

17. The job is quite simple and repetitive.

18. The job can be done adequately by a person working alone - without talking or checking with other people.

19. The supervisors and co-workers on this job almost never give me any "feedback" about how well I am doing my work.

20. This job is one where a lot of other people can be affected by how well the work gets done.

21. The job denies me any chance to use my personal initiative or judgement in carrying out the work.

22. Supervisors often let me know how well they think I am performing the job.

6

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SECTION TWO

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

23. The job provides me the chance to completely finish the pieces of work I begin.

24. The job itself provides very few clues about whether or not I am performing well.

25. The job gives me considerable opportunity for independence and freedom in how I do the work.

26. The job itself is not very significant or important in the broader scheme of things.

27. My work goals or objectives are very clear and specific; I know exactly what is expected of me.

28. My work goals will require a great deal of effort from me to complete them.

29. It will take a high degree of skill and know-how on my part to fully attain my work objectives.

30. I understand fully which of my work goals or objectives are more important than others; I have a clear sense of priorities on these goals.

7

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SECTION THREE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your *own*, personal *feelings* about your job by marking how much you agree with each of the statements.

Circle the appropriate number on the answer sheet for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

31. It's hard, on this job, for me to care very much about whether or not the work gets done right.

32. My opinion of myself goes up when I do this job well.

33. Generally speaking, I am very satisfied with this job.

34. Most of the things I have to do on this job seem useless or trivial.

35. I usually know whether or not my work is satisfactory on this job.

36. I feel a great sense of personal satisfaction when I do this job well.

37. The work I do on this job is very meaningful to me.

38. I feel a very high degree of personal responsibility for the work I do on this job.

39. I frequently think of quitting this job or asking for a transfer.

40. I feel bad and unhappy when I discover that I have performed poorly on this job.

41. I often have trouble figuring out whether I'm doing well or poorly on this job.

8

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SECTION THREE

How much do you agree with the statement?

```
1------------2------------3------------4------------5------------6------------7
Disagree     Disagree     Disagree     Neutral      Agree        Agree        Agree
Strongly                  Slightly                  Slightly                  Strongly
```

42. I feel I should personally take the credit or blame for the results of my work on this job.

43. I am generally satisfied with the kind of work I do in this job.

44. My own feelings generally are not affected much one way or the other by how well I do on this job.

45. Whether or not this job gets done right is clearly my responsibility.

46. In this organization people are rewarded in proportion to the excellence of their performance.

47. There is a great deal of criticism in this organization.

9

SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, circle the appropriate number on the answer sheet for each statement.

How satisfied are you with this aspect of your job?

```
1--------2--------3--------4--------5--------6--------7
Extremely  Dissatisfied  Slightly   Neutral  Slightly   Satisfied  Extremely
Dissatisfied            Dissatisfied         Satisfied             Satisfied
```

48. The amount of job security I have.

49. The amount of pay and fringe benefits I receive.

50. The amount of personal growth and development I get in doing my job.

51. The people I talk to and work with on my job.

52. The degree of respect and fair treatment I receive from my boss.

53. The feeling of worthwhile accomplishment I get from doing my job.

54. The chance to get to know other people while on the job.

55. The amount of support and guidance I receive from my supervisor.

56. The degree to which I am fairly paid for what I contribute to this organization.

57. The amount of independent thought and action I can exercise in my job.

58. How secure things look for me in the future in this organization.

59. The chance to help other people while at work.

60. The amount of challenge in my job.

61. The overall quality of the supervision I receive in my work.

10

SECTION FIVE

Now please think of the other people in your organization who hold the same job you do. If no one has exactly the same job as you, think of the job which is most similar to yours.

Please think about how accurately each of the statements describes the feelings of those people about the job.

It is quite all right if your answers here are different from when you described your own reactions to the job. Often different people feel quite differently about the same job.

Once again, circle the appropriate number on the answer sheet for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

62. Most people on this job feel a great sense of personal satisfaction when they do the job well.

63. Most people on this job are very satisfied with the job.

64. Most people on this job feel that the work is useless or trivial.

65. Most people on this job feel a great deal of personal responsibility for the work they do.

66. Most people on this job have a pretty good idea of how well they are performing their work.

67. Most people on this job find the work very meaningful.

68. Most people on this job feel that whether or not the job gets done right is clearly their own responsibility.

11

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SECTION FIVE

How much do you agree with the statement?

1----------2----------3----------4----------5----------6----------7
Disagree   Disagree   Disagree   Neutral   Agree   Agree   Agree
Strongly   Slightly   Slightly   Strongly

69. People on this job often think of quitting.

70. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.

71. Most people on this job have trouble figuring out whether they are doing a good or a bad job.

12

SECTION SIX

Listed below are a number of characteristics which could be present on any job. People differ about how much they would like to have each one present in their jobs. We are interested in learning how much you personally would like to have each one present in your job.

Using the scale below, please indicate the degree to which you would like to have each characteristic present in your job by circling the appropriate response on the answer sheet.

NOTE: THE NUMBERS ON THIS SCALE ARE DIFFERENT FROM THOSE USED IN PREVIOUS SCALES.

4---------5---------6---------7---------8---------9---------10

Would like having this only a moderate amount (or less)

Would like having this very much

Would like having this extremely much

72. High respect and fair treatment from my supervisor.

73. Stimulating and challenging work.

74. Chances to exercise independent thought and action in my job.

75. A high degree of job security.

76. Very friendly co-workers.

77. Opportunities to learn new things from my work.

78. High salary and good fringe benefits.

79. Opportunities to be creative and imaginative in my work.

80. Quick promotions.

13

SECTION SIX

```
4---------5---------6---------7---------8---------9---------10
```

Would like having   Would like having   Would like having
this only a   this very much   this extremely
moderate amount   much
(or less)

81. Opportunities for personal growth and development in my job.

82. A sense of worthwhile accomplishment in my work.

83. Fairly difficult and challenging work assignments.

84. Working as a member of a group rather than by myself.

85. Very high pay.

86. A low-risk job where I do not have to stick my neck out to get ahead.

87. Opportunities to socialize with my co-workers.

88. Working alone on the job instead of with a group of people.

89. A great deal of responsibility.

90. Generous retirement benefits.

91. Working in an open area where I can see and talk to my associates or co-workers.

14

SECTION SEVEN

People differ in the kinds of jobs they would most like to hold. The questions in this section give you a chance to say just what it is about a job that is most important to you.

For each question, two different kinds of jobs are briefly described. You are to indicate which of the jobs you personally would prefer - if you had to make a choice between them.

In answering each question, assume that everything else about the jobs is the same. Pay attention only to the characteristics actually listed. Two examples are given below.

JOB A | | | | JOB B
A job requiring work with mechanical equipment most of the day | | | | A job requiring work with other people most of the day

```
1-----------2-----------③-----------4-----------5
Strongly    Slightly    Neutral     Slightly    Strongly
Prefer A    Prefer A                Prefer B    Prefer B
```

*   *   *   *   *

If you like working with people and working with equipment equally well, you would circle the number 3 on the answer sheet, as has been done in the example.

*   *   *   *   *

Here is another example. This one asks for a harder choice between two jobs which both have some undesirable features.

JOB A | | | | JOB B
A job requiring you to expose yourself to con- siderable physical danger. | | | | A job located 200 miles from your home and family

```
1-----------②-----------3-----------4-----------5
Strongly    Slightly    Neutral     Slightly    Strongly
Prefer A    Prefer A                Prefer B    Prefer B
```

If you would slightly prefer risking physical danger to working far from home, you would circle number 2 on the answer sheet, as has been done in the example.

PLEASE ASK FOR ASSISTANCE IF YOU DO NOT UNDERSTAND EXACTLY HOW TO DO THESE QUESTION.

15

SECTION SEVEN

JOB A		JOB B

92. A job where the pay is very good.

A job where there is considerable opportunity to be creative and innovative.

```
1-----------2-----------3-----------4-----------5
Strongly    Slightly    Neutral     Slightly    Strongly
Prefer A    Prefer A                Prefer B    Prefer B
```

93. A job where you are often required to make important decisions.

A job with many pleasant people to work with.

```
1-----------2-----------3-----------4-----------5
Strongly    Slightly    Neutral     Slightly    Strongly
Prefer A    Prefer A                Prefer B    Prefer B
```

94. A job in which greater Responsibility is given to those who do the best work.

A job in which greater responsibility is given to loyal employees who have the most seniority.

```
1-----------2-----------3-----------4-----------5
Strongly    Slightly    Neutral     Slightly    Strongly
Prefer A    Prefer A                Prefer B    Prefer B
```

95. A job in an organization which is in financial trouble - and might have to close down within the year.

A job in which you are not allowed to have any say whatever in how your work is scheduled, or in the procedures to be used in carrying it out.

```
1-----------2-----------3-----------4-----------5
Strongly    Slightly    Neutral     Slightly    Strongly
Prefer A    Prefer A                Prefer B    Prefer B
```

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SECTION SEVEN

JOB A | JOB B

96. A very routine job. | A job where your co-workers are not very friendly.

1------------2------------3------------4------------5

Strongly Prefer A | Slightly Prefer A | Neutral | Slightly Prefer B | Strongly Prefer B

97. A job with a supervisor who is often very critical of you and your work in front of other people. | A job which prevents you from using a number of skills that you worked hard to develop.

1------------2------------3------------4------------5

Strongly Prefer A | Slightly Prefer A | Neutral | Slightly Prefer B | Strongly Prefer B

98. A job with a supervisor who respects you and treats you fairly. | A job which provides constant opportunities for you to learn new and interesting things.

1------------2------------3------------4------------5

Strongly Prefer A | Slightly Prefer A | Neutral | Slightly Prefer B | Strongly Prefer B

99. A job where there is a real chance you could be laid off. | A job with very little chance to do challenging work.

1------------2------------3------------4------------5

Strongly Prefer A | Slightly Prefer A | Neutral | Slightly Prefer B | Strongly Prefer B

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SECTION SEVEN

JOB A

JOB B

100. A job in which there is a real chance for you to develop new skills and advance in the organization.

A job which provides lots of vacation time and an excellent fringe benefit package.

1————————2————————3————————4————————5
Strongly   Slightly   Neutral   Slightly   Strongly
Prefer A   Prefer A   Prefer B   Prefer B

101. A job with little freedom and independence to do your work in the way you think best.

A job where the working conditions are poor.

1————————2————————3————————4————————5
Strongly   Slightly   Neutral   Slightly   Strongly
Prefer A   Prefer A   Prefer B   Prefer B

102. A job with very satisfying team-work.

A job which allows you to use your skills and abilities to the fullest extent.

1————————2————————3————————4————————5
Strongly   Slightly   Neutral   Slightly   Strongly
Prefer A   Prefer A   Prefer B   Prefer B

103. A job which offers little or no challenge.

A job which requires you to be completely isolated from co-workers.

1————————2————————3————————4————————5
Strongly   Slightly   Neutral   Slightly   Strongly
Prefer A   Prefer A   Prefer B   Prefer B

18

SECTION EIGHT

ATTENTION: The following statements concern the job of your entire work group (team, section, etc.). Please describe the overall job of your work group as objectively as you can.

How accurate is the statement in describing the job of your work group?

1	2	3	4	5	6	7
Very Accurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

104. The overall task of our work group requires us to do many different things which require using a variety of skills and talents.

105. Our work group or team has considerable independence and freedom in how we do the work.

106. Doing the job itself provides us with direct information about how well we perform.

107. A lot of other people are affected by how well we do our job.

108. As a whole our work group uses a number of complex and high-level skills to get the job done.

109. Even when you consider all the tasks we do, we do not have a chance to do a whole piece of work from beginning to end.

110. The way we do our job significantly impacts on the lives or well being of other people.

111. Our work group or team has little chance to use its initiative or judgement in carrying out the work.

112. Our group is able to completely finish the work we start. That is, other groups do not finish the work we begin.

113. Just doing the job provides many chances for use to figure out how well our team as a whole is doing.

19

SECTION NINE

Listed below are a number of statements which could be used to describe your work relationships.

You are to indicate whether each statement is an accurate or an inaccurate description of your work relationships.

Once again, please try to be as objective as you can in deciding how accurately each statement describes your work relationships.

How accurate is the statement in describing your work relationships?

```
1----------2----------3----------4----------5----------6----------7
Very      Mostly    Slightly  Uncertain  Slightly   Mostly     Very
Inaccurate Inaccurate Inaccurate          Accurate   Accurate   Accurate
```

114. There is good rapport between superiors and the subordinates in this organization.

115. I am authorized to communicate with almost anyone in the entire organization.

116. My immediate supervisor communicates with me often.

117. For most situations there is an appropriate directive or regulation.

118. I am encouraged to be innovative in the performance of my tasks.

119. My supervisor provides me with adequate information to perform my job in the best manner.

120. Rewards and encouragement outweigh threats and criticism.

121. The working environment is relaxed.

122. The chain of command is strictly enforced.

123. It is hard to get people higher up in this organization to listen to people at my level.

124. I am encouraged to say what I really think.

125. Strict obedience of orders is important here.

126. The methods I use to do my job are specified in detail by my supervisor or by directives and regulations.

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SECTION TEN

Every employee produces something in his or her work. It may be a "product" or it may be a "service". It is sometimes difficult, however, to identify that product or service. Listed below are some of the products or services produced at your command.

Torpedoes Assembled   Parts processed
Components repaired   Jobs completed
Forms processed   Reports prepared
Procedures written

These are just a few of the products or services found at your command. There are others, of course. We would like you to think carefully of the things you produce, and also of the things produced by those people who work with you in your work group (i.e., everyone who works for your boss).

There is a scale provided for each question. Select the response number (1 thru 5) that most accurately reflects the production in your work group. Circle the appropriate number on the answer sheet.

127. Thinking now of the various things produced by the people you know in your work group, how much are they producing?

1————————	2————————	3————————	4————————	5
It is very low	It is fairly low	It is neither high or low	It is fairly high	Their production is very high

128. How good would you say is the quality of the products or services produced by the people you know in your work group?

1————————	2————————	3————————	4————————	5
The quality is poor	The quality is not too good	The quality is fair	The quality is good	The quality is excellent

129. Do the people in your work group seem to get maximum output from the resources (money, people, equipment, etc.) they have available? That is, how efficiently do they work?

1————————	2————————	3————————	4————————	5
They do not work efficiently	Not too efficient	Fairly efficient	They are very efficient	They are extremely efficient

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SECTION ELEVEN

Listed below are a number of statements which could be used to describe a job or work group.

You are to indicate whether each statement is an accurate or an inaccurate description of your job or work group.

Once again, please try to be as objective as you can deciding how accurately each statement described your job or work group – regardless of whether you like or dislike your job.

How accurate is the statement in describing your job or work group?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

130. Members of my work group would do almost anything to help each other out on the job.

131. I like being (or would like to be) the "expert" in my work group for some system, task, or process.

132. If I were to be transferred to another work group, I would be very happy.

133. I do not want to learn new skills; I would rather just do what I already know how to do.

134. I have a high degree of commitment to my work group.

135. We pride ourselves on being able to produce more work than the other work groups in our command.

136. I am willing to teach my co-workers some of the "tricks of the trade" that I have learned about my specialty.

137. There is a great deal of competition between people in this work group.

138. I would be very upset if the members of my work group were to be split up into other work groups.

139. Members of my work group help each other out to get the job done.

140. There is pressure from others in my work group not to work too hard.

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SECTION ELEVEN

How accurate is the statement in describing your job or work group?

```
1---------2---------3---------4---------5---------6---------7
Very      Mostly    Slightly  Uncertain Slightly  Mostly    Very
Inaccurate Inaccurate Inaccurate          Accurate  Accurate  Accurate
```

141. There is a great deal of competition between work groups around here.

142. The various work groups in this command cooperate closely to get the mission accomplished.

143. Members of my work group do as little work as they can get by with.

144. We check and recheck our work to make sure we have done the job right.

145. When there is a job to be done our work group always tries to outperform the other work groups.

146. I really enjoy being able to learn new skills.

147. There is a great deal of hostility between work groups around here.

148. The members of my work group are very concerned with doing high quality work.

149. Members of my work group are more concerned with their own individual performance than the performance than the performance of the group as a whole.

150. There is a spirit of cooperation between work groups around here.

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SECTION TWELVE

Now please indicate how you personally feel about your job.

Each of the statements below is something that a person might say about his or her job. You are to indicate your own, personal feelings about your job by indicating how much you agree with each of the statements.

How much do you agree with the statements?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

151. I am willing to put a great deal of effort beyond that normally expected in order to help this command be successful.

152. I feel very little loyalty to this command.

153. I feel I would accept almost any type job assignment in order to keep working for this command.

154. I could just as well be working for a different command as long as the type of work was similar.

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SECTION THIRTEEN

For the following questions choose the response that best reflects your feeling about your job. Circle the number that most accurately reflects your feelings.

155. Which one of the following shows how much of the time you feel satisfied with your job?

1. All the time.
2. Most of the time.
3. A good deal of the time.
4. About half of the time.
5. Occasionally.
6. Seldom.
7. Never.

156. Choose one of the following statements which best tells how well you like your job.

1. I hate it.
2. I dislike it.
3. I don't like it.
4. I am indifferent to it.
5. I like it.
6. I am enthusiastic about it.
7. I love it.

157. Which one of the following best tells how you feel about changing your job?

1. I would quit this job at once if I could.
2. I would take almost any other job in which I could earn as much as I am earning now.
3. I would like to change both my job and my occupation.
4. I would like to exchange my present job for another one.
5. I am not eager to change my job, but I would do so if I could get a better job.
6. I cannot think of any jobs for which I would exchange.
7. I would not exchange my job for any other.

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APPENDIX B

SECTION THIRTEEN

158. Which one of the following shows how you think you compare with other people?

1. No one likes his job better than I like mine.
2. I like my job much better than most people like theirs.
3. I like my job better than most people like theirs.
4. I like my job about as well as most people like theirs.
5. I dislike my job more than most people dislike theirs.
6. I dislike my job much more than most people dislike theirs.
7. No one dislikes his job more than I dislike mine.

LIST OF FIGURES

LIST OF TABLES

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