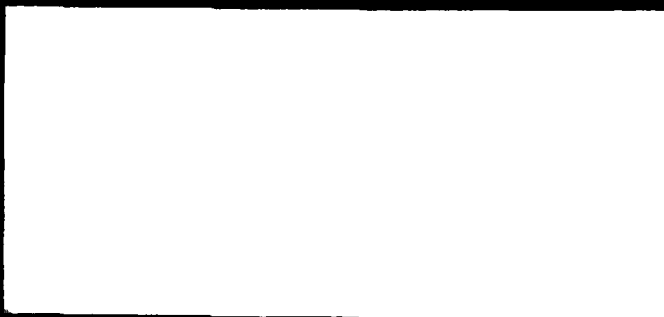


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NAVY ATTRITION AND  
TURNOVER IN PRIVATE INDUSTRY:  
CONCEPTS, MEASUREMENT AND MANAGEMENT

August 1980

by  
J. A. Sheridan  
and  
J. O. Monaghan

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NAVY AND  
PRIVATE SECTOR TURNOVER

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NAVY ATTRITION AND  
TURNOVER IN PRIVATE INDUSTRY:  
CONCEPTS, MEASUREMENT AND MANAGEMENT

by

J. A. Sheridan  
J. O. Monaghan

Abstract

The Navy has had a significant problem in retaining personnel. Consequently, force loss (attrition) has been under study to determine the causes of and the appropriate steps needed to reduce force loss to a manageable rate. The current study addresses the methods used to control force loss in the private sector. Many private sector firms have been successful in maintaining a relatively low rate of force turnover. Current data from individual private sector companies and a review of the recent literature regarding force turnover provide the basis for the report. A comparison of methods used for the control of attrition between the Navy and the private sector is provided.

August 1980

## Introduction

The military and notably the Navy has experienced serious levels of first term attrition in the recent past. The severity of the attrition problem has been dramatically pointed out in a recent news item<sup>1/</sup> that reported that the Navy had taken a ship out of operation because of a lack of key personnel to man the operation of the ship. How could such a condition exist in the United States Navy? What is the cause and what is the solution to the manpower supply problem of the military? The problems are complex and there are no easy solutions save going back to the draft which has a host of other problems associated with it at this time in our history. This report attempts to shed some light on the problems of attrition as a universal manpower problem and how the Navy and the private sector have dealt with it in order to control the magnitude.

The Military establishment, in general, has undergone wrenching changes in their traditions and methods of

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<sup>1/</sup> New York Times, April 12, 1980, "Navy Takes Ship Out of Operation Because of Shortages in Key Personnel."

manpower management. These changes are far reaching and include such changes as: women accepted into all of the military academies, an all volunteer force and major technological changes in combat equipment. Clearly the list of changes could go on and on.

Coincident with the changes in the military there have been major changes in the population as a whole. In fact, many of the changes the military has initiated have had their origin in the changes in the population and the economy.

Of particular importance to the military is that the changes seen in the recent past are not likely to lessen in the number or degree. The fact that the economy has a high rate of inflation, adding to the cost of manpower, that the youth market is shrinking making the market more competitive and technological changes are appearing every day are all causes for concern for military planners. Combine those facts with the fact that major public and personal attitudes have and are changing in the direction of "I want mine now" and more personal gratification. One would have to conclude that the military manpower system has a major supply problem.

The Navy, as well as other services, have recognized for sometime that the manpower supply problem exists. The Navy has had a continuing research program to identify the solutions to many of its unique manpower problems. For example, with the liberal early-release policies and stricter discharge policies, male enlistees are leaving the service before completing their first enlistment at a rate half again as high as that prevailing just before the draft was abolished. Of all the services the Navy has the highest loss rate at approximately 38% in 1977 for the group identified above. Later year projections were expected to show some decrease in this rate but in reality the high losses are further accentuated by a difficult recruiting environment.

Manpower research in the Navy has concentrated on a great many issues not the least of which has been the question of attrition. Much of the research has been focused on specific issues such as compensation. Other issues such as benefits, recruitment strategies and personnel flow systems are being studied on an on going basis. This report will evaluate the summary

knowledge that the Navy has gleaned from its research and compare those results with private sector findings on methods to control attrition.

At the same time that the Navy has been experiencing turnover problems ranging from escalating first-term attrition among enlisted personnel to reduced re-enlistments among critical skills, private industry employers have largely brought this decades-old problem under control.

Much of this paradox can be explained by the many effects of two general conditions since the mid-1970's: the introduction of the All Volunteer Force in the military; and, in private industry, relatively abundant supplies of labor since 1975.

The military/civilian dichotomy respecting turnover is not all-pervasive, of course. In certain industries such as insurance, among certain occupations such as computer specialists, and in establishments having undesirable working conditions and poor pay, turnover remains a significant personnel issue in itself.

More commonly, however, and particularly among major employers, a range of working-conditions, compensation, career development, and other human resources programs have been successfully applied to improve overall worker satisfaction, reduced turnover has been one result.

Among companies still experiencing unacceptably high attrition rates, usually in the first weeks, months, or year of employment a range of techniques are being used to improve job satisfaction and inaugurate firm commitment from the first days of employment -- among new hires more carefully selected and introduced to the company than in the past.

Successful methods of managing entry-level turnover among young people will have increasing relevance in the 1980's, both for private industry and military managers, as fewer youth are available to enter the labor force. The handwriting is on the wall. The demographers tell us that the number of males who are 18 years old in 1985, for example, will be 15 per cent less than in 1976; and by 1992, 25 per cent less. Thus

## 1. Concepts and Evidence on Turnover's Causes: General

The exact determinants of voluntary turnover in the labor force are not scientifically measurable. Individually, workers leave jobs for reasons they themselves may not fully understand. Or they may have carefully weighed the decision, quantified the benefits of moving against staying, and be entirely unrepresentative of other workers.

In the aggregate, however, economists and social scientists can look at job mobility and turnover -- and voluntary separations in particular -- and observe certain relationships between incidence and qualifiers: age, earnings, job tenure, education and other variables of employees are seen as "determinants" of turnover; company size, working conditions, benefits and other variables among employers are likewise determinants.

As indicated in this section, these variables or theoretic determinants of turnover have a high degree of interrelationship. As perceived by analysts of private sector employment at the end of the 1970's, the aggregate causes of turnover cannot be readily isolated. Their very interdependence, however, points the way to the multifaceted treatment approach used to control unwanted force loss in industry.

### 1.1 Background: Changing Nature of "Problem"

Over the years, managers in private industry have seen "the turnover problem" from different perspectives at different times. Economic conditions, social attitudes, and governmental regulatory pressures, not to mention temporary vogues in personnel administration theory, have brought different imperatives to bear on the need to examine and control force loss.

The present review and analysis of private sector turnover experience focuses on the perspectives and practices of the late 1970's and currently, a time when private industry's turnover problem has been of less and less concern -- in sharp contrast to the military's "revolving door"<sup>1/</sup> experience since introduction of the All Volunteer Force.

Theories of the determinants of turnover have not changed greatly over time, despite refinements. And as can be seen in section 1.2, the business/academic understanding of quit behavior closely parallels the military's. One obvious difference that emerges, however, is that private industry is essentially eclectic in what it accepts as turnover's causes, and has brought force loss under control by a variety of continuing human resources programs.

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1/ Moskos, Charles C. Jr.: "It's A New Ball Game: Changing Expectations of Military Service," First Term Enlisted Attrition, Volume 1, Office of Naval Research, June 1977.



## 1.2 General Determinants of Voluntary Turnover

The general determinants of quit behavior in the overall or macroeconomic labor market, as determined by analysis of different voluntary turnover rates at different points of time, between industries, among occupations, and between employees and employers with different characteristics, are known to include a wide range of variables in private industry.

Like the specific reasons employees quit or stay with a given employer, covered in the Management section of this project,<sup>2 /</sup> the general determinants of turnover are seldom discrete in the real world: just as "job satisfaction" is the result of the interplay of a number of factors resulting from employee wants and employment and life conditions, the propensity to quit among general categories of employees is usually the result of a combination of determinants. Also, as will be seen, many of the "determinants" identified by recent studies may be no more than opposite sides of other coins known to affect turnover. And some are surely concomitant characteristics of others: pension rights go with job tenure and age, for example.

For the most part, analyses of general quit be-

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<sup>2 /</sup> See 4.2 Management of Turnover: Private Industry Techniques and Programs

behavior leaves aside the most important historic cause of changes in the turnover rate in the private sector as a whole. The relationship between separations of all kinds and economic conditions has been "amply demonstrated" since the 1920's,<sup>3/</sup> and, as shown below, the quit rate has a consistent relationship to changes in the GNP and the unemployment rate.

YEARLY TURNOVER RATES IN MANUFACTURING  
Turnover rates

Year	Accessions		Separations			% change real GNP	Unemployment rate, %
	Total	New hires	Total	Quits	Layoffs		
1948	5.4	NA	5.4	3.4	1.6	4.1	3.8
1949	4.3	NA	5.0	1.9	2.9	.6	5.9
1950	5.3	NA	4.1	2.3	1.3	8.7	5.3
1951	5.3	4.1	5.3	2.9	1.4	8.1	3.3
1952	5.4	4.1	4.9	2.8	1.4	3.8	3.0
1953	4.8	3.6	5.1	2.8	1.6	3.9	2.9
1954	3.6	1.9	4.1	1.4	2.3	-1.3	5.5
1955	4.5	3.0	3.9	1.9	1.5	6.7	4.4
1956	4.2	2.8	4.2	1.9	1.7	2.1	4.1
1957	3.6	2.2	4.2	1.6	2.1	1.8	4.3
1958	3.6	1.7	4.1	1.1	2.6	-.2	6.8
1959	4.2	2.6	4.1	1.5	2.0	6.0	5.5
1960	3.8	2.2	4.3	1.3	2.4	2.3	5.5
1961	4.1	2.2	4.0	1.2	2.2	2.5	6.7
1962	4.1	2.5	4.1	1.4	2.0	5.8	5.5
1963	3.9	2.4	3.9	1.4	1.8	4.0	5.7
1964	4.0	2.6	3.9	1.5	1.7	5.3	5.2
1965	4.3	3.1	4.1	1.9	1.4	5.9	4.5
1966	5.0	3.8	4.6	2.6	1.2	5.9	3.8
1967	4.4	3.3	4.6	2.3	1.4	2.7	3.8
1968	4.6	3.5	4.6	2.5	1.2	4.4	3.6
1969	4.7	3.7	4.9	2.7	1.2	2.6	3.5
1970	4.0	2.8	4.8	2.1	1.8	-.3	4.9
1971	3.9	2.6	4.2	1.8	1.6	3.0	5.9
1972	4.4	3.3	4.2	2.2	1.1	5.7	5.6
1973	4.8	3.9	4.6	2.7	.9	5.5	4.9
1974	4.2	3.2	4.8	2.3	1.5	-1.4	5.6
1975	3.7	2.0	4.2	1.4	2.1	-1.3	8.5
1976	3.9	2.6	3.8	1.7	1.3	6.0	7.7
1977	4.0	2.8	3.8	1.9	1.2	4.9	7.0

SOURCE: National Commission on Employment...(38)

The studies from which the determinants discussed below were taken generally attempt to go beyond economic conditions in seeking the operative causes of labor market turnover -- even though the impact of certain determinants, "job opportunities," for example, is more influenced by economic conditions than any other factor.

In the current literature, the general determinants of voluntary turnover in industry have been identified as including the following:

- 1.21 Wage rates;
- 1.22 Age;
- 1.23 Tenure;
- 1.24 Education;
- 1.25 Firm-specific training;
- 1.26 Job opportunities;
- 1.27 Pensions;
- 1.28 Union occupancy;
- 1.29 Size of company; and
- 1.30 Health and personal conditions.

1.21 Wage Differentials' Effects on Turnover Rates

That levels of pay are inversely related to turnover, and higher pay impels workers to move between jobs, occupations, or geographic areas, is perhaps the most firmly established postulate of labor market theory on voluntary separations. Particularly in the literature describing research on the job changing behavior of young men,<sup>4/</sup> voluntary quits decline in a direct association with wages. In an analysis by Andrew I. Cohen of 19 to 29-year-old non-college-graduate males who took their first jobs in the late 1960's, less than 30 percent of those earning over \$3.00 per hour voluntarily quit, although a total of 45.8 percent of whites and 60.8 percent of blacks quit their first<sup>5/</sup> jobs.

At least in the short-term, there is little disagreement that earnings represent "satisfaction of employee needs"<sup>6/</sup> that inhibits turnover, although human capital economists recognize that a worker's knowledge of labor market conditions, occupational information, opportunities and pay elsewhere are factors.

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4/ E.g., Parnes, Herbert S. (41); Kohen, Andrew I. ( 25)

5/ Kohen, Andrew I. (25)

6/ Kagerer, Rudolph L. ( 24)

Even more clearly, wage rates are associated with employee skills and education: in a classic, frequently quoted study of the differences in quit rates among manufacturing industries,<sup>7/</sup> Vladimir Stoikov and Robert L. Raimon put the "quality of the work force" or richness of the skills mix in an industry at the top among variables affecting quit rates, followed by "the wage level corrected for (work force) quality."

The underlying assumption of labor market economists such as Stoikov and Raimon is that "all workers seek to obtain the highest possible cash income given their individual preferences for money and leisure and the earnings opportunities available to them."

For one turnover theorist, all companies can be divided into one of two types: high-technology, capital-intensive companies that utilize better educated, better paid people and have low turnover; and low-technology, labor-intensive companies that need large numbers of "warm bodies" whose pay represents no great incentive to stay.<sup>8/</sup>

And among low-wage industries studied by one economist,<sup>9/</sup> the minimum wage is seen as a deterrent to voluntary labor mobility. If wages in a given industry increase relative

7 / Stoikov, Vladimir and Robert L. Raimon (49)

8 / Kagerer, Rudolph L. (24)

9 / Mixon, J. Wilson Jr. (36)

to wages elsewhere, workers' incentive to improve their earnings by changing jobs is diminished.

Even in socialist countries, where according to one researcher <sup>10/</sup> nearly half of all voluntary separations are attributable to living conditions and personal needs, some 70 percent of workers who changed jobs were found to be earning higher wages in the new position.

While in theory it is self-evident that workers will move to improve earnings if it is assumed that labor is "rational and income-maximizing," <sup>11/</sup> long-term job mobility does not always correlate with improved wages.

In a recently published study of older men who were defense workers in 1963-64 (and were surveyed in 1976), for example, those who voluntarily left averaged 3 percent <sup>12/</sup> less in earnings over the 13 years than those who stayed.

Generally, young workers who change employers are more successful in increasing their earnings than those who stay with their employers. The reverse has been found <sup>13/</sup> to be true of older workers.

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10 / Koszegi, Laszlo (27). Koszegi points out that almost 90 percent of all separations in socialist countries is voluntary, mainly because management must justify dismissals to government agencies.

11 / Dalton, Dan R. and William D. Todor (14)

12 / Cooke, William N. (13)

13 / Steinberg, Edward I. (48)

### 1.22 Age Seen as Basic Determinant of Voluntary Quits

Age, along with tenure, is perhaps the most widely<sup>14/</sup> accepted determinant of turnover in the aggregate. As noted by Parnes in 1954, "So universally has mobility been found to decline with advancing age that this relationship may be regarded as conclusively established,"<sup>15/</sup> and current examinations into the general determinants of turnover invariably include age, where they do not concentrate on a single age group.

In one study of the causes of job dissatisfaction and its relationship to turnover, for example, age and tenure are said to have "indirect" effects on turnover, "through job satisfaction and the probability of finding<sup>16/</sup> an alternative." Others have developed surveys showing that age and tenure have "positive, linear relationships"<sup>17/</sup> to job satisfaction, inversely related to turnover in almost all occupations and industries.

For a variety of reasons, it is to be expected that young workers just out of school are likely to "sample"

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14/ E.g., see Marsh, R. and H. Mannari, "Organizational Commitment and Turnover," Administrative Science Quarterly, 22, 1977; Porter, L.W. and R.M. Steers, "Organizational Work and Personal Factors in Employee Turnover and Absenteeism," Psychological Bulletin, 1973; Price, J.L., The Study of Turnover, Ames, Iowa State University Press, 1977.

15/ Parnes, Herbert S. (41), p. 102.

16/ Mobley, William H. et al. (37)

17/ Hunt, John W. and Peter N. Saul (22)

the labor market in their first -- and perhaps second and third -- jobs. Whether this is related to "higher expectations" as the job-satisfaction theorists claim, insufficient labor market knowledge as human capital advocates would say, or these and other characteristics of new entrants to the work force, the fact remains that youth of both sexes and all races change jobs at a comparatively astonishing rate.

According to one Labor Department study, for example, the median "years on current job" of employed 16- to 24-year olds in 1973 was .8 for whites of both sexes and nonwhite women. For nonwhite men in this age group it was just .9 years.

For older groups at the same time, these median year figures were reported:

	<u>White</u>		<u>Nonwhite</u>	
	<u>Men</u>	<u>Women</u>	<u>Men</u>	<u>Women</u>
25-34 years	3.3	2.1	3.0	2.7
35-44 years	6.8	3.4	5.4	4.7
45-54 years	11.7	5.8	10.1	6.3
55 and over	14.6	9.9	11.0	9.8

SOURCE: "Job Tenure of Workers, January 1973," Howard Hayghe, Monthly Labor Review, December, 1975.

For workers of all ages, the median years on their current jobs ranged from 4.7 for white men to 2.8 years



for white women.

As reported in a longitudinal study of young women published in 1976,<sup>18/</sup> of the first two years in the labor force, showed that 55 percent of black women and 44 percent of whites "changed employers at least once" between the beginning and end of the two-year study period.

### 1.23 Tenure, Allied with Age, A Classic Variable

The tenure of employees with a company or in a job is also clearly related, inversely, with turnover. Like the age determinant, tenure is generally accepted as a starting point for most current analyses of turnover's causes, and are even lumped together in some studies.<sup>19/</sup>

In general, where high turnover is found it is most acute in the first year or so of employment. In the insurance industry where two-thirds of new hires are lost in the first year, for example, or in other labor-intensive low-wage industries, employers expect most turnover to occur in the early stages of employment.

In its surveys of office workers, Management World<sup>20/</sup> has found that some 20 percent of turnover is accounted

18 / USDL, ETA (52)

19 / E.g., in Mobley et al. (37), where "for parsimony and to minimize problems of collinearity, age and tenure were standardized and a composite summary variable created."

20 / Management World (30) and Thomas, Edward G. (51)

for by employees whose length of service extends five or more years. In 1975, 36 percent of the 600,000 workers in the study left after less than one year on the job; in 1978 (a year of higher voluntary turnover generally), 42 percent of 579,271 workers covered left after less than a year. Those leaving after one but before five years of service accounted for 40 and 44 percent of total turnover in the two surveys.

#### 1.24 Educational Attainment and Turnover

The reasons why better educated workers tend, all else equal, to have higher quit rates than employees of less educational attainment have been variously postulated. According to one view, more educated workers tend to expect more from the organization, and would "be less committed to the organization and perhaps more committed to a profession or trade."<sup>21/</sup>

Others relate years of schooling, along with socioeconomic and other variables, to levels of occupational information and, hence, turnover.<sup>22/</sup> It goes without saying that earnings and educational attainment are re-

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21/ Porter, Lyman W. and Richard M. Steers (44)

22/ Parnes, Herbert S. and Andrew I. Kohen (42)

lated in the aggregate, and numerous studies have shown turnover highest at the lowest earning levels and highest within these levels among better educated<sup>23 /</sup> employees.

Frequently, education's positive relationship with turnover is ascribed to the reason that jobs are "perceived as not properly utilizing those skills<sup>24 /</sup> acquired through formal education."

The "turnover" referred to here is of course voluntary turnover: "workers with less education are more apt to experience layoffs and unemployment," it has been<sup>25 /</sup> observed, and one longitudinal study of young women found a negative "association between level of education and probability of a young woman's having changed employers involuntarily" in her first two years in the<sup>26 /</sup> labor force. In the same study, however, voluntary quit rates were higher for women with high school diplomas than for those without them, and were higher among college graduates than among those without degrees.

High quit rates among school drop-outs notwithstanding,<sup>27 /</sup> a general determinant of voluntary turnover in private industry is seen as educational attainment level.

23 / E.g., Steinberg, Edward I. (48)

24 / Federico, Suzanne M. and Pat-Anthony Federico (18)

25 / Hayghe, Howard (21)

26 / USDL, ETS (52)

27 / See Evonic, I.N. (17), for views on this cause of "recruiting exit" turnover.

1.25 Firm-Specific Training: Difficult to Measure

One of the more problematic hypothetical determinants of turnover discussed by analysts in the literature today is firm-specific training. How to measure the extent to which skills are applicable to only one job or employer, and how to measure the effects of this training on voluntary (as well as involuntary) turnover pose problems that have not yet been resolved to the satisfaction of most labor market analysts.

<sup>28/</sup> The basic concept, that training in specific skills or procedures can increase the human capital of workers in their present jobs but not add transferrable value -- so that they could not earn comparable income elsewhere, and not be likely to quit -- has obvious validity.

As pointed out by one economist, however, "no readily available measure of specific training exists." Although it should be true that firm-specific training should act to reduce turnover, acting as an incentive to reduce layoffs as well as reducing quits, Farrell E. Bloch notes in a study of manufacturing turnover that its effects are ambiguous among newer employees. High labor costs induce layoffs, he notes, and "for employees currently being trained...training costs will tend to encourage layoffs."

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28 / See G.S. Becker, Human Capital, New York, Columbia University Press, 1964.

29 / Bloch, Farrell E. (7)

At the other extreme of employment tenure, a study of the effects of job security provisions on turnover and mobility notes that "the negative relationship between age and quits should result from older workers being less employable outside their present jobs as a relatively large amount of their human capital is specific and nontransferrable."<sup>30 /</sup> Older workers have fewer outside job opportunities for a number of reasons, however; and their human capital investment in present employers is likely to include much more than firm-specific training, e.g., pension rights and seniority.

A recent study on turnover and earnings notes that "according to Becker's"<sup>31 /</sup> firm-specific training hypothesis, persons experiencing permanent turnover (whether voluntary or involuntary) have little firm-specific training. Since firm-specific skills are useful only to the given employer, specifically trained workers have less incentive to leave." But "Unfortunately, direct measurement of specific training effects has thus far proven"<sup>32 /</sup> unsuccessful."

Part of the problem of course comes from the need to distinguish "firm" specific from "industry" or "occupa-

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30 / Block, Richard N. (8)

31 / Gary S. Becker, op. cit.

32 / Cooke, William N. (13)

tional" specific training in modern industry. Several major companies in the Paradigm study, for example, reported concern with turnover rates among data processing personnel, a field with considerable overlap in skills and training applicability.<sup>33/</sup> In most jobs requiring training on-the-job, some part of what is learned is generic and some part applies only to that employer.

#### 1.26 External Job Opportunities

Most voluntary turnover is quitting by people who leave for another job. The availability alone of other jobs may not decide the issue for an individual job-leaver, but overall quit rates have shown a consistent relationship with economic conditions -- particularly unemployment rates, as shown in the chart at the start of this section.

<sup>34/</sup> Stoikov and Raimon, for example, cite "general business activity" at the head of a list of variables affecting "the perceived ease of worker-initiated movement." In a study comparing 1963 manufacturing turnover with 1966, they note that as the unemployment rate went

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33/ Paradigm (40)

34/ Stoikov, Vladimir and Robert L. Raimon (49)

from 5.7 to 3.8 percent the average monthly quit rate rose from 1.4 to 2.6 percent.

The relationship between voluntary turnover and unemployment rates is the result of the fact that most quits occur after the worker has arranged for other work. In an analysis of various postwar studies of both blue-collar and white-collar workers, Iowa State economist Peter Mattila concludes that "at least" 50 to 60 percent of all workers who quit line up their next job before quitting -- with rates of up to 85 percent among professional and technical occupations.<sup>35/</sup>

In surveys of office worker turnover covering 1975<sup>36/</sup> and 1978,<sup>37/</sup> "Another Job" was the reason for termination for 30 percent of turnover in one year and 46 percent in the other; the difference corresponds to the different unemployment rates in those years.

Even if a worker has not specifically lined up his next job, his perceptions of labor market conditions are expected to affect "both his propensity to move and his estimates of opportunities," notes another analyst.<sup>38/</sup>

More than national or even local unemployment rates

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35/ Mattila, Peter J. (32)

36/ Management World (30)

37/ Thomas, Edward G. (51)

38/ Kohen, Andrew I. (25)

are involved in a worker's perception of external job opportunities, of course. Occupational information varies greatly among young men, research has shown,<sup>39/</sup> and is related to levels of education, measured intelligence, and family background or socioeconomics.

Most human capital theorists of turnover's determinants include some variation of this occupational information theme, which simply posits that workers are more likely to move if they know more about alternatives. One study of recruiting sources notes, for example, that new hires who come from employment agencies may be more likely to become turnover because their "perceived ease of movement" has been enhanced by exposure to a job-listing organization.<sup>40/</sup>

More objective measures of external opportunities, such as the "availability of comparable positions in other organizations,"<sup>41/</sup> are recommended by some analysts. For the most part, however, the view taken is that "an employee's perceptions of his outside job opportunities are influenced by real changes in the job market and by self-imposed restrictions and personal criteria."<sup>59/</sup>

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39/ Parnes, Herbert S. and Andrew I. Kohen (42)

40/ Decker, Phillip J. and Edwin T. Cornelius III (15)

41/ Szilagyi, Andrew D. (50)

59/ Flowers, Vincent S. and Charles L. Hughes (19)



### 1.27 Private Pensions and Firm Attachment

Pension plans that create equity in a worker's job have universally been considered a deterrent to turnover in private industry, although a number of researchers have noted that those workers most influenced by the "pull" of an expected pension are also those least likely to voluntarily leave for other reasons: they are older, with more time on their jobs, specifically skilled, and more likely to have seniority rights and psychological reasons for remaining where they are.

Still, it has long been recognized by researchers such as Parnes that the private pension plan's effect on the worker is often to "confine his efforts at advancement to promotion within the company and perhaps to forego more rewarding opportunities elsewhere."<sup>42/</sup>

Pension plans in the private sector have undergone basic quantitative and qualitative changes since Parnes wrote of "the rapid growth of private pension plans through collective bargaining"<sup>43/</sup> in 1965. Not only have they declined sharply in number since passage of ERISA,<sup>44/</sup> but employers now offer a more varied array of possible benefits than the "all or nothing" plans that characterized the postwar years.

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42/ Palmer, Gladys L. (39), Chapter III, "Workers' Attitudes to Job Changing: The Effect of Private Pension Plans," Herbert S. Parnes

43/ Ibid.

44/ The Employment Retirement Income Security Act of 1974.

Private pension plans' improvements are generally credited with being a major factor in the "early retirement" trend of recent decades, particularly among men over <sup>45 /</sup> 55. One study found that in 1947, half of all men in the 63-68 age group worked, and by 1979 only one-<sup>46 /</sup> fifth did. Private pension plans' improvements have included earlier vestment and opportunities for earlier retirement, and at least one company responding to a private study indicated that these inducements were used to treat a problem described as "the opposite of turn-<sup>47 /</sup> over" among older managerial employees.

Although in some cases the role of pension plans in controlling turnover may have come 180 degrees -- being used to induce retirement rather than retain workers -- the general theory that pension benefits represent equity recognized by the worker, and inhibiting his departure for economic reasons, remains in the literature, although in more discriminating terms.

In one study of 133 of the country's largest private firms, for example, reflecting the complexity of today's

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45 / See, e.g., "Developments in Aging: 1978," Part 1, Report No. 96-55, Special Committee on Aging, U.S. Senate, March 6, 1978.

46 / Burkhauser, Richard V. and John A. Turner, reported in The Socioeconomic Newsletter, Institute for Socio-economic Studies, Vol. IV, No. 10, October 1979.

47 / Paradigm Study (40 )

more sophisticated pension offerings, the authors sought to "identify those features of private pension plans that have the greatest influence on quit behavior," rather than the mere presence or absence of a pension.<sup>48 /</sup> Firm attachment of various classes of workers was tested against plan characteristics such as vesting, benefit levels, retirement eligibility age, and contributory status.

As might be expected, the quit rate declined sharply for workers approaching vesting, and rose thereafter. Younger workers had higher quit rates under plans with strict vesting requirements, lower benefit levels, and later retirement eligibility. Interestingly, when younger workers' "contributory status" is positive -- when they have to pay into the plan from the start through payroll deductions -- this acts to reduce quits, serving, the authors say, as a steady reminder of coverage.

Specifically, this study of Fortune 500 firms found that each added dollar of monthly retirement benefits among vested men 45 to 54 years old increased their quit probability by 0.002.

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48 / Schiller, Bradley R. and Randall D. Weiss (46)

Thus although the role of pensions and the effects of their characteristics on different kinds of employees are viewed with different purposes in mind by today's human resources managers, the fact remains that retirement benefit programs and their particular features play a role in retention.

Insofar as younger workers are concerned, this role may be almost entirely psychological, and part of the worker's overall perception of the quality of his employer.

And among certain types of workers, especially low-skill manufacturing employees that one study found "stay primarily for maintenance or environmental reasons...relating to the nonwork environment,"<sup>49/</sup> pension plans with non-rigid vesting requirements and other features would seem to reduce turnover.

According to one psychologically-oriented study of 406 employees in three companies, low-skill manufacturing workers give the reason "I wouldn't want to rebuild the benefits I have now" far more frequently than skilled workers, managers, and professionals when explaining why they do not move.<sup>50/</sup> Thus the characteristics of the job, as well as age and tenure, operate to affect workers' reactions to pension plans and their characteristics.

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49/ Flowers, Vincent S. and Charles L. Hughes (19)

50/ Ibid.

### 1.28 Union Occupancy Seen As Turnover Deterrent

The literature on the effects of unionization on employment stability, mobility, and turnover goes back many years, and reflects a wide variety of factors that may affect workers' decisions to leave a company or industry. The results of research into the impact of unions and their benefits have not always been precisely conclusive or useful to managers, however. For example, several studies have established that the presence of seniority provisions reduces voluntary turnover "because of the burden of opportunity costs for employees who gave up their accrued seniority benefits,"<sup>51/</sup> but it is also axiomatic among turnover researchers that the longer a person stays in a job the less likely the person is to leave, up to retirement age.

Other factors are involved, of course, that differentiate organized from non-union environments. Job mobility authority Herbert S. Parnes asks, for example, whether "the union's attempt to control job opportunities, to protect job rights, and to ameliorate unsatisfactory working conditions inhibit (s) the voluntary movement of workers?"<sup>52/</sup>

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51/ Block, Richard N. (8)

52/ Parnes, Herbert S. (41)

Parnes, in a 1954 work, took note of a number of researchers' conclusions that unionization reduces voluntary mobility because of seniority, pensions, work rules, and higher pay levels,<sup>53/</sup> but pointed out that "practically all of them should be regarded as hypotheses rather than established propositions. It is true that most of the deductive analysis leading to the conclusion that unionism restricts mobility is perfectly logical, and that the immobilizing effects of union policies seem almost self-evident.

"But there are dangers in accepting 'self-evident' truths," Parnes points out. For example, the effect of seniority rules on mobility "has become virtually an axiom in textbooks on labor economics," but "these effects may have been overstated." For one thing, the seniority principle applies to non-union as well as unionized establishments. More significantly, "the psychological and sociological deterrents to job shifting by long-service employees may be so strong even in the absence of seniority rules that the addition of such rules would make little difference." Parnes recommends that because of the many kinds of influences that

<sup>53/</sup> Especially Joseph Shister, "Labor Mobility: Some Institutional Aspects," Industrial Relations Research Proceedings of Third Annual Meeting...1950; and Clark Kerr, "Labor Markets: Their Character and Consequences," American Economic Review, May 1950.

bear on individuals' reactions to unions, the question of union influence on turnover and mobility should be examined from a comparison of establishments rather than individuals' longitudinal behavior.<sup>54/</sup>

This was the approach taken in an economically oriented analysis by Cornell University's Richard N. Block, which concluded that "job security provisions do appear to keep employees with their firms," although some provisions are more definitely effective than others.

<sup>55/</sup>  
The Block study, for the U.S. Department of Labor's Employment and Training Administration, assigned a value (from one to ten) to two kinds of job security provisions in labor contracts, as reported by the Labor Department. These were employment security provisions, which "had the general function of increasing the certainty of the employee's income stream," and seniority provisions.

These indexes were used to measure the impact of the provisions on the manufacturing quit rate and manufacturing layoff rate. "The best results were obtained for the seniority provisions" applied to quit rates, according to Block, results coinciding with human capital

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54/ Parnes, Herbert S. (41) p. 128.

55/ Block, Richard N. (8). See also Block, "The Impact of Seniority Provisions on the Manufacturing Quit Rate," Industrial and Labor Relations Review, July 1978, p. 474 ff.

economic theory, in Block's view "because of the burden of opportunity costs for employees who gave up their accrued seniority benefits."

The difficulty inherent in disassociating the presence of unions and collectively bargained provisions from other factors influencing quit rates was acknowledged by Stoikov and Raimon in a widely cited 1968 analysis.<sup>56/</sup> This study, on the reasons for different quit rates among 52 industries (as reported by the Labor Department), used Union Occupancy Rate as an assumed substitute for an "effective system of industrial jurisprudence" such as grievance mechanisms which would increase job satisfaction and lower the quit rate. The authors noted that the "closest we can come to quantifying this variable" of perceived fairness as a reason for staying is union occupancy.<sup>57/</sup>

On the other hand, various other studies of differences in manufacturing quit rates confirm wages as the key or most important variable,<sup>58/</sup> and both pro- and anti-labor economists agree that unionized workers are generally better paid. Also, seniority per se is obviously related to vesting and other length-of-service variables.

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56/ Stoikov, Vladimir and Robert L. Raimon (49)

57/ The authors ranked these variables in order of importance to the manufacturing quit rates: 1) work force quality, 2) wage level, 3) recent increases in earnings, 4) union occupancy rate, 5) percent with brief job tenure, and 6) layoff rate.

58/ E.g., Bloch, Farrell E. (7)



### 1.29 Company Size as a Determinant of Turnover

That quit rates vary inversely with the size of companies in private industry may be one of the least "meaningful" determinants of turnover identified by researchers and analysts. This correlation, established by numerous studies over the years,<sup>60/</sup> could result from any or a number of other determinants discussed in the literature, or could simply reflect the fact that turnover is expressed as a percentage of total employment, and quits have more impact on the rates of small firms.

One possible cause of the relationship is that "company size confers status or prestige, and this would serve to prompt an inverse relationship between size and quits."<sup>61/</sup>

More likely, however, is the reality that larger companies are more committed to personnel policies of the type that minimize turnover (see section 4.2). Major companies with a large investment in a permanent work force have more at stake in managing their human resources.

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60/ E.g., Bureau of National Affairs, Inc. (10) (11)

61/ Stoikov, Vladimir and Robert L. Raimon (49)

### 1.30 Health, Marital Status and Personal Characteristics

A wide variety of personal conditions and demographic characteristics have been related over the years to high or low turnover rates. Most of these are rather subdivisions of other determinants as covered here: sex, for example, commonly relates to <sup>62/</sup> job tenure and earnings; <sup>63/</sup> race to earnings, education, and job opportunities; <sup>64/</sup> and intelligence test scores to educational levels and socioeconomic background.

As a practical matter, this kind of turnover for "personal reasons" is often not examined by individual companies, moreover, being considered beyond the <sup>65/</sup> control of managers. Companies concerned with equal employment responsibilities and requirements, on the other hand, go to some pains to distinguish turnover by race and sex, whatever their view of these factors as <sup>66/</sup> "determinants."

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- 62 / Hayghe, Howard (21)
  - 63 / Smith, Catherine Begnoche (47)
  - 64 / Parnes, Herbert S. (41)
  - 65 / Szilagyi, Andrew D. (50)
  - 66 / E.g., AT&T Management Laboratory (2)

Various researchers have pointed out that health,<sup>67/</sup> which if poor inhibits mobility, is a general determinant of voluntary turnover. Certain occupations obviously have a greater need for physically robust workers. And certain specific job situations -- such as one case where 35 percent of workers interviewed in a turnover study had suffered injuries in their first six weeks on the job<sup>68/</sup> -- are potentially harmful to anyone's health.

In surveys of office workers,<sup>69/</sup> however, just 3 percent give health as the reason for leaving. In the Canadian military, at the other extreme, 29.9 percent of "recruiting exits" (comparable to first-term attrition)<sup>70/</sup> were for medical reasons, reflecting occupational differences. In socialist countries, as well, health is a significant determinant of turnover,<sup>71/</sup> usually related to hard or hazardous work.

Turnover as a response to stress, closely allied to job satisfaction in the psychologically oriented

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67/ Kohen, Andrew I. (25)

68/ Glaser, Edward M. (20)

69/ Management World (30) and Edward G. Thomas (50)

70/ Evonic, I.N. (17)

71/ Koszegi, Laszlo (27)

literature, defies measurement in the aggregate. But at least one study cites "evidence that turnover may be the end product of the somatic conversion to stress," and "the health of the individual and the organization are clearly enhanced by withdrawal in these cases."<sup>72/</sup>

Other personal characteristics such as marital status and number of dependents have also been examined in theoretical turnover literature. As determinants of turnover generally, however, these factors have proved unreliable guides in a rapidly changing society, where a burgeoning number of wives and mothers are in the labor force.

Number of dependents is used by some as a determinant of "growth needs" affecting turnover,<sup>73/</sup> however, and numerous studies have indicated the employment stability of married vs. unmarried men. One study of women who voluntarily quit found that "family responsibility" -- a composite of marital status, dependents, and age of youngest child -- acted to make women stay on the job longer.<sup>74/</sup>

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72 / Dalton, Dan R. and William D. Todor (14)

73 / Szilagyi, Andrew D. (50)

74 / Federico, Suzanne M. and Pat-Anthony Federico (18)

## 2. A STUDY OF PRIVATE SECTOR FORCE LOSS CONTROLS

### Introduction

All organizations are faced with the problem of force turnover or force loss. In many cases force loss is not considered a negative factor in the management of the work force. However, there are times when force loss can interfere with the performance of the organization to the extent that organizational goals cannot be obtained. In the private sector that means that an organization cannot compete in the market or cannot provide a service. The obvious result would then occur; the company would go out of business. In many businesses one of the main ingredients in the production of a product or service is the people employed to generate the product. The management of the human resources of a company becomes an important issue as labor market conditions tighten up to make the market more competitive. Such conditions have existed for some skills in the recent past in the private sector. Many factors have contributed to this condition but much of the labor market reflects the demographics of the new work force and all the resultant ramifications of the baby-boom. The demographics combine with a shift in attitudes regarding personal life styles and values and this combination produces a much more difficult employee

management environment for the private sector. In spite of what appears to be an environment that would produce much higher force loss than in previous eras the private sector has not really experienced disastrous force loss conditions. It is this fact that makes the study of the private sector of interest to the Navy. If the private sector can manage force loss under the conditions described and the Navy is experiencing difficulty then perhaps the methods used to control force loss in the private sector can be transferred to the Navy in an effective manner. It is not to be expected that there will be a direct translation from the private sector to the military but some methods might be applicable to the problem of force loss in the military.

### Study Design

An attempt was made to include a representative set of companies in this study in order not to bias the results based on only a few companies. A sample of thirty companies were asked to participate in the study of control mechanisms used to combat unwanted force loss. Within these companies thirty managers of human resources were identified and personally contacted. Twenty-three companies agreed to participate. After an initial contact was made a follow up data collection sheet was mailed to the participants. Each manager was asked to complete the data collection in their company and add any other pertinent information regarding force loss controls in their company. All participants and companies were guaranteed that the data from their company would not be disclosed or presented in a format that would allow for individual identification. Table 1 presents the categories of data collected in the reported study. The data collected was self reported and no attempt was made to validate the data recieved.

### Results

The results presented are in the form of descriptive statistics rather than elaborate analyses. Clearly this study is one that describes existing conditions that prevail rather than hypothesize about those conditions in the private sector. Even so, one disclaimer must be voiced with regard to the results and conclusions that are drawn from the data. That is, these are reported data and not observed data. Thus the data reported is the view of the manager providing the information. And, while these managers are mostly experienced human resources managers, they are not in general professional or trained industrial psychologists trained in research methods. Consequently, the results presented suggest how the private sector believes it manages force loss or turnover. The validity of the measures used to control force loss may or may not be effective. Only further study would enable us to determine the extent of validity in the measures reported and their impact on force loss control.

### Company Characteristics

Of the twenty-three (23) companies that participated seventeen (17) were multinational. The remaining six (6) confined their operations to the national market place only. Thirteen (13) were in more than one business. The approximate total number of employees of the companies who supplied data on the size of the employee body was three million (3,000,000). While



there were a large number of multinational companies in the sample most of their employees are located in the United States. In fact, more than seventy-five (75%) percent were in the U.S. It is safe to say that over two and one half million (2,500,000) employees that work in the United States were covered by this study.

While the study covered approximately three million employees the companies studied varied a great deal in size of total employees. The table below provides company employee force size in ranges by frequency in each range.

Sample Companies Force Size

<u>Force Size Range</u>	<u>No. Of Companies</u>
Less than 25,000	5
25,000 to 50,000	6
51,000 to 75,000	4
76,000 to 150,000	3
151,000 or greater	5

As the table above indicates there were a few more companies at the low end of the scale than at the high end but an attempt was made to cover the full range of company sizes.

Another variable addressed was the percentage of force that was considered management. The table below describes the data collected in this study:

Distribution of % Management

<u>Range</u>	<u>Number of Companies</u>
5% or less	2
6% to 10%	7
11% to 15%	3
16% to 20%	1
21% to 25%	3
26% or greater	3
no response	4

Measurement of Force Loss/Turnover

The effective management of force loss can only be achieved if there are acceptable measures of force loss. To that end, several data points were collected to determine if the private sector did in fact measure and track force loss.

All companies studied reported that they kept force loss statistics. One hundred percent (100%) kept records for management and eighty-two percent (82%) kept records on nonmanagement force losses.

While force loss/turnover is measured by most companies, only six (6) companies indicated that the company had established an "unacceptable" force loss rate. That is a force loss rate that results in the company initiating

PRIVATE SECTOR DATA CATEGORIESTable 1Company Characteristics

National or MultiNational  
Extent of Diversification  
Number of Divisions  
Total Number of Employees  
Percent of Total Employees Classified Management

Measurement of Force Loss/Turnover

Maintenance of Force Loss/Turnover  
Management  
NonManagement  
Definition of an Unacceptable Rate of Force Loss/Turnover  
Definition of Force Loss/Turnover  
Formula for Calculating % Turnover  
Company History of Force Loss/Turnover

Management of Force Loss/Turnover

Factors Identified as Related to Force Loss/Turnover  
Measures Taken to Manage Force Loss/Turnover  
Attempts to Manage Force Loss/Turnover

action to reduce the loss rate.

When asked to be specific regarding what the unacceptable rate was all six (6) companies indicated that the rate varied by the job category in question. Sometimes the rate varied by skill groups such as: engineers, software specialists, MBAs, sales, etc. Mention was also made of geographic differences regarding what rate would or would not be acceptable. An interesting definition of an unacceptable rate was expressed by several companies. This definition used the deviation from history as the indicator for unacceptability. The magnitude of the deviation was not specified.

A critical factor in comparing force loss rates, levels of unacceptability and the actions taken to treat force loss across companies is the difference in the definition used to define force loss or turnover. In this study of twenty three (23) companies there were ten (10) definitions. There is a possibility that some of these definitions are the same but it was not possible to ascertain that based on the data provided. The list of definitions is in table 2.

There is reason to believe, however, that definitions one through four are one and the same, see table 2. The result would be seven (7) definitions rather than ten. This would seem to point up the fact that there is a lack of uniformity in even the basic definition of the phenomenon of turnover.

While the verbal definition of turnover is interesting and does delineate who is included in the population measured. Equally important is the mathematical calculation used to compute the loss rate. Again, several formulae were provided by the companies studies and perhaps several of them are infact the same. But, in the event that all the similar definitions are not the same, all of those reported are presented in table 3.

#### Private Sector Recent Experience With Force Loss

As indicated in the introduction the recent experience by the private sector has not been one of heavy force loss. To the contrary it has been relatively stable. Sixteen companies or 70% report stable force loss conditions. Six (6) report overall stable but rises in specific job skill areas. Only one (1) company reported a decline in their force loss rate.

PRIVATE SECTOR DEFINITIONS OF FORCE LOSSTable 2

1. Total separations from the payroll
2. Total losses by reason for loss
3. Voluntary plus involuntary losses
4. Controllable plus uncontrollable losses
5. All losses except layoffs
6. All losses except retirements and involuntary terminations
7. Regular fulltime employee losses to payroll
8. Employees who quit
9. Salaried employees who leave the payroll or go to hourly pay
10. Movement out of a position with a corresponding replacement

FORMULAE FOR CALCULATING FORCE TURNOVERTable 3

1. 
$$\frac{\text{Number of Employees Leaving During Calendar Year}}{\text{Number of Employees on Payroll at Start of Year}}$$
2. 
$$\frac{\text{Number of Total Separations}}{\text{Number of Total Employees}} \times 100 \text{ for a given period}$$
3. 
$$\frac{\text{Number of Employees Who Quit During Period}}{\text{Number of Employees at Start of Period Annualized}}$$
4. 
$$\frac{\text{Number of Terminations}}{\text{No. of Employees at Start} + \frac{\text{No. of Employees at End Period}}{2}}$$
5. 
$$\frac{\text{Number of Employees Leaving During Calendar Year}}{\text{Average Head Count for Year}}$$

In spite of the fact that force loss is reported by most companies studied to be stable overall a great deal of corporate activity and energy is expended on the subject.

#### Factor Influencing Force Loss/Turnover

Many companies conduct studies of their company's performance regarding force loss. Many companies also follow the literature regarding force turnover and also participate in external study groups in an effort to maintain the reported stable force loss rate. Of the companies who have reported on research that they have conducted within their companies the following table describes the factors which they believe influence the turnover rate. Table four (4) is divided into five major areas with subgroups. For each subgroup there is a frequency count that identifies how many times that item was identified by the companies studied. Not all companies responded to all areas and these items are self generated and not prompted by a designed question that could have been leading.

#### Actions Taken to Control Force Loss

To solve a force loss problem the private sector appears to concentrate on the isolation of the problem area and study only that problem. However, there does appear to be



FACTORS REPORTED AS INFLUENCING FURNOVERTable 4

<u>Influence Area</u>	<u>Frequency</u>
Demographics:	
Age	5
Net Credited Service	6
Labor Market Competition	4
Race	2
Sex	2
Geographic Area	2
Personnel Practices:	
Performance Appraisal	1
Selection	1
Training	1
Compensation	6
Job Posting	1
Career Opportunities	3
Promotion Practices	2
Company Operations:	
Nature of Business	4
Type of Work	4
Size of Corporation	1
Plant Closings	1
Divestments	1
Quality of Supervision	3
Work Load	1
Employee Socialization	1
Skill Groups:	
EDP	2
Sales	2
MBA	1
Engineer/Technicians	5
Other:	
Short Term Economics	3
Under Study	1
None Observable	1

a general feeling that whatever the problem is it probably has some component of compensation associated with it. Thus there are a series of actions that are taken initially and these are listed in table 5.

The actions taken to control force loss partly tells the story of what the private sector believes the important issues are regarding force loss. When asked to rank a set of personnel programs and practices as to their importance, compensation issues were high on the list of relative importance. Table 6 provides the rank order and the frequency of these personnel practices that are common in private sector companies. Additional items were added to the original list and these were unranked due to the low frequency of response to the item. Albiet there are some good additional items added to the original list. Two companies did not respond to this question and two companies indicated that they had studies underway to determine the importance of such programs in the control of force loss in their companies.

PRIVATE SECTOR ACTIONS TAKEN TO REDUCE  
FORCE LOSS/TURNOVER

Table 5

<u>ACTIONS TAKEN</u>	<u>Number of Companies</u>
Look for Probable Cause	9
Review Compensation Program (salary, benefits, incentives)	9
Career Planning Actions succession planning high potential promotion list review career development strategy	4
Implement Training Program	2
Review Quality of Supervision	1
Perform Work Content Analysis	1
Introduce Employee Relations Program	1
Not Had a Force Loss Problem	4
No Response	1

PERSONNEL PROGRAMS AND PRACTICES RANK ORDER WITH  
REGARD TO IMPORTANCE IN CONTROLLING FORCE LOSS

Table 6

<u>Program</u>	<u>Rank</u> *	<u>Frequency</u>
Pay Survey	1	14
Performance Appraisal	2	11
Potential Assessment	3	9
Site Location	4	6
Labor Mkt. Studies	5	7
Supervisory Training	6	8
Job Design		7
Job Satisfaction Survey	7	8
Transfer Plan	8	7
Medical Plan	9	5
Tuition Reimbursement	10	4
Work Hour Adjustment	11	4

Added Items

Good Management Practices

Testing

Good Communications

Target Setting for Reduction in Losses

Participate in Force Loss Studies

No Response from 2 companies

Under Study in 2 Companies

\*Lowest Rank (1) is most important. rank order determined from the firms studies.

Discussion

The study reported clearly highlights some of the difficulties encountered in studying force loss in the private sector. The problems are magnified when an attempt is made to pursue analyses that cross company boundaries. With varying force loss definitions, variations in mathematical computational procedures for force loss, a built in bias regarding compensation as the solution to force loss all lead to an increase in the difficulty of determining a definitive solution or for that matter even an explanation of force loss.

Not with standing many of the difficulties encountered in this study the analysis indicates that there are some rather fundamental data collected that is important to the understanding of force loss. For example, one could speculate that because of the attention paid to compensation in the private sector the loss rates are stable. On the other hand, one could also speculate that pay was only a partial contributor to the control of force loss in that most companies not only dealt with pay, promotion and appraisal issues but they also introduced other programs such as: training, medical programs, and other benefits. In fact, the detailed data suggests , and only suggests

because of the type of data and sample size, that those companies with the most programs in effect had the lowest force loss rates. That statement cannot be defended on the basis of this study but does suggest that employment is a system of programs and actions utilized to manage a particular work force. It appears that a different set of procedures, policies and programs are important to different sets of employees and that the particular set of conditions of employment varies as a function of the characteristics of the work force. Within a given work force for a given company there are different sets of work groups that are in different stages of their employment life. Thus the employment life cycle appears to be as important as anything in controlling force loss. In a simplistic description it simply means that there are probably not pat solutions for force loss for all work groups. Each group needs to be evaluated and specific programs adopted to deal with that groups force loss.

While this study does not address many facets of turnover its purpose was to only determine the force turnover measures used in the private sector. The companies studied encompass almost three million workers and right or wrong

pay, performance and potential are the top three programs used to address force loss in the private sector. A great number of other issues have been raised by the results of this study. Issues such as the importance of job content and work conditions on work force attrition. However, the factors are treated as second order effects in the private sector and there was not enough in depth data provided to ascertain their true importance in the control of employee force loss.

### 3. Measuring Turnover in the Private Sector

A central problem in quantifying private industry evaluation and management of turnover in ways that will yield important insights and concrete information for the management of military turnover and retention lies in the comparability of definitions. For many reasons, including the dual-job nature of military service, no completely satisfactory method of reconciling the definitional nature of "the turnover problem" as seen by private industry and as seen by the Navy is likely to emerge.

To begin with, private industry and labor market analysts of private employment measure and define turnover in dozens of different ways, in terms often shaped by narrowly perceived problems or -- in recent years -- by the apparent absence of any major turnover problems.

The more explicitly defined and measured nature of turnover in the Navy, as described in other sections of this project, is not monolithic either, of course. The notion of reenlistment vs. turnover is properly differentiated by stages, ratings, eligibility, and other factors, all of which define the nature of turnover as a "problem."

While the question of definitional comparability should be high on the list of subjects requiring further study, the present overview of the ways turnover is (or is not) identified by private industry should provide



a broadened appreciation of how companies perceive retention and turnover currently. More importantly, these perceptions form the basis for private industry efforts to manage turnover, the subject of the subsequent section. The success of a given organization's attempts to control force loss will, it is to be assumed, usually depend on accurate perception of the nature of the loss and the application of some sort of yardstick to determine actual "success."

### 3.1 The BLS and Turnover in Manufacturing

Since 1930, the Bureau of Labor Statistics of the U.S. Department of Labor has been publishing labor turnover in manufacturing data, which "reflect the gross movement of wage and salary workers into and out of employment in individual establishments"<sup>1/</sup> and are expressed as rates per 100 employees. The BLS defines turnover as including two broad groups: accessions or additions to employment; and separations or termina-<sup>2/</sup>tions of employment.

Separations broadly cover all who have been taken off the rolls or quit in the period, for reasons including military service lasting more than 30 consecutive days and, since 1959, transfers to other establishments of the same company. These terminations are broken down further by the BLS into

-Quits, which are terminations initiated by employees but not including retirement, transfer within the same company, or military service;

-Layoffs, or suspensions from pay lasting seven

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1 / "Labor Turnover in Manufacturing: April 1980," USDL-80-358, Bureau of Labor Statistics, U.S. Department of Labor, May 30, 1980. This is a monthly series.

2 / See Handbook of Methods, Bulletin 1910, BLS, USDL.

or more consecutive days, initiated by the employer "without prejudice to the worker," for reasons such as lack of orders, seasonal slowdowns, plant breakdowns, and other temporary conditions;

-Discharges, terminations initiated by the employer for incompetence, etc.; and

-Other separations, which include military service lasting 30 days or more, retirement, death, disability, or transfers to another establishment of the same company.

It is the quit rate that is commonly used by economic analysts and researchers examining voluntary turnover,<sup>3/</sup> its relationship to economic conditions and comparative prevalence among industries, occupations, and worker characteristics. The quit rate in the BLS manufacturing sample hovered around 2 percent per month in 1979, for example, while total separations were approximately 4 percent per month.

Annualized, it would appear that nearly half of all

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<sup>3/</sup> E.g., see Kohen, Andrew I. (25); Bloch, Farrell E. ( 7); Block, Richard N. ( 8); Stoikov, Vladimir and Robert L. Raimon (49); et al.

manufacturing employees left their jobs in the year, but of course many of these separations represent the same individuals counted more than once.

The quit rate historically has moved inversely to the layoff rate; both have a "well documented relationship to other important economic variables,"<sup>4 /</sup> such as percent change in the real Gross National Product and unemployment rates. In 1954, for example, a slow year for the economy, the monthly average for quits was 1.4 and for layoffs was 2.3. In 1969, a good year, quits averaged 2.7 percent per month and layoffs 1.2 percent. Quits have never exceeded 3 percent per month (except for 1948) nor been less than 1 percent, in the BLS sample, and macroeconomic analysts consider this data the "best available" material for measuring overall labor mobility and turnover, with reservations.

Herbert S. Parnes,<sup>5 /</sup> for one, notes that "the Bureau probably underestimates the volume of separations in manufacturing," because of overconcentration on larger, more stable, more unionized firms, and deliberate exclusion of highly seasonal industries such as canning.

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4 / National Commission on Employment and Unemployment Statistics (38).

5 / Herbert S. Parnes, (41) p. 64.

The main shortcoming of the BLS turnover data is that it is simply not useful for other than macro-economic analysis; the data is not nearly disaggregated enough to tell individual employers much about the particular labor markets that interest them.

In a report published by the National Commission on Employment and Unemployment Statistics last year,<sup>6/</sup> these problems were cited in the BLS turnover data:

- only manufacturing industries are covered;
- response is voluntary and unrepresentative, understating turnover;
- three States, including California, do not participate in the program;
- no occupational or demographic information is given;
- movements of temporary and permanent workers are not differentiated; and
- no data are collected for one-week layoffs.

Specifically, the Commission points out that turnover in manufacturing is considerably lower than that in other sectors of the economy. In trade and services, which to-

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6 / Hall, Robert E. and David M. Lilien, NCEUS (38).

gether have more employment than manufacturing, the turnover rate is nearly twice that of manufacturing.

Also, because reporting is voluntary, firms with more turnover are less likely to respond than low-turnover firms, because of the volume of paperwork involved.

Most important for present purposes, the BLS data do not tell anything about the characteristics of workers, although the Commission notes that "It is known from other sources that turnover is disproportionately concentrated among young workers, among racial minorities and other disadvantaged workers, and in certain occupations."

(Longitudinal studies of young men have established, e.g. Parnes, Career Thresholds, that in 1966 two-fifths of 20 to 24-year-olds left their first employers, 77 percent voluntarily. Another study focusing on jobs rather than individuals <sup>7/</sup> found that 19-29-year-old men's likelihood of quitting is inversely related to wage rate, tenure, health problems, marriage, local employment conditions, and education.)

Despite these limitations on their usefulness to individual employers, the BLS turnover series have

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<sup>7/</sup> Kohen, Andrew I. (25). See also USDL, LTA "Years for Decision," (52).

formed the data source for various theoretical analyses of inter-industry differences, and the basic formula used by the BLS to determine turnover -- total separations (or quits) over number of employees times 100 -- remains in use by many business-research organizations and individual companies.

### 3.2 Bureau of National Affairs

The Bureau of National Affairs, for example, publishes quarterly turnover data based on this formula:

$$\frac{\text{Number of total separations during month}}{\text{Avg. no. of employees on rolls during month}} \times 100$$

These figures cover all permanent separations, whether voluntary (quits) or involuntary (layoffs and discharges), but do not include employees placed on temporary or indefinite layoff, providing a figure somewhat lower than the BLS estimate.

The BNA does however sort out its sample (429 companies in the last quarter of 1979) by company size, industry, and region. In 1979, for example,<sup>8/</sup> the monthly average for companies with under 500 employees was 2.2 percent; for 2,500-and-over companies, 1.3 percent. Manufacturing companies had a rate of 1.6; and firms in the finance industry 2.5 percent. Turnover was

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<sup>8/</sup> Bureau of National Affairs, Inc., "Job Absence and Turnover," 4th Quarter - 1979, March 13, 1980.

1.6 percent among companies in the Northeast; and 2.4 percent per month among respondents in the West. The complete results for 1979, shown below, reflect differences in company size, industry, and region that are consistent with other studies in the literature, although because of the BNA's restricted definition the monthly averages are lower than other estimates.

**Average Monthly Rates: 1979**

<b>Number of Employees</b>	All Companies	<b>1.9%</b>
	Up to 250	<b>2.2</b>
	250-499	<b>2.2</b>
	500-999	<b>1.9</b>
	1000-2499	<b>1.7</b>
	2500 and more	<b>1.3</b>
<b>Industry</b>	Manufacturing	<b>1.6</b>
	Nonmanufacturing	<b>2.0</b>
	Finance	<b>2.5</b>
	Nonbusiness	<b>2.1</b>
	Health Care	<b>2.2</b>
<b>Region</b>	Northeast	<b>1.6</b>
	South	<b>1.8</b>
	North Central	<b>1.8</b>
	West	<b>2.4</b>
% of average work force		1.0      2.0      3.0

SOURCE: "Job Absence and Turnover," Bureau of National Affairs, Inc., March 13, 1980.



### 3.3 Measuring Turnover in Private Industry: Variations

All of the companies in the Paradigm study, as reported in another section of this project, compute turnover rates for at least some of their employees. The companies in this study are major employers, and were selected in part because of their evident commitment to human resources management; in other words, they are companies expected to pay close attention to the quality and quantity of the internal work force.

Some 80 percent of the companies in the Paradigm study, moreover, have more than 25,000 employees. As a rule, larger companies are more likely to maintain turnover data. In a 1973 study of 136 companies by the Bureau of National Affairs, for example, 77 percent of companies with more than 1,000 employees measured turnover while just 55 percent of under-1,000-employee firms<sup>9/</sup> computed turnover on a regular basis.

Private sector companies compute turnover using the Bureau of Labor Statistics formula or some variation as a starting point, but the Paradigm study, other industry surveys, and a review of the literature show wide differences in how far companies disaggregate gross figures<sup>9/</sup> BNA, "Employee Absence and Turnover," (11 )

by time period covered, causes of separations, job level and function, and personal characteristics. Naturally, where a human resources department "ends up" with its turnover analysis is more important than whatever starting point is used, but companies do differ in the basic terms used to measure gross turnover. Part of the formula variance derives from the fact that many companies do not collect separation data on a monthly basis: 83 percent of companies in one survey collected turnover data, but only 56 percent did so monthly. (This survey was dominated by smaller employers; 59 percent had fewer than 1,000 workers.)<sup>10/</sup>

The formula used by the BLS is simply

$$\frac{\text{number of separations during month}}{\text{total number of employees at midmonth}} \times 100.$$

According to a BNA survey of companies of all sizes in 1974, 53 percent of respondents used this formula. Only 69 percent of respondents in this particular survey calculated turnover on a monthly basis, however.<sup>11/</sup>

The Paradigm study discovered that some of the country's largest employers maintain only annual data.<sup>12/</sup>

10 / American Society for Personnel Administration ( 1 ).

11 / Bureau of National Affairs, Inc. ( 10 )

12 / Paradigm ( 40 )

A retailer with over 350,000 employees, an accommodations chain with 65,000 employees, and a food concern with 50,000 employees reported that they used this formula for regular turnover reports:

$$\frac{\text{total number of separations in year}}{\text{average number of employees during year}} \times 100$$

More commonly, the major firms responding to the reported study measured turnover by monthly or quarterly periods, and distinguished voluntary from involuntary separations.<sup>13/</sup>

#### Voluntary vs. Involuntary Separation

Although not all of the studies in the literature distinguish between voluntary separation and involuntary losses,<sup>14/</sup> virtually all of the literature and most major company human resource organizations make this crucial distinction in measuring turnover. This is customarily the first refinement of gross turnover data:

$$\frac{\text{Voluntary + Involuntary losses}}{\text{Total employees in period}} \times 100$$

From a management perspective, voluntary turnover (essentially "quits") needs to be distinguished from involuntary in order to establish two basic kinds of

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13/ E.g., Decker, Phillip J. and Edwin T. Cornelius (15).

14/ Other turnover formula variations include the number of hires in the period. See Paradigm (40).

information about the nature and consequences of a company's turnover:

1. What turnover is avoidable, and what part is unavoidable; and
2. What part of the avoidable turnover is actually desirable, from the company's perspective.

These are questions at the heart of the management of turnover, the subject of the following section. To obtain the information needed to exercise management, however, companies extend their disaggregation of turnover by cause -- reaching further and further behind the general "voluntary v. involuntary" categorizations, according to their perceptions of a turnover problem.

One employer in the Paradigm study categorized all turnover by 22 causes, for example; a survey of 579,271 office workers listed 11 "reasons for termination;"<sup>15/</sup> eight causes are given by the author of one book on turnover;<sup>16/</sup> and almost all companies that disaggregate turnover by cause also correlate these variables with job titles, department, and personal characteristics because they consider it "important to look beyond the gross turnover rates" which may "mask a great deal of meaningful information."<sup>17/</sup>

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15/ Thomas, Edward G. (51).  
16/ Peskin, Dean B. (43)  
17/ Kay, Emanuel (26)

Companies progress in refining loss statistics, becoming more sophisticated and entering more variables, according to perceived needs. A major high technology employer, for example, with a relatively stable workforce (11.1 percent total over the year), breaks losses down according to these reasons:

- leave of absence (1.5%);
- layoffs (0.2%);
- resignations (4.4%);
- dismissals (0.9%);
- contract completed (1.0%)
- retirement (1.6%);
- death (0.17%);
- transferred out (1.3%); and
- other (0.03%).

Like many large firms today, however, this one has computerized personnel records and a continually updated data base, permitting managers to obtain complete information on employee movement -- by job, level, organization, personal characteristics, tenure, etc. -- should skills shortages or other imbalances appear imminent.<sup>18 /</sup>

In the BNA study of 136 companies' turnover policies in 1974, 37 percent computed separate rates for quits; 31 percent for discharges; 26 percent for deaths; 25 percent for retirements; 23 percent for layoffs; and 14 percent for transfers.<sup>19/</sup>

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18/ Paradigm study (40)

19/ Bureau of National Affairs, Inc. (11)

Efforts to distinguish between avoidable and unavoidable, or controllable and uncontrollable, turnover, result in further refinements to turnover's definition and measurement.

Definitions of what is "avoidable" turnover naturally vary among companies: when a worker quits to return to school, for example, a company's educational benefits program might make this "avoidable," whereas the loss would be flatly out of the control of a company with no educational assistance policy. Similarly, retirements are usually out of a company's control, but different pension policies would have different effects on loss rates at various ages near the retirement age.

The nature of the work done by the company also affects turnover measurement and definitions. A major construction firm, for example, found that voluntary (avoidable) losses soared after workers had been on the job 18 to 20 months, which may have been an indication that people were leaving to find busier construction projects with more future and perhaps more overtime.<sup>20/</sup>

No consistent way of measuring turnover by its cause is evident in private industry, although the concept of relating losses to reasons is widely acknowledged as essential to managing turnover and controlling its costs.

#### 4. Current Management Methods in Private Industry

Where turnover is found to be occurring at an unacceptable rate in private industry, managers seek its causes and costs to guide specific plans for remedies.

While recognizing that in theory a "complex causal network"<sup>1/</sup> may be responsible for voluntary terminations, company managers under pressure to reduce quits, like military managers, focus on the reasons given by job leavers to shape policies and techniques to improve retention. Exit interviews, interviews and questionnaire surveys of departed employees as much as six months after termination,<sup>2/</sup> and long-range studies of individual leavers are utilized in an effort to isolate specific causes related to personal characteristics, the job itself, comparative opportunities and earnings, and other variables.

Management intervention to reduce turnover is not entirely formed by leavers' expressed reasons for dissatisfaction, of course. Methods such as wage increases in a given area are weighed against not only

1/ Kohen, Andrew I. (25)

2/ Kay, Emanuel (26)

their immediate payroll costs, but other possible impacts such as "wage compression." (See section 4.24)

In the Paradigm study and among other major employers in the literature, companies with large, heterogeneous but generally stable work forces pursue a broad range of personnel policies designed to make their company "a good place to work." Human resources activities are ongoing at these companies, and the turnover "problem," where discovered, is anecdotal rather than endemic.

Still, the larger firms are more likely to regularly report on turnover, as has been seen. And because of some firm's greater commitment to the goals and aspirations of their employees, their response to anomalous or rising turnover rates is likely to be prompt and as thoroughgoing as possible.

Among some of the other companies reported on in the literature, high turnover is of less concern to management. In some cases, this may result from a lack of appreciation of its true costs; in others, its costs are well understood but its alternatives are seen as even more costly.



#### 4.1 Establishing True Costs of Turnover

Among companies that take steps to manage turnover, the first and perhaps causative stage in the process is the measurement of the costs of force loss to the company: "causative," because the management of private companies requires that all managerial programs be justifiable at "the bottom line," in reduced costs or increased profits.

"Firms which calculate their turnover costs generally find that the expense is much larger than anticipated," note the authors of one recent review of nine turnover cost studies in Canadian companies.<sup>3 /</sup> Moreover, "Labor turnover costs can be measured and used as justification for programs to reduce turnover. These cost measurements provide a benchmark for monitoring and measuring the success of a project and proving whether or not the intervention has been successful."

Normally, the cost analysis focuses on a perceived problem area. As one respondent to the Paradigm study<sup>4 /</sup> points out, "The first thing we do when we spot a problem is to review company philosophy in this area. Do

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3/ Cawsey, Thomas F. and William C. Wedley (12).

4/ A lumber products company with 50,000 employees in four divisions, with an elaborate intervention program on turnover that categorizes 22 different reasons for losses. Paradigm (40).

we really care if we lose people here? If not, there's no need to manage the problem."

Job obsolescence, divestiture, projected plant relocation, or other conditions in a particular company or industry are one kind of reason for not attempting to manage (reduce) turnover. Another has to do with the kinds of employees involved.

At Texas Instruments, for example, management tries to "stop reinforcing the wrong reasons" people stay, in particular employees dubbed "turn-offs" who are "highly dissatisfied with their jobs and stay for mainly environmental reasons" such as a poor job market or<sup>5/</sup> benefits.

Even the determination not to attempt to reduce turnover in a given situation requires some understanding of the costs of turnover, however. As underscored in one study of the effect of pensions on turnover, before more generous retirement benefits are initiated as a remedy to force loss it should be clear that the benefits costs "are more than recouped in the form of reduced turnover costs."<sup>6/</sup>

Reported costs of turnover vary enormously among companies, reflecting a broad range of direct and in-

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5/ Flowers, Vincent S. and Charles L. Hughes (19).

6/ Schiller, Bradley R. and Randall D. Weiss (46).

direct cost factors attributed to force loss. A 1975 study of turnover costs among hourly workers at International Nickel Co. estimated an average cost of \$3,732 per turnover;<sup>7 /</sup> a 1979 estimate of the cost of turnover among computer programmers suggested a range of \$5,000 to \$9,000 per employee;<sup>8 /</sup> and other reports estimate costs of from \$350 per hospital worker to \$6,000 for each turnover in an electronics manufacturing company,<sup>9 /</sup> in 1979 dollars.

The costs of turnover, specifically voluntary quits,<sup>10 /</sup> have been perceived as including the following:

1. Recruitment costs, such as advertising, college recruiting, employment agency fees, recruitment literature, and some public relations costs;
2. Selection costs, including application materials, interviews, medical examinations, reference and background checks, travel expenses, and a share of personnel department costs;

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7 / Cawsey, Thomas F. and William C. Wedley (12).

8 / Baker, H. Kent ( 5).

9 / American Society for Personnel Administration ( 1).

10/ Peskin, Baker, Cawsey, et al.

3. Orientation and training costs, including not only the costs of formal training but "break-in" time, during which increased supervision is required, and maintenance and accident costs may rise;
4. Separation costs, such as exit interviews, severance pay, social security and unemployment insurance costs;
5. Morale costs, particularly among high-turnover employers, which could have a cumulative or "snowballing" effect on turnover, absenteeism, and productivity; and
6. Lost productivity, resulting from factors such as the temporary absence of a worker and the need to "break in" a new employee.

To measure productivity costs of turnover, one author (Zimmerer, Management of Personnel Quarterly, Summer 1971) recommends that companies devise an employee cost/contribution measure for new workers that would identify a "breakeven point" when the worker is contributing more than his cost to the company: if feasible, such a measure would include all of the above costs.<sup>11/</sup>

Intangible costs to the company such as "morale" costs also reflect on the company's image in the community. While the company is spending advertising and public relations dollars to improve that image, a turnover situation that reflects a revolving-door employer, or simply "not a good place to work," could be eroding the value of the company's image.

Even more to the point, in light of various researchers conclusion that turnover's immediate precursor is "intention to quit," a high <sup>12/</sup>awareness among employees of turnover among their predecessors and colleagues may be a major, largely unmentioned reason for high turnover.

This is an area that might prove especially fruitful for future research leading to insights into Navy turnover. While many attitudinal studies in the private sector have related job conditions causing stress or dissatisfaction to turnover, none has been discovered that relates perceived turnover (compared with an objective measurement) to intention quit. It may be that studies of employees in settings bearing some superficial resemblances to military occupations (among skilled workers in a highly unionized, geographically isolated plant, e.g., or secretaries and clerks in a building with its own cafeteria) might shed new light on the importance of peer group influences on retention decisions.

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<sup>12/</sup> Szilagy, Andrew D. (50), et al.

Of course, more than peer group attitudes are influential in conditioning the worker's perception of his job as a place with a future. Military leaders do not need to be reminded of the impact of public attitudes on enlistment and reenlistment patterns. Certain companies become known in their employment areas as places where "you can always find work for a few months" until something better comes along. A company with such a reputation may have no other choice, but if it wishes to stop hiring "warm bodies" it should take steps to improve its image in the community.

Similarly, certain industries are well-known for their retention problems. The insurance industry as a whole typically loses two out of every three new hires in the first year.<sup>13/</sup> In heavy construction, workers often expect to be laid off after two years or less, the duration of many projects: most construction company separations did occur involuntarily at that time, one study found, but voluntary quits also soared then.<sup>14/</sup>

The extent to which "high turnover contributes to even more turnover" may be difficult to measure in general, but related to specific variables obtainable in attitude surveys this "intangible cost" of turnover may be more significant than is indicated in present research.

13/ Merrill, David W. and John H. Stimpson (33)

14/ Lowman, Joseph and Tom Snediker (29).

#### 4.2 Policies and Methods to Reduce Turnover

As indicated, all human resources activities designed to improve job satisfaction, performance, goal accomplishment, and other objectives of modern companies with a large investment in people, tend to reduce turnover, or rather prevent it from becoming a problem except in unusual cases.

Virtually all of the policies reflected in the particular techniques discussed below are part of major employers' arsenals of human resource activities. As can be seen, however, companies with recognized high-turnover situations put greater or less emphasis on various techniques, according to the time period (tenure), occupational type, employee characteristics, and job requirements involved. These techniques fall into the areas of

- 4.21 The Selection Process,
- 4.22 Orientation,
- 4.23 Supervision,
- 4.24 Compensation,
- 4.25 Attitude Surveys, and
- 4.26 Career Development.

#### 4.21 The Selection Process and Early Turnover

For most companies who experience unacceptable levels of turnover within the first few months or year of employment, the logical place to look for a problem that can be corrected is in the selection process. When employees are seen to be leaving soon after the point of hiring -- when there is at least "an implied assumption on the part of the manager and the employee that it will work out"<sup>15/</sup> -- managerial attention is drawn to the process of recruiting, interviewing, evaluating, and finally selecting new employees.

Two general approaches to selection process improvements are used, sometimes simultaneously: the first concentrates on the applicants, and seeks to establish screens or ways of hiring the "right people;" the second focuses on improvements in the selection process itself, and includes such measures as interviewer training and realistic job previews.

#### Applicant Evaluation

Among companies with high turnover in low-skill, entry level jobs with widely fluctuating force needs,<sup>16/</sup> one author notes, "many employers fail to follow up  
15/ Merrill, David W. and John H. Stimpson (33)  
16/ Kagerer, Rudolph L. (24)



job references, primarily because of pressure from operating personnel to 'send somebody down,' with the predictable result that "job hoppers, short term workers, and welfare or unemployment period satisfiers" are put on the payroll. This may be an acceptable cost for some companies, balanced against the cost of checking previous employers for "reason for leaving previous employment," but for most companies such procedures are just the beginning of applicant screening.

Turnover management methods that focus on the individual applicants in the selection process are usually based on some preconceptions or standards: what type of applicant is likely to stay and succeed. Along with the specific criteria personnel interviewers use to estimate whether an applicant can do the kind of work for which he is being hired, companies have developed criteria assumed to be predictors of turnover.

These standards bear virtually no relationship to the theoretical determinants of turnover discussed in section 1.2 of this report. Companies have particular force needs and hiring policies (sometimes shaped by EEO requirements) that preclude adherence to a "low turnover profile" in selecting applicants: to fill

entry-level factory positions, for example, a company could not reasonably be expected to hire only middle-aged white men without high school diplomas.

A different kind of profile, called a "Social Style Profile," was developed for use in the selection process at New York Life Insurance Company, <sup>17/</sup> and has reduced first-year turnover from about two-thirds (the insurance industry average) to 50 percent in the last six years. This method is essentially an extension of the pre-employment interview: three to five people talk to each applicant, and each interviewer completes an adjective checklist grading the applicant in categories of Assertiveness, Responsiveness, and Versatility.

Developed by a consulting firm and used by other companies as well as New York Life, it has been noted that "The use of this social style measurement tool is particularly useful in selecting life insurance sales people because success in a sales role is clearly dependent on social skills -- how others see the salesperson as behaving." At the same time, the company began using the Aptitude Index Battery (AIB) tests, which tell what the candidate thinks about himself.

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17/ Merrill, David W. and John H. Stimpson (33)

By focusing on "social skills" for applicants to sales jobs, the insurance company is doing what most private firms do in establishing applicant criteria. The point is to find the right person for the job or department, a process that may include the involvement of supervisors as well as personnel experts.

"It pays for supervisors to take time to interview applicants thoroughly," says one management consultant, recommending that supervisors should "attempt to develop realistic selection criteria" for specific jobs, avoiding overqualified people who lead to "not only an inflated payroll but also to disgruntled employees with unmet expectations."<sup>18/</sup>

#### Changing Selection Process

Recognizing "unmet expectations" as a major cause of early employee turnover, most companies that attempt to deal with the problem seek better ways of apprising applicants of the nature of their prospective employment.<sup>19/</sup> A study of high-turnover sales representatives at Xerox, for example, concluded that the main problem was that "the job was oversold" in the selection process.

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18/ Baker, H. Kent (5)

19/ Belknap, William C. (6)

At Xerox, a videotape was prepared for applicants as a realistic job preview, pointing out good points as well as difficulties in the job, "to allow applicants to select themselves out prior to the final decision to hire, and therefore prevent future turnover." At the same time, the company moved to improve interviewers' skills in communicating with applicants.

Unmet job expectations that lead to turnover in the first weeks, months, or year of employment are more likely to be related to the work itself and job conditions than compensation, benefits, or external conditions -- factors that pre-exist at the time of employment and are not likely to immediately change.

Thus, companies such as an insurance company reported in one study try to prevent early turnover by presenting candidates with an objective view of their prospective jobs. In this program,<sup>20/</sup> clerical job applicants "were allowed to observe some on-the-job activities for a short period of time.

"After six weeks, the company reported a significant decrease in the number of employees who quit after only a few weeks or months on the job." Also, more applicants declined offers of employment because "the work was not what I expected it to be."<sup>21/</sup>

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20/ Szilagyi, Andrew D. (50)

21/ For further discussion and examples of Realistic Job Previews, see Wanous, John P. (53).

Among most major companies committed to ad-  
vanced personnel policies,<sup>22/</sup> the selection process  
is based on elaborately worked out and tested  
psychological and skills aptitude measurements, to-  
gether with criteria relevant to specific work. Turn-  
over in itself, or its opposite retention, is not or-  
dinarly the problem or goal addressed by these pro-  
cedures and policies, but is rather seen as a by-  
product of performance or "success" in the job.

Where turnover is seen as a costly problem de-  
serving intervention in the selection process -- usu-  
ally because new hires are leaving within weeks or  
months at an unacceptable rate -- the selection pro-  
cess is reviewed in its entirety. This can even include  
examination of the sources of recruitment, which some  
see as a predictor of turnover.

In one study of within-one-year quits at an in-  
surance company, a bank, and an abstracting company,<sup>23/</sup>  
for example, it was determined that from a turnover  
viewpoint, applicants referred informally by friends  
and relatives had significantly lower quit rates than  
those recruited through employment agencies or news-  
paper ads.

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22/ Paradigm (40)

23/ Decker, Phillip J. (15)

#### 4.22 Orientation to Reduce Newcomers' Anxieties

Orientation of newcomers to companies takes many forms and has many purposes in private industry -- from taking a new employee to lunch as a "gesture" to several-week-long "personal growth" courses for disadvantaged new hires, more popular in the late 1960's and early 1970's than now.

One kind of orientation program designed to reduce turnover is similar to Realistic Job Preview, and was reported on as a case history at Texas Instruments. Here, electronic components assemblers were given a one-day "realistic socialization" orientation designed to "'soften' the shock of entry." According to a study that compared 100 new assemblers who had the course with 100 who had not, "Total cost savings for the 100 experimental new hires were estimated at \$50,000 for the first year in job performance, and another \$35,000 in the personnel costs of reduced turnover and absenteeism."

Often the orientation consists of "follow-up interviews with new employees to help them bridge the

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24 / Wangus, John P. (53). See also Gommersall, E.R. and M.S. Myers, "Breakthrough in On-The-Job Training," Harvard Business Review, 1966, 44, p. 62-72.

transitional phases of a new job" and reduce the turnover that might result from newcomer's anxiety or small problems that loom large for some new employees, such as where to park or when breaks are permitted.<sup>25/</sup>

Where departmental turnover is high, "short-term retention strategy...can include such steps as having the new employee properly oriented and integrated into the company...through a participative process that aims to clarify both individual and company needs," notes one management consultant, indicating that orientation should be the first stage of career development.<sup>26/</sup>

Orientation designed to reduce turnover among socioeconomically disadvantaged new workers was more in vogue in the early years of Federal equal employment opportunity enforcement than recently. According to one manager whose company discontinued a "behavior adjustment and personal growth" course for youthful minorities in the early 1970's, "this kind of training steps on a lot of toes if it's not done with a

25/ Bureau of National Affairs, Inc. (11) Both of these items are listed on an "Orientation Checklist" supplied to the BNA by a small manufacturing company, along with "Rest Rooms," "Bulletin Boards," and safety information.

26/ Baker, H. Kent. (5)

great deal of care. There's a tendency by some companies to make value judgements on some people's lifestyles in this kind of behavioral training."<sup>27/</sup>

In one widely reported attempt to reduce turnover among disadvantaged workers,<sup>28/</sup> in which trainees received \$2.50 an hour in a six-week course designed to foster "personal growth," the company later found that the characteristics of the jobs -- dirty and unsafe factory work -- was the true cause of turnover.

#### 4.23 Improving Supervision to Reduce Turnover

Although cited by only one of the major firms in the Paradigm study, companies with high turnover among unskilled or entry-level employees often resort to special supervisory training to help supervisors "communicate with their respective employees on a continual basis in an effort to reduce turnover."<sup>29/</sup>

Quality of supervision is recognized as having an important impact on the ability of new hires to adjust to difficult jobs, and is equally important among certain kinds of employees, notably those with

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27/ Paradigm (40)

28/ Glaser, Edward M. (20). See also Quinn, R.P., T. Levitin, and D. Eden, *The Multi-Million Dollar Misunderstanding: An Attempt to Reduce Turnover Among Disadvantaged Workers*, Ann Arbor, University of Michigan Survey Research Center, 1971.

29/ Bureau of National Affairs, Inc. (11)



no previous work experience or from disadvantaged backgrounds.

Among largely black and female terminees interviewed by Louis Harris Associates in one study, for example, over one-third cited as their reason for leaving strict supervisors and "too many rules and regulations."<sup>30 /</sup>

Others stress that new employees should "report to a single supervisor during the early months of employment."<sup>31 /</sup>

Supervisory efforts are also considered essential in developing "organizational commitment" among newer workers. As indicated in one study of 156 management trainees,<sup>32 /</sup> supervisors should appear to be truly concerned with employee's welfare, as demonstrated by such practices as regular career counseling.

In one study of a high-turnover situation among male plant employees in the late 1960's, it was found through a "supervisor audit" that aspects of the then-topical "generation gap" were contributing to poor supervisor-employee relations, and hence turnover.<sup>33 /</sup>

This general result has been found relevant by other  
30 / AT&T Manpower Laboratory (2)  
31 / Baker, H. Kent (5)  
32 / Porter, Lyman W. and Richard M. Steers (44)  
33 / EBS Management Consultants, Inc. (16)

companies in more recent times. At New York Life Insurance Company, for example, tests designed to identify "behavioral patterns" of new employees "can be most helpful after selection -- during early supervision and training. For example, in terms of motivation it is critical to understand individual differences."<sup>34 /</sup>

#### 4.24 Compensation Surveys and Other Pay Programs

While much of the private industry research and management effort directed toward reducing turnover seems intent on "other than pay" reasons and remedies, as befits profit-making organizations, in practice most companies look to their pay structure when experiencing unacceptable turnover in the form of voluntary quits.

Among the nation's leading employers, according to our reported study,<sup>35 /</sup> pay surveys to determine competitive compensation levels are considered the most important managerial measure in controlling force loss.

Such surveys may uncover a "soft spot in the

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34 / Merrill, David W. and John H. Stimpson (33)

35 / Paradigm (40)

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PARADIGM CONSULTANTS TINTON FALLS NJ

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NAVY ATTRITION AND TURNOVER IN PRIVATE INDUSTRY: CONCEPTS, MEAS--ETC(U)

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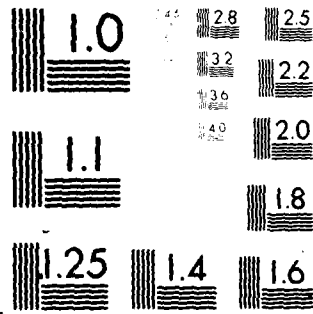
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compensation program that competitors are taking advantage of," as one author points out.<sup>36/</sup>

Although the inverse relationship between earnings generally and turnover has been well established,<sup>37/</sup> and most voluntary quits in private industry occur after the worker has lined up another job,<sup>38/</sup> pay increases alone are not universally seen as the way to manage unacceptably high turnover. The purpose of compensation surveys of competitors is not so much to raise salaries as an inducement to stay as to assure that your own pay levels are not "behind the times," especially in inflationary periods, and that turnover is not being caused by workers' perceptions of their worth in the external labor market.

Several respondents in the industry study made this distinction, while stressing that pay practices were part of overall human resources development policies rather than isolated managerial techniques.

"One of the problems in a time of greatly increased union benefits and compensation," says the human resources manager of a major lumber products company, "is that when we 'promote' a person into management from the

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36/ Peskin, Dean B. (43)

37/ See Section 1.21, this report.

38/ 50 to 60 percent, according to Mattila, Peter J. (32)

union, he or she isn't necessarily taking home that much more pay. This can be a high-turnover stage, if we don't communicate the long-range advantages of the employee's new situation.<sup>39/</sup>"

Salary increases made for the purpose of reducing turnover can also distort a company's pay structure by causing "wage compression," another Paradigm study respondent points out. "If you raise the earnings of a department or section's employees to nearly that of the supervisors in that area, this can have harmful effects on both supervisors and the people who are promotable to supervisors. This kind of wage compression may be more costly than the turnover it was intended to prevent."

Some analysts have pointed out that pay dissatisfaction may be "internal or external,"<sup>40/</sup> resulting from either the worker's sense of his value to the company or external job opportunities.

Internal pay practices designed to reduce turnover are ordinarily of the performance-bonus type, but in<sup>41/</sup> at least one study it was found that wage increases

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39 / Paradigm (40)

40 / Szilagyi, Andrew D. (50)

41 / Federico, Suzanne M. and Pat-Anthony Federico (18)

based on performance alone, with no "automatic" raises based on tenure, were a contributor to high turnover during the first year of employment.

Pay increases to inhibit turnover are a method more frequently considered effective among nonmanagement and unskilled workers. Job dissatisfaction has generally been found to relate to pay more often among these workers than among managerial, technical, and professional employees, whose dissatisfaction is more likely to be the result of inadequate "challenge" in their jobs or limited opportunities for career development.<sup>42/</sup>

With all of these caveats, however, pay surveys and subsequent adjustments are the single most widely applied method of managing unacceptable turnover in particular situations. Companies experiencing high turnover in certain occupational areas -- among data processing people or construction superintendents, for examples -- monitor comparable salaries through industry groups or informal surveys. And as numerous studies of general mobility and quits have established, wage differentials remain a prime cause.<sup>43/</sup>

42/ E.g., Szilagyi, Andrew D. (50)

43/ E.g., Mixon, J. Wilson Jr. (36); Hayghe, Howard (21); Stoikov, Vladimir and Robert L. Raimon (49)

#### 4.25 Attitude Surveys and Quit Decisions

Employee attitude surveys, particularly among larger companies, are emerging with increasing regularity as a tool for helping manage turnover, as well as other problems in the personnel area relating to employee satisfaction. New attitudes in the work force, first widely apparent in the turbulent 1960's and continuing today in "employee rights" issues such as privacy rights and participation in decision-making, have led increasing numbers of managers to new efforts to determine and anticipate the changing attitudes of workers.

The particular relevance of attitude surveys to turnover management lies in the recognition that quit decisions are made over a period of time, "sometimes<sup>44/</sup> months," according to one study of 3,000 employees in six private concerns. Citing "the lengthy buildup to a decision to leave a company," this researcher calls it wise to "monitor attitudes" as well as job performance, "because changes for the worse are likely to relate to the strength of a decision to leave the organization."

Throughout the current literature on job satisfac-  

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44/ Szilagyi, Andrew D. (50)



tion, in fact, "intention to quit" is viewed as the final precursor to voluntary turnover, and researchers have found that this intent may take time to develop and even persist for some time before actual quitting occurs.

Drawing on other researchers' conclusion that "understanding the manner in which the actual decision (to quit) is made is far from complete," one widely cited study of hospital workers concluded that "intention to quit exhibited the only significant coefficient with actual attrition."<sup>45/</sup> Thus job dissatisfaction is several steps removed from actual quitting. In between, the worker will start considering this option, begin a job search, and perhaps evaluate alternatives in discussions with his peers.

Applying the techniques of the hospital worker study to National Guardsmen, another analyst found that "turnover related more strongly to intention to quit than to any other construct," and that other determinants of turnover such as tenure and job opportunities<sup>46/</sup> "influenced turnover only through withdrawal cognitions."

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45/ Mobley, William H., Stanley O. Horner, and A.T. Hollingsworth (37)

46/ Miller, Howard E., Ralph Katerberg and Charles L. Hulin (34)

In the past, job satisfaction theory generally held that job dissatisfaction (for whatever, external or internal reason) lead to turnover. A 1972 study of 122 Air Force pilots, for example, indicated that the answers to a single question, "How often have you thought of quitting or changing jobs?", would have predicted departures.<sup>47/</sup> The more recent studies developing this theory have tended to put more time between job dissatisfaction and quitting -- time to "monitor attitudes toward the job and organization at various intervals to serve as an early warning system for potential turnover."<sup>48/</sup>

And from a human capital perspective, it is only "rational search strategy to line up a job in advance of quitting in order to avoid the costs of foregone income and maximize bargaining power."<sup>49/</sup>

Attitude surveys are one way of finding out "How dissatisfied is dissatisfied?" among employees, and are a clearly useful technique for determining which further avenues of turnover management might profitably be pursued.

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47 / Atchison, T.J. and E.A. Lefferts (4)

48 / Porter, Lyman W. and Richard M. Steers (44)

49 / Mattila, J. Peter (32)

#### 4.26 Career Development: Integration of Goals

The phrase "career development" takes in a broad range of human resources policies and practices in private industry, from training to retirement policies. The objective of career development is in a sense the opposite of turnover, or retention of essential human resources. By "career," companies do not normally mean a career with other companies.

Most of the human resources programs in this area mentioned in the Paradigm study -- potential assessment, performance appraisals, career pathing, e. gs. --<sup>50/</sup> focus on exempt or managerial employees. In the job satisfaction literature, as well, the point is repeatedly made that professional and managerial people require more "work itself" satisfiers and view opportunities for advancement as a key factor in job satisfaction.<sup>51/</sup>

Where turnover is high among nonmanagerial or unskilled workers, however, it has been related to what one author calls "low opportunity chains,"<sup>52/</sup> or what another describes as "the doomsday job."<sup>53/</sup>

"Pay is commonly used as a reason for termination," says the manpower planning director of Fairchild Cam-

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50/ Paradigm (40)

51/ E.g., Flowers, Vincent S. and Charles L. Hughes (19)

52/ Smith, Catherine Begnoche (47)

53/ Peskin, Dean B. (43)

era and Instrument, "but as often as not it serves as a convenient way out" of jobs with no future. This executive recommends the use of job enrichment to motivate workers in high-turnover jobs, even encouraging workers to "expand their own jobs."<sup>54/</sup>

As noted by another advocate of career development practices among low-skill workers, however, "Despite the recommendations of job enrichment" people, "there is often little that can be done to upgrade" some work. "If an employee can see no way out (dead end), the mind dulling routine of a simple or dirty job with low pay has little 'holding power.'" The answer in these cases is to develop ways of integrating entry level jobs into the organization as part of career ladders.<sup>55/</sup> Specifically, this can mean training that includes some exposure to the "next job up" the career ladder, or tuition reimbursement.

As various researchers have pointed out, employee commitment increases as the employer is seen as the "provider" of need satisfaction -- and these needs include a chance to reach personally meaningful goals.<sup>56/</sup>

Most major companies' human resources strategy is

54/ Peskin, Dean B. (43)

55/ Kagerer, Rudolph L. (24)

56/ Porter, Lyman W. and Richard M. Steers (44)

in part designed to integrate employees' goals with  
those of the company.<sup>57/</sup> One consultant recommends, for  
example, that "each employee set down personal develop-  
ment objectives as they relate to a career plan" and  
coordinating these to company plans. Such an effort  
"may contribute to lowering turnover and developing  
more motivated employees who will make a long-term  
contribution to the firm."<sup>58/</sup>

Modern corporate organizational structure rarely  
presents a simple hierarchy of managerial positions.  
Instead of being rungs on ladders, today's managerial  
jobs are more accurately represented as interfacing  
areas of responsibility on a matrix, and in multi-  
divisional companies managers are transferred across  
divisions "on the way up," though titles and salaries  
may not change.

Unlike the civil service workers who were found to  
be quitting at high rates because they were in "low  
opportunity chains,"<sup>59/</sup> today's corporate managers are faced  
with a number of "career paths," and part of the human  
resource function is to clarify these to limit force loss.

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57 / Paradigm (40)

58 / Baker, H. Kent (5)

59 / Smith, Catherine Begnoche (47)

## 5. The Navy's Understanding of Military Turnover

Current research that informs managers' understanding of unwanted force loss in the modern military is summarized here in its two most general categories:

- 5.1 Studies of reenlistment behavior, especially first-term reenlistment and with particular attention to highly skilled personnel in ratings that may be strategically vital; and
- 5.2 Examination of the trends and causes for first-term enlisted attrition, the failure to complete initial obligation periods that is increasingly widespread in the all-volunteer services.

The Navy, considered "in the forefront"<sup>1/</sup> among organizations examining retention behavior, has produced or supported hundreds of studies in this area over the years. The following sections summarize key variables associated with reenlistment decisions and first-term enlisted attrition, and explore some of the areas seen by researchers as deserving of further attrition research.

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1/ Atwater, Donald M. and Sandra Zeitzew (see Military Bibliography, MB)

### 5.1 Reenlistment Studies Cite Vast Armada of Variables

Despite the wealth of information accumulated in results of Navy studies of reenlistment behavior that go back to the 1940's, and the formidable array of management interventions spurred by these studies over the years, the Navy continues to experience lower retention rates among career personnel than it considers acceptable. Especially in an era of increasing technological challenge, readiness is being threatened by unanticipated force loss in key ratings and skills, both enlisted and officer.

The problem is not isolated among first-term reenlistments: "To a degree not evident in other services," notes a House Armed Services Committee report, "the (Navy's) shortage is occurring among personnel who have already reenlisted once -- personnel normally considered career personnel."<sup>2/</sup>

As is evident from a review of several dozen key studies on reenlistment behavior conducted over the last decade,<sup>3/</sup> the Navy has not been "at a loss" to discover the reasons for career attrition. Factors affecting the reenlistment decision have been identified as including a lengthy list of compensation and other factors, as

2 / U.S. House of Representatives, Committee on Armed Services (MB)

3 / See Military Bibliography (MB), pp. Bibl.-6 to 11.

indicated below:

- Continuation Bonus (see Munch, Wetzler, Foch)<sup>4 /</sup>
- Variable Reenlistment Bonus (Haber, Munch, Kleinman, Enns, Frey, Goodstadt)
- Proficiency Pay (Goodstadt)
- Regular Military Compensation (Stolloff, Mossell, Haber, Glickman, Cooper)
- Total Military Income (Nelson, Wilburn, McCall)
- Reenlistment Bonuses (Munch, Stoloff, Enns, Frey, McCall)
- Pay Increases (Nelson, Lockman, Grubert, Haber)
- Retirement Benefits (Haber, Frey)
- Length of Enlistment (Haber, Kleinman)
- Job Satisfaction (Comptroller General, Glickman, Stoloff)
- Being Used in Skill Trained For (Stoloff, Goodstadt, Mossell)
- Job Training (Weybrew, Glickman)
- Job Context (Lockman, Stoloff, Vineberg)
- Job Security (Comptroller General)
- Civilian Unemployment (Cooper)
- Civilian Income Alternative (Nelson, Wilburn, Mossell, McCall)
- Image of Branch of Service (Stoloff, Lockman)

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4 / These references are to articles and studies in the Military Bibliography



- Rank (Haber)
- Educational Benefits (Weybrew, Glickman, Frey)
- "Fate Control" (Frey)
- Personal Freedom (Glickman, Comptroller General)
- Quality of Supervision/Leadership (Lockman)
- Travel Opportunities (Glickman)
- Family/Friends Attitudes (Lockman, Glickman)
- Own Attitude (Vineberg, Haber, Goffard)
- Draft Pressure (Nelson, McCulloch, Wilburn, Grubert, Fechter, Gilman), and
- Living Conditions (Vineberg, Comptroller General)

This sampling illustrates both the breadth of Navy research into reenlistment behavior and the diversity of methods used to improve retention -- diversity especially evident in the compensation area.

Also, it should be clear that much of this research has corroborated or led to personnel initiatives, especially in the introduction of bonus incentives to improve retention rates among critical skills, such as nuclear-qualified submarine officers.

Nonetheless, factors outside the control of Navy managers have operated to restrict implementation of results long agreed upon as conclusive. The relationship of pay to the kind of job satisfaction that leads to reenlistment is one example.

The many variables in the relationship between job satisfaction and retention among Navy enlisted personnel have long been identified and studied for their impacts on reenlistment decisions. In 1965, for example, the Navy Personnel and Training Research Laboratory in San Diego, in a study of 3,600 primarily sea-going enlisted men, produced a "host of variables" from which one later study "extracted 44 pecuniary, habitability, organizational, and personal characteristic items," all of which were considered to be related to job satisfaction.<sup>5/</sup>

The results were then categorized to distinguish between "job-content" variables, attitudes about the work itself; and "job-context" or hygiene variables. In traditional job satisfaction theory, the former are considered to be "satisfiers" and the latter "dissatisfiers." This study concluded that while both kinds of factors influence on-the-job performance, "only the job-context and compensation measures assert a strong influence on reenlistment" decisions. Pay and habitability factors were found to be important determinants of reenlistment behavior, which "seems to be independent of a positive attitude toward one's job," said this 1971 study.

## 5.2 Current First-Term Attrition Research Views

Research into the causes of high and growing rates of first-term attrition in the Navy, a phenomenon of all military services since the introduction of the All Volunteer Force, reached an apex in 1977 with publication of papers generated by the "First Term Enlisted Attrition" conference sponsored by the Office of the Secretary of Defense and the Office of Naval Research.<sup>6/</sup> As noted by one recent review of research,<sup>7/</sup> the "dominant proportion" of studies done for purposes of better understanding first-term attrition have been done by the Navy among services, although "a declining interest in the area is evident based on the time pattern when studies were completed."

By 1977, the problem of first-term attrition had emerged as one of the most serious and potentially costly concomitants of the All Volunteer environment. The failure of individuals to complete their initial periods of obligation has attended the introduction of the AVF in other country's services as well, various studies have pointed out.

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6/ April 4-7, 1977, Leesburg, Va. Research published as "First Term Enlisted Attrition, Volume I: Papers," June 1977; and "Volume II: Summary," H. Wallace Sinaiko, August 1977. See (6), (17), (25), (44).

7/ Atwater, Donald M. and Sandra Zeitzew, "A Comprehensive Review of Monetary Compensation in the Military," January 1980, Rehab Group, Inc., Contract No. 79-R-0812.

In the Canadian forces, for example, a 1976<sup>8/</sup> study by the Personnel Applied Research Unit showed that 58 percent of all force losses were occurring in the first four years of service, and 50 percent before the end of three years. The PARU researchers, focusing on "recruiting exits" that occur in the first year or so, has related their cause to "societal factors which influence the development of commitment during the early stages of membership." The group at which Canadian recruitment is aimed -- the young, inexperienced worker, often a school dropout -- are "from the lower end of the 'success' scale. We are getting a lot of drifters," this research concludes, "and we should expect them to leave, or to develop commitment more slowly."

Social conditions are also cited as a cause of retention problems in Great Britain's forces, which began phasing out conscription in 1957, and has since seen personnel costs "absorbing an increasing share of the total defense budget."<sup>9/</sup> Contrasting pre-1914 public attitudes toward "service" and the early 1960's

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8/ Evonic, I.N. (17)

9/ Harries-Jenkins, Gwyn (23)

image of "professionalism" to today's attitudes toward military service in Britain's all-volunteer force, one analyst asserts that the introduction of pay rates intended to be comparable to civilian pay has been a response to changing attitudes toward service that has been eventually "dysfunctional."<sup>10/</sup>

Increasing first-term attrition rates in the U.S. military, especially evident since introduction of "easy out" policies intended to improve the overall quality of forces and reduce personnel costs, have emerged as the principal source of turnover in the AVF.

As pointed out by H. Wallace Sinaiko in a summary<sup>11/</sup> of the 1977 First Term Enlisted Attrition conference, "It is not a new phenomenon, but since the advent of the all-volunteer force the rate of attrition has increased significantly," leading to concern because of its high costs and impact on force readiness.

According to a 1977 report of the Congressional<sup>12/</sup> Budget Office, "The increase in first-term attrition

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10/ "Individuals, rather than looking upon the military task as a unique exercise of specialist skills in which job satisfaction is derived from task performance, have tended to evaluate their function against the conditions of employment of their civilian counterparts," which has "enhanced the sense of relative deprivation," especially among troops stationed in Northern Ireland. Harries-Jenkins, Gwyn (23)

11/ Sinaiko, H. Wallace; "First Term Enlisted Attrition, Volume II: Summary," Office of Naval Research, August 1977.

12/ "The Costs of Defense Manpower: Issues for 1977, CBO Issues Paper, January 1977, p. 26.

(from 25 to 37 percent over the previous four years) results from the new administrative discharge procedures that make it possible to separate personnel prior to the end of the term of service." When the House Appropriations Committee set the new policy in 1974, said the CBO report, it "suggested a goal for marginal performer discharges of 6,500" per year, but Defense Department losses were later projected at 40,000 per year for this cause, "more than six times the Committee's guidelines."

13/

According to current Defense Department data, attrition rates for males in the first three years went from 25.9 in 1971 to 36.8 in 1974; for the Navy, the increase was from 28.3 percent to 37.7 percent. While these data project improvements by 1980 (28.9 for the DOD and 27.5 percent for the Navy), high rates of attrition will continue to mean that the military must recruit more volunteers for each position than in the past.

One estimate is that "on the basis of the most recent attrition data (1979) the services must now put 17 percent more recruits in the pipeline than they did

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13/ "Percent Attrition During 1st 3 Years of Service for Male Non-Prior Service Accessions," Defense Manpower Data Center, September 30, 1979, reprinted in Congressional Record, July 1, 1980, p. S9042.

in 1971 to yield the same number of productive man-years during a three-year enlistment period."<sup>14/</sup>

In addition, non-high school graduates have first term attrition rates twice that of high school graduates,<sup>15/</sup> indicating that recruiting efforts and costs may have to be increased to improve the quality and retention rates of enlisted men.

"Beyond direct budget costs associated with high attrition," the Defense Department's A.J. Martin has observed,<sup>16/</sup> "indirect, but real, costs in the form of 'failure experience' for young people in the form of negative attitudes held by prior service personnel" are a factor. "Negative and credible information about military service experience among large numbers of prior service personnel can only make recruiter and advertising efforts that much more difficult."

Clearly, the "easy out" policies of the Navy and other services are neither wholly without merit in themselves nor entirely responsible for unacceptably high attrition rates. In an all-volunteer environment, it often can be more costly to force marginal or poor performers to stay in the service than it would be to recruit and train a replacement.

14/ Binkin, Martin, and Irene Kyriakopoulos: "Youth or Experience? Manning the Modern Military," The Brookings Institution, Washington, March 1979, p. 56.

15/ In the Navy in 1977, e.g., 53.8 v. 25 percent, according to the Defense Manpower Data Center, op. cit.

16/ Martin, A.J.: (31)

More importantly, as underscored by the landmark 1977 conference, there exist a number of other potential causes of high attrition rates among first-term enlisted men in the military. These causes have been identified as including

- Organizational issues, such as mismatches between recruits' aspirations and organizational needs, organizational commitment, and transfer policies;
- Recruitment weaknesses, the recruiting process, and issues affecting expectations of first-term enlistees;
- Job redesign issues that may increase satisfaction and motivation; and
- Improved personnel management techniques, including the development of new data bases to help managers learn more about when attrition decisions are made and which specific interventions have the greatest impact on groups of enlisted personnel.

Virtually all of these areas, while highlighted in current research, have been called "candidate areas for R&D support," indicating that although much has been dis-

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17 / Sinaiko, H. Wallace, op. cit.



covered about the interplay of factors influencing first-term turnover, much remains to be specifically quantified and applied.

#### 5.21 Organizational Issues Affecting Attrition

New ways of adapting the "receiving organization" to meet the needs of today's youth have been stressed in current Navy-supported research.

Houston University's David Gottlieb,<sup>18/</sup> for example, noting that "the art of understanding the dynamics of youthful attrition from social organizations as well as the art of effective remediation has advanced little" in recent decades, recommends several "socializing" approaches to organizational adaptation.

Because young people's decisions to enroll in school, take a job, or enlist "are not always based on rational behavior or systematic study," for example, he suggests "some process whereby potential recruits would have an opportunity to re-consider" the enlistment decision.

Like Gottlieb,<sup>19/</sup> Charles L. Hulin stresses the more "inward" attitudes of modern youth, and cites the in-

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18/ Gottlieb, David; (MB)

19/ Hulin, Charles L.; (MB)

creasing importance of the need to match organizational values with those of a changing population. Hulin observes, however, that "The most striking characteristic of empirical literature relating organizational/environmental factors to job withdrawal is its scarcity."

20 /  
Porter and Steers, focusing on the individual's identification with and involvement in the organization as a counter to turnover, stress the "notion of exchange" that runs through influential variables such as personal characteristics, job characteristics, and work experience. Employees (or recruits) come to organizations with certain needs depending on personal characteristics, and their organizational commitment is determined by the organization's ability to meet these needs.

Others have seen first-term attrition as primarily a "system problem,"<sup>21/</sup> the result of management practices. Policies to reduce turbulence resulting from frequent transfers, to assign specific careers to those who know what they want, "fast track" careers for those who qualify, flexibility of career planning for those

20 / Porter, Lyman W. and Richard M. Steers: (44)

21 / E.g., Canter, Ralph R.: (MB)

"searching," and assessment center evaluation of marginal applicants to develop predictive measures of later attrition.

#### 5.22 Recruiting Issues Raised by Current Research

As pointed out by Gottlieb<sup>22/</sup> and others,<sup>23/</sup> one approach to the first-term attrition problem may be to consider alternative population sources of recruitment: older persons, women, people with minor disabilities, and junior college graduates, e.g. The recruiting target group for all of the services and even for other countries all-volunteer forces<sup>24/</sup> has been clearly identified as having greater "turnover prediliction" than other demographic groups.

Improvements in the recruitment process, particularly where it appears that military service is being "oversold" to applicants<sup>25/</sup> in ways leading to future dissatisfaction and attrition, are stressed by other researchers. Their studies indicate further research is needed to assure that "the realities of service life" are being communicated both to potential

22/ Gottlieb, David: (MB)

23/ Binkin, Martin, and Irene Kyriakopoulos: (MB)

24/ Evonic, I.N. (17)

25/ See Mobley, William H., Herbert H. Hand, and John E. Logan (MB); Greenberg, Marshall G. and Gerald McConeghy (MB); and Wiskoff, Martin F.

sment data, explored in certain studies by Martin F. Wiskoff of the Navy Personnel Research and Development Center,<sup>32/</sup> have also been recommended as a way to develop predictive tools for estimating both recruits' attrition and turnover at various stages of military careers.

Along with the need to learn more about the timing and circumstances of attrition, researchers have suggested special programs to better integrate marginal people,<sup>33/</sup> special "behavior reversal" techniques for enlistees having trouble adjusting<sup>34/</sup> (especially minority males), and studies aimed at better understanding "psychological coping skills"<sup>35/</sup> that may be lacking in high-attrition groups.

Apart from all of the above areas of continuing research into the causes and remedies for first-term attrition, improvements in the "easy out" policy that many see as a prime cause of turnover's recent escalation are being sought by Navy researchers. An assumption of this work is that a "walk away provision"<sup>36/</sup> may result in lower overall personnel costs.

32/ Wiskoff, Martin F.: (MB)

33/ Canter, Ralph E. (MB)

34/ Jenkins, Louis E. (MB)

35/ Sarason, Irwin G. (MB)

36/ Guthrie, Robert V. (MB)

## 6. Comparisons of the Navy and Private Sector Research on Attrition

The objectives of this study were:

1. Determine the status of the private sector's understanding of personnel attrition;
  2. Determine the status of the Navy's understanding of personnel attrition;
- and
3. Evaluate current private sector and Navy management techniques for managing attrition and compare the systems.

The status of the private sector's understanding of attrition has been discussed in detail in Sections One thru Four of this report. Thus the study objective number one has been fulfilled. The second objective of this study was achieved and is documented in Section Five. The third objective is the purpose of this section of the report.

The Navy clearly recognizes that there is and will be significant manpower supply problems now and in the future. Extensive studies that explore the demographics of the next decade have been reported by Grissmer<sup>1/</sup> of the Rand Corporation. Not only were general demographics depicted but attrition and the youth market were explicitly detailed with regard to their implication for

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1/ Grissmer, D. The Rand Corporation, Future Manpower Issues for the 1980's Conference, Presentation Hunt Valley, Md., Oct. 1978.

military manpower. So too has the Brookings Institute reflected on the coming problem of military manpower supplies in the book Youth or Experience? Manning the Modern Military.<sup>2/</sup> While these two documents have only appeared in the last two years the military research literature is replete with studies of attrition and attrition related reports as reported in Section 5 of this document.

Without trying to encompass every facet of the research the range of topics covered extends from EEO objectives, flow models, benefits and training to compensation methods. Suffice it to say that a great deal of research has been accomplished with regard to the determinants of attrition in the Navy and the story is not complete.

The researchers have addressed a number of key issues that have been found to be related to attrition in the private sector as well as the military. With this array of knowledge before them one must conclude that

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2/ Binkin, M. and Kyriakopoulos, I., Youth or Experience? Manning the Modern Military. The Brookings Institute, Washington, D.C., 1979.

the Navy probably has a very good idea of the complexities of managing attrition. Why then does attrition continue to be high? It could well be that the solutions to the problem are not within the Navy's purview to implement those solutions. It appears that the implementation of the solutions require approval at a higher governmental authority than the Department of the Navy and that approval has not been granted.

The Navy, as compared to both the private sector and other service branches, is unique. The jobs in the Navy many times require the incumbents to be at sea. Not only are they at sea for long periods of time, in many cases they perform jobs that are physically demanding and have unattractive features. A good example is the rating of boiler tender. This job has the additional burden, like many other military classifications, of having very little transferrable skills to the civilian labor market. Pilots, on the other hand, clearly have transferrable skills and are hotly recruited by commercial airlines. Thus the full gamut of attrition problems confronts the Navy.

One example of the problem confronting the Navy is that of the boiler tender. This job with its below decks

environment, long tours at sea, little if any transferrable skills to the civilian labor market and an extremely limited career path in the Navy has been a prime problem for the Navy. Add to the description that there is poor pay when compared to his civilian counterpart, a long lag in catching up financially due to inflation, a much more highly disciplined management environment than in the civilian labor market, a guaranteed term of employment if he just keeps his nose clean or an easy early out if things don't work out in the Navy and you have the ingredients for high attrition rate job.

The simple fact that the economic conditions are not favorable for increased government spending on military manpower is partly at the foot of some of the problems of attrition. These limitations on financial support and head count constraints combine to produce serious manpower shortages. In the Navy, it is well known that many military personnel are called upon to put in exceptionally long hours because of manpower shortages and there is no added compensation as there would be in the private sector. The attrition problem however has been further aggravated by the poor recruiting conditions



that have prevailed in the recent past. The more scarce the replacement resources are the heavier the work load placed on those currently serving which in turn leads to an even higher attrition rate. It does appear that the Navy's attrition problem is a vicious circle.

On the other end of the continuum are the high skilled ratings. Electronic technicians, computer experts and pilots just to name a few. Here the Navy can expect heavy competition for these resources. It's well documented that there are a large number of airline pilots who are reaching retirement age and replacements will have to be found. One of the best sources is the military branches as they have been supply sources in the past.

The expected phenomenal growth in the telecommunications/computer field will create many more jobs than there are trained people. Already industry is feeling the increased attrition rate and escalating salary levels. The Navy's compensation plans are clearly not competitive with what these technical skills demand in the private sector. Without significant changes in compensation/manpower policy the Navy faces a serious threat to their

being able to perform their overall mission due to a lack of trained technicians and personnel in key jobs.

In comparing the Navy's manpower situation to that of the private sector there are some rather striking differences. First and foremost, the private sector very seldom if ever asks anyone to engage in a life risking task. On that score, there is a critical difference between sworn duty and employment. That is, the military is not employment nor should it be treated as if it were. By the same token, Navy management must be pragmatic with regard to the supply of qualified available labor. Secondly, employment in the private sector guarantees a broad range of rights that are not as clear cut and visible in a military environment. In the private sector supervision must be aware of the needs of subordinates. In the military, orders are given to be carried out with no questions asked. There is no value judgement intended but youth of today are oriented differently.

As pointed out earlier in this report, most of the private sector's large employers have systemic per-

sonnel practices that address every aspect of an employee's needs and work conditions. Of course there are financial constraints in the private sector but in general every effort is made to maintain a positive job satisfaction atmosphere. These programs result in added costs to the business and therefore the price of goods and services go up. This is not the same for the military. The Navy does not have the option of passing along costs and expenses must be balanced against approved end strength levels. Thus the flexibility in managing force size and expenses is not apparent in the Navy's manpower management processes. There does appear to be a need for an assessment of the manner in which money is spent with regard to manpower in the Navy as well as the other branches when compared to spending on hardware. Hardware is of very little use if it cannot be manned or repaired and is not operational when it is needed.

Work conditions in the private sector, at least for large employers, is dominated by the demands of the unions and government regulations. If working conditions are not to the liking of the employees the union tries to negotiate

better working conditions. If the employer does not agree to these changes and his competitor does, the employer not agreeing will not remain competitive in the labor market. The Navy management does not have to respond to pressure to improve jobs based on pressure from a union or from government regulators or for that matter from the Navy personnel. Thus the union in the private sector plays a role in job satisfaction and job security and at the same time reduces attrition. The military has no such protective organization. In the past decade several abortive attempts have been made to unionize military personnel but those have failed. Clearly there is a need to determine if some job improvement measures should be undertaken. Later in this report some specific suggestions will be given.

With the advent of the enforcement of Title VII of the Civil Rights Act the private sector implemented career path systems for even the lowest level of employee. That meant that employees who were stuck in dead end jobs could opt for a transfer out to another job given that certain job performance and tenure standards were met successfully by the incumbent asking for the transfer. Sometimes these programs are self nominating and

sometimes they were company nominating. In many cases these programs take the form of job posting or job bidding. All serve to reduce attrition from the company even though internal movement of employees increases. Such systems, however, when used as entry level job points-of-flow from which a great number of employees move on to other jobs has some definite advantages from both an attrition standpoint and a morale perspective. No one group of employees are trapped in jobs they don't want and only stay in those jobs if they can not qualify for another job or they choose to stay in the job and some will stay. Thus outright quits are reduced and those quits that do take place happen at the most economical point in time (at the lowest pay scale) from the organization's point-of-view. It would appear that such a system has merit for some of the Navy jobs. It is recognized that major changes would have to be introduced but a pilot program deserves some consideration.

Another area of difference between the private sector and the Navy that bears on attrition is the age group proportions of the new entrants. The private sector,

as well as the military, research clearly identifies age being related to attrition. Young people leave their jobs more often than middle age and even more often than those just a few years older in their early twenties. While youth has been a tradition in the recruitment of Navy personnel it may also be part of the problem.

Many social factors may also play a role in the high attrition rates found in the Navy. One variable considered is that the youth of today have had a relatively undisciplined environment. The family situation has had a "I can't be bothered" attitude and the schools have literally lost all powers of enforcing any disciplinary action with regard to the students. Consequently the Navy presents a rather unusual situation to the new recruit. While the private sector is probably not as disciplined an environment as the Navy it isn't a rose garden and the private sector does not experience the same attrition rates as the military.

In the private sector a new employee normally is on a probation period before they can safely assume they

have a job. During that probation period their performance is closely observed. If the new employee doesn't pass the probation period the person is fired. Getting fired from a job can seriously dampen one's prospects of getting another job of comparable level or better pay. Once fired the next job is likely to be of lower pay unless there are clearly valid reasons for problems with the previous employer. The civilian labor market operates in such a way as to penalize those who do not perform well. That is not to say that it is totally equitable but that it does operate in general in a leveling manner. The military takes in many of those who have not been successful in competing in the civilian labor market. And to many youth, leaving the military early is not a bad thing nor does it effect their obtaining employment in the private sector. Thus there are only minor penalties to many of those who attrite early from the military.

#### Major Comparisons Between the Private Sector and the Navy

First and foremost the private sector treats the management of human resources in a systemic fashion but within the context of a competitive market place. Where private

actions are taken to guarantee qualified labor and those actions increase labor costs, those costs are passed on to the consumer. Thus a balance must be reached between pricing and employee expenses.

The Navy does not operate as if it were in a competitive environment even though nothing could be further from the truth. The military is in a highly competitive market place. The Navy not only competes with the private sector for labor but with other military branches. A little recognized competitor for this labor is the U. S. government with all of the skills training programs (CETA), summer employment programs, welfare programs and even extended unemployment compete for the same labor pool. Since many of the military jobs pay only token wages welfare or unemployment is seen as a better deal than military service. Attrition has been related to job availability but it appears that we must add to the definition of a job all of the transfer of payment programs that are disincentives to work.

While the private sector has moved regarding personnel practices to a much more flexible posture the military has not kept up with the change. Industry has introduced



such things as: flex-time, job sharing, part-time, contract help, occasional help, variable benefits, protected pensions, bonuses, incentive plans, employee stock ownership plans, assessment centers, sophisticated and validated selection procedures, major corporate training programs, job design concepts, work restructuring, job enrichment, job satisfaction surveys and analyses, site location analysis, career pathing, career development programs, stock options for all employees, job security and protections clauses in union contracts, objective performance appraisal systems, management by objectives, supervisor relationships training, orientation programs, employment interview techniques, objective job briefs, pre-hire job visits and a host of other programs. The military also has introduced some changes in its manpower policies and practices but not to the extent that the private sector has over the last decade. True, the Navy has tried to deal with some of the compensation issues but has not been able to implement a change that would stop the heavy attrition that has been going on. Money issues are a prime reason for the attrition but it is not the only reason. Some of the root causes can be

associated with the selection process and the recruitment process. Some of the selection issues have been portrayed in Section 5 of this report. However there are other approaches that probably are superior to those mentioned. One such method used is that involving reservation wages and shadow wages to define the probable recruitment areas of high yield. This kind of analysis technique would allow the Navy to better pinpoint local populations that would be more receptive to Navy duty. Such techniques have been used successfully in large private sector firms and should work for the Navy in recruiting the necessary manpower required for the least amount of money spent.

There also appears to be very little, if any, job design or career path considerations as a method of managing attrition. The private sector has effectively used many of these techniques to maintain their job satisfaction at an acceptable level. There has also been a recent up-surge in this area and a great number of the Fortune 500 companies utilize job satisfaction studies as barometers of employee problems that could result in attrition.

A great deal has not been said with regard to supervision but it should have been addressed in the research. One

area of keen interest is the quality of supervision. In the private sector the selection and development of supervisors is an important process. Many times a variety of programs are used. Assessment centers, potential assessment procedures and career development through job assignment and pathing are used to develop a supervisor. Additional training is usually associated with supervision even if it is an orientation course. In the military a noncommissioned officer achieves the level of supervision thru seniority and demonstration of a proficiency or skill. Such a demonstration establishes the individuals personal skills but does not make the individual a supervisor or leader except on paper. It may well be that attrition is associated with the leadership ability of the noncoms and a mismatch in value systems between the noncoms and the young recruits. This would not be uncommon to find this situation in the private sector at either the management level or the nonmanagement level. And, while supervision is not reported as a priority item in the private sector study it definitely is a factor in attrition. Since most firms already address that issue they conclude that supervision is not a problem but has been resolved to the best of the firm's ability.

Comparing the Navy with the private sector on methods to manage attrition is somewhat unfair in that the Navy has a set of constraints not found in the private sector. The single most crucial constraint is that they are forced to be in a competitive market for labor but their access to resources are so limited that they cannot compete for the labor they need to achieve their mission.

## 7. Summary and Conclusions

Current research into the theoretical determinants of turnover (attrition) in the aggregate in private industry has produced a lengthy, overlapping, and sometimes interchangeable assortment of variables. This multiplicity of general causes for voluntary attrition, and the difficulty of quantifying exact degrees of influence among variables, does not render the research "useless" or merely academic.

Instead, studies establishing the variety of quit behavior's causes have apparently broadened the perspectives of private sector managers, pointing the way to an eclectic approach to force loss control. Because different personal characteristics and employment situations operate differently on job satisfaction, perceptions of external opportunities, and so forth, managers recognize the futility of pursuing a single "determinant policy" to reduce involuntary attrition. Moreover, the needs of individual companies and government regulation, preclude their hiring only low-turnover types, as profiled by the determinants literature.

The special industry study reported in this document indicates that major employer's successful efforts to minimize voluntary turnover suggests that companies with the most human resources programs aimed at improving employee satisfaction were those with the lowest force loss rates. More specifically, the companies in the study follow policies based on an appreciation of the diversity of turnover's causes. Different programs and human resources actions are seen as necessary to different sets of employees at different stages in their employment life.

The differences between the private sector and the Navy with regard to almost any variable are legion. Consequently it is somewhat surprising to see the similarities between the two when comparing reasons for attrition. Both the private sector and the Navy report many of the same reasons for turnover. The major sets of reasons for attrition in both sectors are presented below:

1.
  - o Recruitment Practices
  - o Selection Methods
  - o Compensation Practices
  
2.
  - o Work Force Demographics
  - o Labor Force Demographics
  - o Job Characteristics
  - o Career Opportunities
  - o Performance Appraisals
  
3.
  - o Supervision
  - o Training
  - o Benefits (medical, education, etc.)

The groups indicate that those items within a group are more or less comparable in importance with regard to contributing to attrition. The research reviewed indicates that anyone of the variables if not managed properly, could be a major factor in attrition in any organization. The grouping reflects the literature and the researchers' opinions when added to the private sector managers' opinions with regard to what is most important in the management of attrition.

These listed variables show up as key variables again and again in both the private sector and Navy research. The clear signal seems to be that the more of these variables that are addressed either by programs or policy the less attrition will be observed in the organization. It is also clear from the review that attrition variables are relative to the specific work group, occupation, geographic area, age group, etc. in many cases. Thus the solution to these problems in the private sector are addressed on a pragmatic basis. The Navy, on-the-other-hand, has a large number of the problem areas that have been shown to be related to attrition but they have been given very limited resources to address a problem of the magnitude of the attrition problem.

This report has addressed attrition as a historic problem but the future could bring an even worse condition with regard to attrition. Draft registration may or may not have a positive impact on Navy attrition and recruitment but other issues bode ill for military manpower supplies. Developments in population demographics, increased labor force competition and population value changes are all negative factors in the decade of the 1980's. With regard to managing attrition both now and in the next decade the following conclusions followed by some possible recommendations are presented:

Conclusions

1. There are a basic set of key variables that are related to attrition. The major variables are listed above. In general they apply to the Navy as well as the private sector.
2. The private sector deals with overall attrition thru systemic personnel management procedures. Attrition that erupts and is unwanted is dealt with on a case by case basis.
3. The Navy is in a noncompetitive position with regard to labor force acquisition and management due to a lack of resources. The lack of resources is partly a function of the budgeting and budget approval process.
4. The manpower policies, procedures, programs and methods of managing attrition in the private sector would to a large degree work to control attrition in the Navy. One caveat with regard to this conclusion. For these procedures to work the Navy must be able to manage its force in a comparable manner to the private sector.



5. The Navy probably will not be able to make enough changes in a short period to create an environment where attrition will be significantly reduced and remain low.
6. Based on conclusion number five attrition in the Navy will probably become worse as the decade unfolds. Obviously other events could take place that would change that but given a stable world condition voluntary attrition will increase.

#### Recommendations

Only four recommendations will be offered at this time but it is believed that these four recommendations are at the crux of the problem. Even if only one of them is implemented a step would be made in the right direction. The recommendations are listed in order of how it is believed they should be implemented.

1. The Navy needs to man up to the approved level and maintain enough replacements thru recruiting to minimize over-work conditions for current members of their service. The Navy should apply some of the labor market identification technology currently used by the private sector to locate high potential labor markets. For an example see Research Report No. 35, EEO Goals Development in the Naval Sea Systems Command by Atwater, Niehaus and Sheridan; Office of the Assistant Secretary of the Navy, Manpower, Reserve Affairs and Logistics, Navy Department, Washington, D. C.
2. There is a serious problem of attrition with regard to a number of enlisted ratings. These ratings should be reviewed with regard to job design improvements. If the jobs cannot be improved then a rotational assignment program might be called for. These jobs could be viewed

as entry jobs from which they could be moved to other jobs. These jobs could be used as requirements for schooling or other more attractive jobs. A total evaluation of these high attrition jobs is needed and a resultant program to address the force losses developed. There are many examples of these kinds of jobs in the private sector and the accompanying programs to deal with people in those jobs. A good evaluation should lead to a proper program for which an example probably already exists.

3. The Navy needs to address the resource allocation issue by developing an impact paper that articulates the implications for the Navy if the manpower attrition and acquisition problems are not solved. This paper should then be used to state the Navy's position to governmental bodies and to develop the rationale for naval operations given these problems are not solved in the near future.
4. There will be a future drain on military manpower that are trained with special skills, e.g., pilots, electronic technicians, A&E mechanics, computer programmers, communications specialists, etc. The Navy's forecast of manpower requirements should be reviewed in order to determine where the supply will come from. Shortages may have to be augmented with outside contractors. Other retention programs may need to be implemented such as: fast track (promotion acceleration) systems, changing the retirement system to influence retirement in the direction needed, out-placement programs for those who are no longer current in a skill to make opportunities for some who will take early outs, bonus plans for some ratings (this is used in the private sector all the time), and of course, competitive compensation and benefits packages. The one critical skill that has not been addressed in this recommendation is that of the pilot rating. This problem deserves special attention and a special study to determine what are the alternatives to the high loss rates now and expected in the future in all the service branches.

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Appendix

Compilation. Listing of relevant documents and reports of studies by

- subjects covered
- method of measuring turnover
- main variables and features, and
- year published (or completed).

<u>DOCUMENT</u>	<u>SUBJECTS</u>	<u>Method of Measure.</u>	<u>FEATURES</u>	<u>YR. PUB.</u>
(1) Amer. Soc. for Pers. Adm.	91 companies	BLS +	Turnover rate calculation, costs (how many do it)	1979
(2) AT&T Man-power Lab	78 people who left	quits	Sample mostly female, 60% black. Reasons psychological (stress, career advancement)	1971
(3) AT&T	Lit. Review		"Turnover and Worker Mobility" abstracts	1971
(4) Atchison	122 AF pilots		Herzberg's job satisfaction method and turnover prediction	1972
(5) Baker	High-turnover companies		Costs. Management by objective: orientation, supervision, "integrate" w/ goals of company	1979
(6) Belknap	Xerox sales reps	By job, age, etc. (data base)	Selection as key; job oversold. RLPs.	1977
(7) Bloch	28 manufacturing indus.	BLS	Human capital views on relationships between quits/hires/layoffs and wages, hours, firm-specific training	1979
(8) Block	Mfg. inds.	BLS quit rate	Analysis of BLS quit, layoff, and retention rates according to contract provisions' presence or absence. Human capital theory	1977
(9) Bray, et al.	274 AT&T managers	"vol." qualified	Attitudes of managers; satisfiers, etc.	1974
(10) BNA-1/4 Rpt.	400+ cos.	BLS+	Rates by company size, industry, region.	1980

(11) BNA-1974	136 cos.	BLS+	Frequency of collection among companies, reasons attributed, cost estimates, with survey data on absenteeism	1974
(12) Cawsey & Wedley	9 studies in Canada	4 defs.	Management of costs by defining; monthly control forms	
(13) Cooke	1,670 defense wks.	BLS	Some evidence contrary to the human capital view that voluntary turnover adds to earnings.	1979
(14) Dalton & Todor	literature		Positive aspects of turnover (mainly mobility)	1979
(15) Decker & Cornelius	2,466 in 3 companies	BLS	Recruiting sources as determinants (ads vs. referrals, etc.)	1979
(16) EBS	111. Bell males + field audit		Turnover rise for plant employees from 1965-68 attributed to working conditions (external), selection, training, counseling, and low early wage rates	1969
(17) Evonic	Canadian Forces	By stage of career	Societal supports, characteristics of group on which recruitment focuses, medical	1977
(18) Federico (s)	96 vol. quits		Salary expectations among women leaving union; tenure increases recommended	1976
(19) Flowers	406 in 3 companies	wanted v. unwanted	Texas Instruments psychological survey of stayers as well as leavers; classes by "work ethic" type; individual needs	1973
(20) Glaser	66 low-skilled wks.		Attempt to reduce turnover among disadv.; Poor quality of jobs, not workers, cause	1976



(21) Hayghe All LF in 1973 BLS Percentages of people on job for various lengths of time, by sex, age, race, 1963 and 1973. Also education. 1973

(22) Hunt & Saul 5,800 white collar workers Attitude survey of Australian workers on job satisfaction related to tenure, age; realistic work expectations 1975

(23) Harries-Jenkins British military Trends over 1914-75; effects of military pay; image of military service 1978

(24) Kagerer High-turnover companies Avoidable Selection process, integration of entry-level jobs; measurement and costs; pre-screening job-hoppers 1979

(25) Kohen lit. & longit. by jobs Young civilian men in LF; wages, tenure, health, marriage, education variables; 1st job quits 1977

(26) Kay middle managers wanted v. unwt'd. Exit interviews, 6-month-later interviews; distinction between quits company won't miss and those it will 1974

(27) Koszegi European social- Vol. ist countries 90% in Socialist countries is voluntary, and half of this for "environmental" or health reasons, but wages play role 1978

(28) LaRocco, Pugh & Gunderson 1,270 1st-term Retention EMS on ships Job satisfaction, demographics, social background, service history, performance 1977

(29) Lowman & Snediker 1,600 construction co. wks. Work related reasons for turnover shown by cohort (tenure) analysis 1980

(30) Mgt. Wld. 600,000 office wks. BLS by 12 reasons separations by reasons (1st; another job) Tenure, size of company, geographic; % of 1976

(31) Martin      All services      Attrition      Policy change effect on 1st-term attrition; individual unit's differences indicate importance of management      1977

(32) Mattila      8 studies, BLS Quits long. & factory      Proportions lining up next job before quitting; education      1974

(33) Merrill & Stimpson      NY Life Ins. Co.      Social style profile combined with other tests in selection process      1979

(34) Miller, Katerberg, Hulin      225 & 235 N. Guardsmen      Moblely study of hospital employees tried out on National Guard; intention to quit strongest construct      1979

(35) Miner      BNA survey      BLS      BNA surveys evaluated for Monthly Labor Review      1977

(36) Mixon      15 low-wage industries      BLS      Minimum wage inhibits voluntary mobility, also affecting employers' selection mode      1978

(37) Mobley, Horn-er, Hollingsworth      203 hospital employees      Intention to quit main precursor; links in process include age/tenure, alternative job, satisfaction, "thinking of" quitting      1978

(38) NCEUS      Mfg. cos.      BLS      Review of BLS turnover program      1979

(39) Palmer, et al.                Mobility & turnover      Occupational attachment, attitudes affecting job change; pensions (Parnes); vertical mobility & aspirations      1962

(40) Paradigm      23 major employers      BLS + 4      Measurement differences, individual problems, variety of management methods (often in concert)      1980

(41) Parnes      Longit.      Mobility      Concepts and determinants of mobility      1954

(42) Parnes & Kohen 5,000 14-24-year-old men 1975

Human capital concept of occupational information as influence on wage-induced turnover and satisfaction; education; family's socioeconomic status; urban/rural

(43) Peskin High-turnover BLS+ jobs 1973

Cost measurement, by department; causes including pay, job conditions, promotion, supervisors, personal such as health

(44) Porter & Steers 156 mgt. trainees - retail co. 1977

Commitment, or employee's identification with company goals, as influenced by age, education, job characteristics & experience in job; "notion of exchange"; goals

(45) Sands 68,616 EMS 1978

Predictor variables in POET-2: education, mental group, age, number dependents; for Naval selection process

(46) Schiller & Weiss 133 large companies 1979

Private pensions and firm attachment, by feature of plans (vesting, etc.)

(47) Smith 20,000 civil service jobs 1979

Occupational causes of turnover (argument against sex as per se determinant); career development; earnings

(48) Steinberg CWHS data 1979

Comparing 1970-75 and 1960-65 mobility; age; earnings of young workers who move vs. earnings of older workers who move

(49) toikov & Raimon 52 industries 1968

Nine variables from 2 viewpoints; wages, recent wage raises; size of company; union; quality of workforce (first); tenure; race; sex

- (50) Szilagyi 3,000 in 6 organizations vol.for org. reas. 1979  
 Voluntary turnover for organizational reasons is focus; geographic; pay, promotion, supervision, work as organizational factors; age; turnover intention and its development over time
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- (51) Thomas 579,271 of- face workers BLS + 12 reas. 1979  
 Average turnover rates by size of company, business type, tenure, exempt/nonexempt, reasons for termination (all types - another job to deaths)
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- (52) USDL, ETA young women longit. study mobility 1976  
 Correlates of interfirm movement (among moves by employed youth - Ch. 3) in 1968 and 1970 include occupations, education, tenure, geographic, marital status.
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- (53) Wanous literature 1978  
 Realistic job expectations; tenure; performance; orientation; RJPs