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**AN UNFOLDING MODEL OF VOLUNTARY TURNOVER OF AIR FORCE
RESERVISTS AND AIR NATIONAL GUARD MEMBERS**

THESIS

Jennifer C. Kulick, Captain, USAF

AFIT/GEM/ENV/04M-11

**DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY**

AIR FORCE INSTITUTE OF TECHNOLOGY

Wright-Patterson Air Force Base, Ohio

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AFIT/GEM/ENV/04M-11

AN UNFOLDING MODEL OF VOLUNTARY TURNOVER OF AIR FORCE
RESERVISTS AND AIR NATIONAL GUARD MEMBERS

THESIS

Presented to the Faculty

Department of Systems and Engineering Management

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Air Education and Training Command

In Partial Fulfillment of the Requirements for the
Degree of Master of Science in Engineering Management

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Captain, USAF

March 2004

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RESERVISTS AND AIR NATIONAL GUARD MEMBERS

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Abstract

Retention is an important issue for every organization due to the high costs of replacing members. This issue is becoming increasingly important as the role of guard and reserves has continually increased over the past several years, and so research needs to be conducted on the retention of these groups. Therefore, a web-based questionnaire was administered to Air National Guard and Air Force Reservists from various units and locations. The data from 581 participants was applied to an adapted version of an unfolding model of voluntary turnover originally developed by Lee, Mitchell, Holtom, McDaniel, and Hill in 1999. Data collected indicated that very few people actually have a script to leave the service at the completion of their present obligation. Therefore, many people can still be influenced to remain in the service and so the leaders need to understand what will retain these members and what will cause them to leave. Hopefully leaders will gain a better understanding about the psychological process members go through when deciding to separate, and be able to make recommendations on what issues should be addressed. Recommendations on retention issues and future research are discussed.

Acknowledgments

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Jennifer C. Kulick

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AN UNFOLDING MODEL OF VOLUNTARY TURNOVER OF AIR FORCE RESERVISTS AND AIR NATIONAL GUARD MEMBERS

CHAPTER 1

INTRODUCTION AND LITERATURE REVIEW

The role that 244,700 (31.8% of the total force including civilians; (Air Force Magazine, 2003) reserve and guard members play in the total force has increased dramatically in the last few years in such operations as Desert Storm, Desert Shield, Shining Hope, Noble Eagle, and Iraqi Freedom. Undoubtedly, the activation of these members has influenced the members themselves, their families, and their places of employment. While certain problems that the members and their employers confront have been investigated through research (i.e., differences in pay between reserve and civilian positions; the influence lengthy activations have on members and employers; (Fugita & Lakhani, 1991; Kirby & Naftel, Winter 2000), the extent to which these service members have reevaluated their decisions to remain in the reserves or guard deserves further investigation. Due to the increasing role and impact the Air Force Reserves and Air National Guard have in national defense, the leaders need to gain a better understanding of why and what process a member would go through in deciding to leave voluntarily.

Voluntary turnover represents a significant cost to organizations in terms of money and knowledge (Steel, Griffeth, & Hom, 2002). That is, new members must be recruited when quality members that the organization would otherwise retain leave.

Moreover, these new employees must be trained, become proficient, and accustom themselves to the organization's culture. Because of the costs associated with voluntary turnover, subsequently referred to simply as turnover, both public and private organizations make every effort to minimize the loss of quality employees.

In the attempt to help organizational leaders understand turnover and avoid it, literally hundreds of qualitative and quantitative studies have been done to investigate turnover. Researchers have tried to decipher the turnover process itself (Mobley, 1977; Steel, 2002), identify individual variables that are related to turnover (Mobley, Horner, & Hollingsworth, 1978), and isolate other factors both internal and external to the organization that contribute to exit decisions (Mobley, Griffeth, Hand, & Meglino, 1979; Steel, 1996). Although the circumstances under which each individual leaves an organization are unique, studies have generally found that individuals follow a similar psychological and behavioral pattern as they make turnover decisions (Gerhart, 1990; Lee, Mitchell, Wise, & Fireman, 1996; Mobley, 1977). Yet, many would say that these studies have been largely unsuccessful because they explain only small percentages of turnover (Steel, 2002).

In 1994, Lee and Mitchell presented a new turnover theory based on psychological processes and specific external events. The model included a series of constructs such as experiencing a positive or negative event that initiates the psychological analysis involved in quitting, engaging in a preexisting plan of action; ensuring that the individuals' values and goals match those of the organization; and experiencing job satisfaction, professional, or personal fulfillment. With these constructs, the authors suggest four distinct decision paths an individual may follow as he or she

decides voluntarily to leave an organization. Subsequently, Lee, Mitchell, Wise, and Fireman (1996) tested this model on a group of nurses who had voluntarily quit their jobs at different hospitals. In this study, Lee et al. (1996) found that 63% of the nurses could be categorized into one of the four specific paths in the unfolding model—a significant improvement over previous studies that explain less than 15 percent of the variance (Mobley et al., 1979; Steel, 2002).

Not satisfied, Lee, Mitchell, Holtom, McDaniel and Hill (1999) made several improvements to the model based on information gathered from the nurses' responses. The revision, referred to as the Unfolding Model of Voluntary Turnover, included seven constructs that were structured as a series of decisions. The constructs included: shocks, scripts, image violations, job satisfaction, search and evaluation of alternatives, and availability of alternative job offers. A shock was defined as a jarring event, either positive or negative, that initiated the psychological analysis involved in leaving. Script referred to a preexisting plan of action that the individual developed from past experiences, observation of others, reading, or social expectations. Image violations occurred when an individual's goals or values did not fit with those of the employing organization or those implied by a shock. Job satisfaction was a measure of the extent to which the job provided the intellectual, emotional, or financial rewards the individual desired. Search behaviors were the actions involved in searching for an alternative to his or her current job and evaluating the available options. Lee et al. (1999) tested the new model on individuals who voluntarily left several accounting firms. They found that in the new model, 93% of their sample followed the specific paths, another marked improvement in the prediction of turnover.

While this model has been able to predict a larger percent of turnover in the samples discussed, it has also shown promise in predicting the turnover of active duty military members (Lin, 2003). Still, the model has not been adapted to the reserve or guard component of the services—a critical part of all recent military operations and one that is having the same retention problems experienced by the active duty branches (General Accounting Office, 1991). Accordingly, the purpose of this study is two fold. First, Lee et al.'s (1999) model will be adapted to reflect the unique nature of reserve and guard service, providing leaders with a better understanding of the causes of turnover decisions. Second, the model is tested with a sample of Air Force Reservists and Air National Guard to see if they follow one of these distinct paths, leaving leaders better equipped to facilitate retention.

Before the method and results are discussed, this chapter reviews some of the early models of turnover. Then, it summarizes the studies that have been conducted on military members. This discussion is followed by an introduction of Lee and his colleague's (1994; 1999; 1996) unfolding model of turnover and describes the adaptations that have been made to the model to better suit the unique nature of service in the Air Force Reserves and Air National Guard.

Traditional Models of Turnover

Early models of turnover have a common theme that are centered around an individual's job satisfaction, commitment, and job search behaviors (Mobley, 1977; Price & Mueller, 1981). Generally, these models have posited that individuals that are dissatisfied with their current employment may have thoughts of quitting. Based on these

thoughts and their commitment to the organization, individuals evaluate their present job and compare it to perceived alternatives. With the collected information, individuals decide whether to remain at the current job or commit to searching for another job and eventually leave.

With these central features common across much of the research, studies have diverged slightly as researchers have attempted to isolate the factors that influence job satisfaction and subsequent decisions to leave organizations. The variables that have been studied in this stream of research fall in three general areas. That is, the variables address individual, organizational, or environmental characteristics (Cotton & Tuttle, 1986; Mobley et al., 1979; Muchinsky & Morrow, 1980). The individual characteristics that have been explored relate to the attributes of the employees themselves that may trigger turnover. In contrast, the organizational characteristics that have been studied refer to the interface between individual workers and organizations. Environmental characteristics are those that affect the organization as a whole and the ease of movement an individual has between organizations. While it is beyond the scope of this discussion to review every variable studied for each of the three general areas, a limited number of the most common and significant are evaluated. Figure 1 illustrates the common model of turnover that has guided much of the research (Lin, 2003).

Individual Characteristics

As noted, individual characteristics relate to the attributes associated with an individual employee. These variables include demographic factors such as age, tenure, education, and skill level. Additional individual variables include dispositional factors

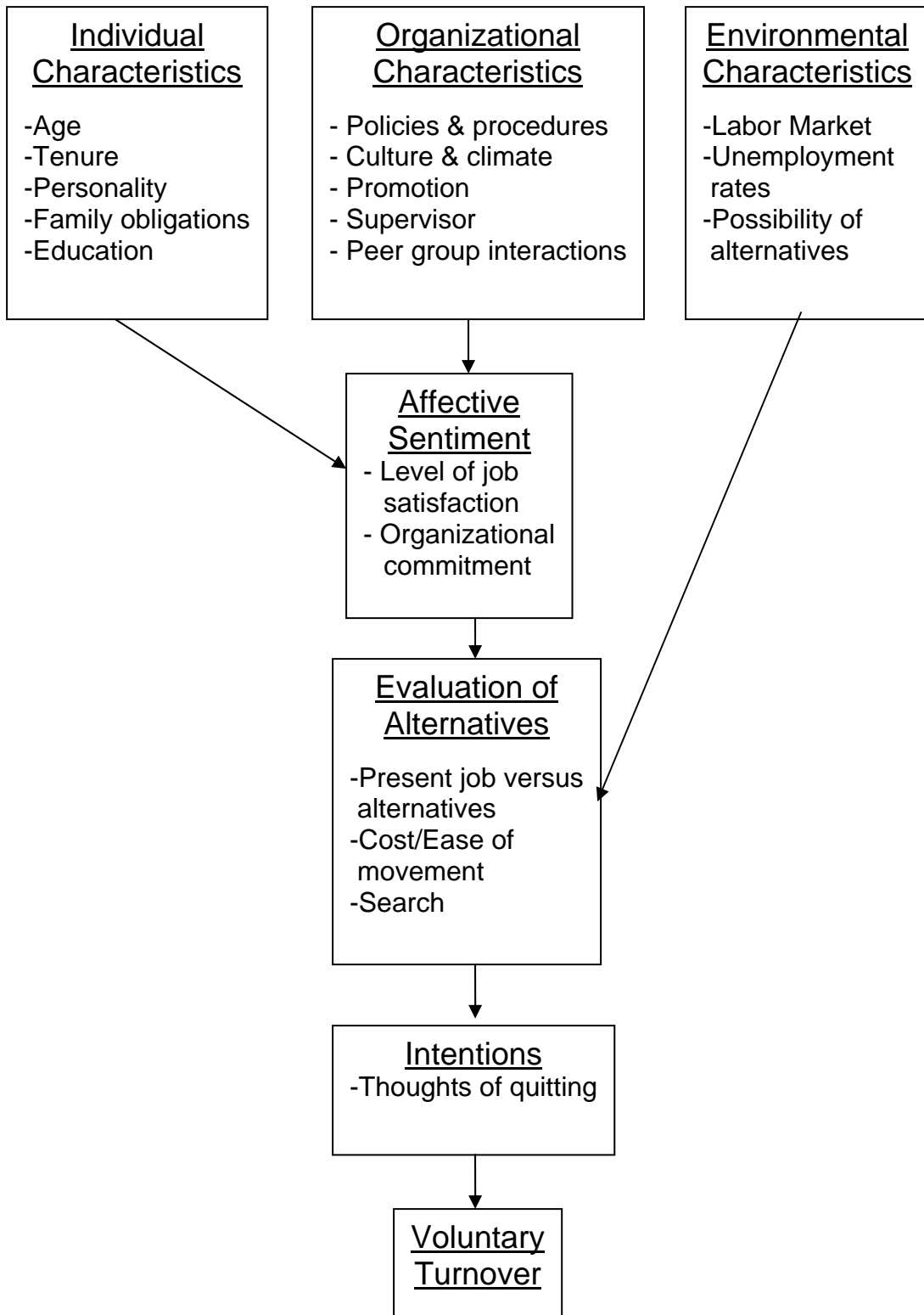


Figure 1 Integrated Model of Voluntary Turnover Based on Traditional Models

such as personality and family obligations (Gerhart, 1990; Mobley et al., 1979; Mobley et al., 1978). Research has consistently shown that age and tenure are negatively related to turnover (Cotton & Tuttle, 1986; Griffeth & Bannister, 1986; Griffeth, Hom, & Gaertner, 2000; Mobley et al., 1978; Muchinsky & Morrow, 1980). Alone, age has explained less than seven percent of variance which contributes little to the overall understanding of turnover (Cotton & Tuttle, 1986; Mobley et al., 1978). In a recent quantitative review of the literature, Griffeth, Hom, and Gaertner (2000) reaffirmed these findings, suggesting that age may not be the best indicator of turnover. Moreover, the extent to which age is an appropriate predictor of turnover has come into question as well. That is, younger people may have a greater tendency to leave organizations voluntarily because they have not invested a significant amount of time into the organization not because of their age. Based on this idea, Mangione (1973) thought that length of service would be the single best predictor of turnover. Indeed, the relationships between tenure and turnover have exceeded the age-turnover relationships repeatedly (Griffeth et al., 2000; Muchinsky & Morrow, 1980).

Research has also examined how individual differences such as personality relate to decisions regarding turnover. Barrick and Mount (1996) hypothesized that those who were disposed to be conscientious would be less likely to leave their jobs voluntarily. They reasoned this hypothesis based on the traditional models of turnover. That is, those that are conscientious typically become more committed to the organizations they work for and turnover models suggest that more committed individuals do not tend to leave organizations voluntarily. While their findings supported this hypothesis, the number of studies that have explored personality factors appears to be relatively small, limiting the

extent to which researchers can conclusively say that personality is related to turnover (i.e., Griffeth's et al.'s, (2000) recent meta-analysis of turnover studies identified no studies that examined personality-turnover relationships).

Finally, a significant body of research has suggested that off-the-job factors related to the individual may influence decisions to leave the organization as well. While Cohen (1995) demonstrated that non-work commitments like family influence attitudes toward one's job, others have directly linked family responsibilities to turnover (Cotton & Tuttle, 1986; Mobley et al., 1979). Lee and Maurer (1999), for instance, found that having children at home predicted turnover better than commitment to the employing organization.

In sum, research on individual differences has been vast. Unfortunately, few individual factors have predicted a meaningful proportion of turnover. The notable exceptions have been tenure and number of children. That is, the longer an individual has with an organization and the more children the individual supports, the less likely the individual is to leave a position. Still, the ability of these individual factors to predict turnover has not been sufficient, generating other areas of study.

Organizational Characteristics

Organizational characteristics refer to the interface between individual workers and organizations. The traditional turnover models suggest that employed workers will seek alternate employment when there is some level of dissatisfaction with his or her current job. Therefore, studies have explored the extent to which an array of organizational characteristics may influence this satisfaction. For instance, the extent to which the organization's climate, as perceived by its members, influences satisfaction

and triggers an evaluation of the current job has been studied (e.g., (Aquino, Griffeth, Allen, & Hom, 1997). Specific policies, procedures and management practices have been explored to see how they influence members' satisfaction and subsequent turnover decisions (e.g., (Allen, Shore, & Griffeth, 2003). Other studies have examined the extent to which personal goals align with the organization's values and goals as well as the job characteristics (e.g., autonomy, content, clarity) the individual is actually performing (Kammeyer-Mueller & Wamberg, 2003).

In a recent study of organizational climate and practices, Allen, Shore, and Griffeth (2003) suggested that an organization with a supportive and caring climate would have more satisfied employees and fewer employees that voluntarily leave. Indeed, department store employees and insurance agents' beliefs that their organizations had supportive climates reported higher levels of satisfaction and appeared less likely to leave. This study went on to explore how human resource management policies (e.g., fairness of rewards) and management practices (e.g., participation in decision making) influenced turnover, finding that management policies and practices help beliefs of support and satisfaction which are negatively related to withdrawal behaviors.

While the global beliefs about the organization have been related to turnover decisions, others have looked at variables regarding the organization that are more proximal to the employee, suggesting that supervisors' actions are one of the keys to retention. Muchinsky and Morrow (1980) suggested that employees are less likely to quit if they receive feedback and recognition from their supervisor. Moreover, they found that there is more turnover among employees whose supervisors exhibit highly structured or production centered supervisory styles. Consistent with this notion, they went on to

report that the employees' turnover decisions are also influenced by the interactions with supervisors. A supervisor who has successful interactions with their subordinates are more likely to retain the subordinate than supervisors who do not interact well with subordinates.

Although the relationship with supervisors plays a large part in satisfaction with the organization, the nature of the work itself and the role that has been defined for the employee has a significant effect. Several studies have been conducted to determine if job content factors are significantly related to turnover. While a number of variables have been studied, role conflict and ambiguity are notable (e.g., (Boyar, Maertz, Pearson, & Keough, 2003). Rizzo and his colleagues (1970) define role conflict and ambiguity, suggesting that role conflict is the difference between an individual's expectation of the job and the reality of the job while role ambiguity refers to the extent to which an individual completely understands expected job behavior. Johnston, Parasuraman, Futrell, and Black (1990) found that role conflict and ambiguity affected turnover through satisfaction (as the model specifies) among a sample of salespeople. This finding was supported among a group of salespeople by Sager (1994). It was further reinforced by Griffeth et al.'s (2000) meta-analysis, which suggested that role ambiguity had both a direct and indirect effect on propensity to leave, but role conflict only indirectly affected turnover.

Collectively, the results from the previous studies indicate that work-related factors are related to turnover. However, as with the individual factors, few organizational characteristics have predicted a meaningful proportion of turnover. In a recent meta-analysis of 45 studies, Griffeth et al. (2000) reported a corrected correlation

(corrected for measurement error) of .15 between turnover and organizational characteristics (e.g., supervisor satisfaction, leader-member-exchange, role clarity, role ambiguity).

Environmental Characteristics

Finally, researchers have continually tried to understand how factors that are external to the organization and individual influence turnover. These environmental characteristics (as termed in this study) refer to variables such as unemployment rates, labor market perceptions, and the probability of finding another job (Gerhart, 1990; Mobley et al., 1979; Steel, 1996). Of these characteristics, research suggests that the availability of alternatives (real and perceived) has a strong impact on decisions to leave (Muchinsky & Morrow, 1980). Thus, people are extremely hesitant to leave their organizations voluntarily when the unemployment rates are high. As early as 1965, Eagly reported a -.84 correlation between overall quit rates and unemployment rates in the United States. In contrast, Blau and Kahn (1981) found no relationship between unemployment rates and turnover in an analysis of data collected through a nationwide survey of non-agriculture employees conducted by the Department of Labor.

Considering the inconsistent results, several attempts have been made to resolve these differences, using meta-analytic techniques. Cotton and Tuttle (1986) analyzed six studies that explored the relationship between unemployment and turnover, concluding that there was only a moderate relationship between the two. Others (Cotton & Tuttle, 1986; Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Mobley et al., 1979) have taken a slightly different tack as they looked across studies, finding that unemployment rates moderated traditional models components (i.e., unemployment moderated the

satisfaction—intentions relationship and the intentions—turnover relationship; Hom, Caranikas-Walker, Prussia, & Griffeth, 1992; Mobley et al., 1979).

Still, the availability of other alternatives is believed to be an important consideration as individuals decide to leave organizations. Thus, researchers have extended this area of study to examine perceived opportunities, expecting strong relationships between these perceptions and turnover. However, the extent to which individuals perceive other opportunities has been, at best, moderately related to turnover. This point has been demonstrated with two meta-analyses. Steel and Griffeth (1989) found an average corrected correlation of .13 between perceived opportunities and turnover while Griffeth et al. (2000) replicated this finding ($\rho = .12$) over ten years later.

The conclusion derived from this stream of research tends to echo what has been expressed to this point. Although environmental characteristics have proven to be a predictor of voluntary turnover, it would be inappropriate to rely solely on these characteristics. Moreover, the extent to which these variables can be used to predict substantial proportion of variance has been questioned. Economic characteristics will differ throughout various industries, geographic locations, and at different points in time. Beyond this, the measures used to tap perceived alternatives have been questioned (Steel, 1996).

Military Models of Turnover

While much of the research discussed to this point has examined the private sector, those that have examined voluntary turnover in a military setting have used the traditional models to guide their efforts as well. That is, the models used to gain an

understanding of turnover decisions among military members are centered around the members' job satisfaction, commitment, and job search behaviors. Researchers have then tried to isolate the factors that influence job satisfaction and subsequent decisions to leave organizations. Kelley et al. (2001) focused on individual characteristics when they investigated whether deployment experiences influenced a group of active duty mothers' decisions to stay in the service or separate. In contrast, Kennedy, Holt, Ward, and Rehg(2002) examined organizational characteristics, finding that changing organizational policies influenced turnover intentions of military engineers. Steel (1996) looked at the labor market both objectively and subjectively (as perceived by the members) and found that the environment was related to the turnover decisions of military members.

Researchers have also used the traditional turnover models to reflect the unique nature of reserve service. As with the active duty force, an organizational factor that has received considerable attention among reservists is deployment experiences (cf. (Kelley et al., 2001). Researchers have suggested that these experiences can have either a positive or negative effect on the member (i.e., the effect varies based on the length and frequency). Kirby and Naftel (Winter 2000) recently conducted a study to learn how deployments effected the retention of reservists after Operation Desert Shield and Storm. They hypothesized that the reservists welcomed the opportunity to put their skills and training into real world deployments. Consistent with previous studies (Geleta, Moll, Morstein, & Paska, 1988; Grissmer, Kirby, & Sze, 1992; Lakhani, 1995), their analysis reinforced this hypothesis suggesting that being mobilized did not adversely affect retention. Moreover, the probability of future activations had a small and positive effect on retention.

Other variables that have been explored in civilian samples have been applied to reservists and National Guard members as well. These include individual characteristics like the spouses' attitudes toward military service (Grissmer et al., 1992); effects of family structure (T.W. Lee & Maurer, 1999); organizational characteristics such as climate (Grissmer et al., 1992), role clarity, and ambiguity (Fugita & Lakhani, 1991; Lakhani & Fugita, 1993). Collectively, studies have shown there are no significant differences in the correlation between intention to leave and turnover between full time military and civilian samples (T.W. Lee & Maurer, 1999). Although the studies apply to full time military members, guard and reserve members have additional factors that would need consideration.

Contemporary Models of Turnover

Regardless of the setting (i.e., military or civilian groups), many have criticized the existing turnover models, suggesting they have many shortcomings (e.g., (Steel, 2002). One criticism is that the traditional models are narrowly focused in that they emphasize how job dissatisfaction triggers one's withdrawal from the organization (Lee et al., 1996). With this narrow focus, many behaviors that are difficult to quantify have been overlooked. These include impulsive behaviors that may be facilitated by unexpected changes in attitudes or conditions. Consider an individual that is given an unsolicited job offer. He or she may be satisfied, but still leave without experiencing job dissatisfaction or the intent to quit, because the unsolicited offer is so good. Second, the incremental nature of the research has limited the ability to predict large percentages of turnover. In essence, the turnover studies have explored a limited set of variables and

have not incorporated many of the important individual, organizational, and environmental constructs together, resulting in the prediction of a very low percentage of actual turnovers.

In a review of these traditional models and studies, Lee and Mitchell (1994) posited that there have been two dominant and contrasting approaches suggested to improve studies of voluntary turnover. The first approach, suggested by Hom, Griffeth, and associates (Hom et al., 1992; Hom & Griffeth, 1991), advocates improving the research between the intermediate linkages between job satisfaction and employee turnover. This approach would involve further investigation of the antecedents of turnover such as those found in the traditional models discussed. The second approach, advocated by Hulin (1991), expands the narrow focus of the satisfaction-turnover links to a broader and more general theory that explores the consistency between attitudes and behaviors.

Lee and Mitchell (1994) proposed a third approach that was based on the idea that individuals make turnover decisions based on a series of deliberations. Termed the unfolding model of turnover, their approach combined the ideas presented by Mobley (1977), Steers and Mowday (1981), and Hulin, Roznowski, and Hachiya (1985). While the nuances of the model will be discussed in subsequent sections, Lee and Mitchell's (1994) model is unique for several reasons. First, it incorporated many constructs that are common to many of the traditional models (e.g., job satisfaction, search behaviors). Second, rather than the traditional path models presented, their model is based on a series of decisions that individuals make, incorporating the concepts that are internal (push) and external (pull) to the individual. The combination of the internal and external forces

results in individuals following one of four decision paths. The decision paths began with internal assessments of the organizational environment, personal goals, and satisfaction—as suggested in previous models. These assessments are then followed by external forces or market-pull where individuals are confronted with searching for other jobs, evaluating other jobs, and considering other job offers.

Beyond this, Lee and his colleagues (1994; 1999; 1996) have been able to capture conditions of voluntary turnover that were overlooked in traditional methods. In particular, their model captures situations where individuals leave when (a) they are relatively satisfied with their jobs, (b) they do not search for other jobs before leaving, and (c) leave because of some facilitating event rather than a negative attitude. In addition, the content issues involved in the facilitating events often occur off the job.

Background

Lee and Mitchell's (1994) unfolding model of turnover is based on Beach's (1990) theory of generic decision making, termed image theory. Image theory suggests that individuals “screen” and interpret information as they evaluate options. As the individual rapidly screens information, a person assesses the extent to which the information aligns with personal images of value, trajectory, and strategy. Value images reflect an individual's standards, principles, and general values. Trajectory images are used to guide a person as he or she sets goals and energizes themselves toward goal-directed behaviors. Strategy is defined as a set of behavioral tactics that an individual believes will help him or her achieve goals. Screening is based exclusively on violation of fit (i.e., assessing the extent to which the surrounding environment matches a personal value structure) and the three images serve as the criteria.

Based on this idea, Lee and Mitchell (1994) suggest that individuals screen information as they make turnover decisions, comparing how this information aligns with personal images. Thus, their unfolding model of turnover consists of a series of sequential decisions where individuals screen organizational and environmental information (see Figure 2). This screening process begins with some distinguishable event. The event causes a person to pause and think about the meaning or implication the event has in relation to his or her job (i.e., screening the extent to which the event aligns with existing images). While the screening process does not always lead one to leave their current job, individuals will subsequently consider whether there are other alternatives when the screening process does lead one to the conclusion that leaving is an alternative worth considering. The specific elements of the model and different possibilities or alternatives (described as decision paths) that are considered will be discussed in the next section.

Model Components

As suggested, Lee and Mitchell (1994) concluded that the turnover process begins with individuals continually scanning for significant events. Termed shocks; these significant events are distinguishable and encourage the individual to deliberate about his or her job. The shock must pass the screening process and be incorporated and integrated into the individual's system of beliefs and images. The shock can affect the individual positively, neutrally, or negatively, but it is sufficiently significant that it is not ignored. (I assume that a neutral effect means the shock was significant, but did not result in any action? Not sure why a significant shock would have an effect that is neutral, unless its just that it makes the person think about their alternatives, but they don't change jobs.)

Once individuals experience a shock, they need to determine the appropriate response. As they consider a course of action, individuals think whether they have some preexisting plan or script. Scripts, the second variable in the unfolding model, would most likely be based on past actions or rules the individual has generated by observing others or knowledge acquired in some other fashion. In the next step, individuals evaluate the extent to which conditions are consistent (or inconsistent) with their goals, values, and strategies and those of the employing organization (i.e., image violations are assessed). At this point, individuals ask themselves, “Did the job provide the intellectual, emotional, or financial benefits they desired?” If not, levels of job dissatisfaction grow, triggering the need to search for and evaluate job alternatives. Finally, the member must evaluate if they would leave with or without a job offer in hand after searching for another job. Even if the individual has searched for another position and been offered a job, he or she must decide whether to actually voluntarily leave or to stay in the current position.

These psychological processes suggested that there were five theoretical decision paths that individuals will follow. A decision path illustrates how employees interpret their work environments, identify decision options, and enact his or her response. The first path (labeled Path 1 in Figure 2) represents an impulsive choice that is based on a shock. That is, the individuals experience a shock but do not have an existing plan of action, consider current organizational attachments, or search for alternatives. The second path occurs when individuals experience a shock that is perceived to be a violation of personal beliefs or images. Given this, drastic steps are taken where individuals reconsider their attachment to the organization and, once again, leave without

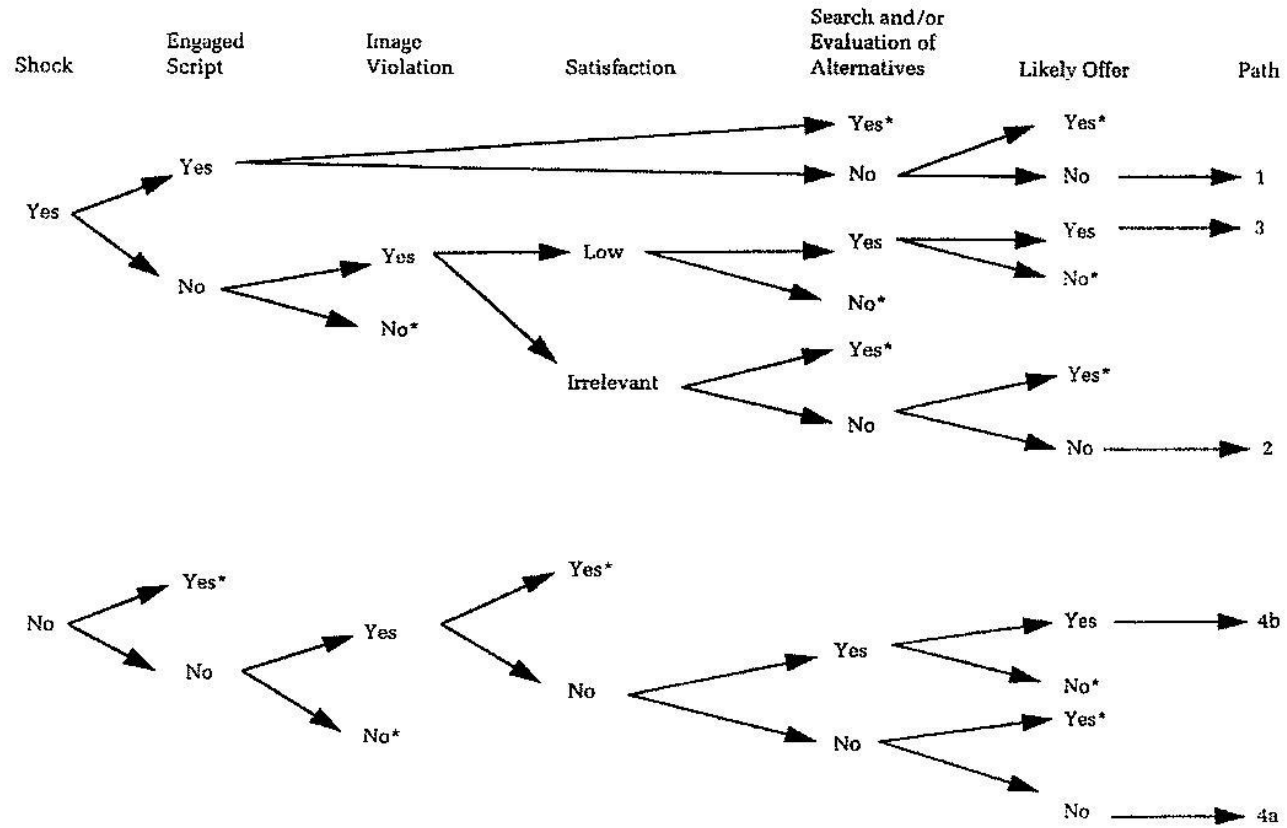
searching for alternatives (labeled Path 2 in Figure 2). Path 3 (see Figure 2) describes individuals that are more deliberate in their decisions to leave. While these individuals experience shocks that are accompanied with image violations. The image violations trigger evaluations of current level job satisfaction levels, leading to subsequent job searches and evaluations of offers before departing.

The unfolding model also suggests that individuals may still choose to leave without experiencing a shock or triggering event. Individuals that followed Paths 4a and 4b (see Figure 2) do not experience shocks, engage in a preexisting script, or incur an image violation but did have a low level of job satisfaction. Path 4a depicts those individuals that voluntary left with no search and evaluation of alternatives, while those that followed Path 4b did search and evaluate his or her alternatives and had a likely job offer. Lee et al. (1999) suggest that Path 4b captures the turnover process that is suggested in the traditional models. That is, an individual's choice to leave is triggered by a certain level of dissatisfaction. This dissatisfaction encourages job searches, evaluation of alternatives, and selection of an alternative (i.e., actual turnover).

Model Validation

The unfolding model has been tested using several samples. It was first tested in 1996 by Lee, Mitchell, Wise, and Fireman. Lee et al. (1996) tested the model by interviewing 44 nurses who had recently quit their jobs. Sixty-three percent of the nurses followed one of the four distinct paths, also known as classifiable quits. These results marked a significant improvement over many of the more traditional turnover models. Three years later, Lee, Mitchell, Holtom, McDaniel, and Hill (1999) decided to make several changes to the model and retest. This time 301 individuals who had left

The Unfolding Model of Voluntary Turnover^{a, b}



^a This figure includes the changes to the unfolding model added for the present study.

^b An asterisk (*) indicates that the route is not classifiable and that it represents a theory falsification—a way in which an individual could leave an organization that would not be part of one of the model's paths.

Figure 2 Lee et al.'s (1999) Unfolding Model of Voluntary Turnover

Big 6 accounting firms in six major cities were surveyed. The new model resulted in 93% of classifiable quits. The model used in the 1999 study is presented.

Adaptation of Unfolding Model of Voluntary Turnover

The direct application of the unfolding model to Air Force Reservists and Air National Guard members is limited because of the fundamental differences between reservists and civilians. Civilian employees, for instance, have far more choices regarding the time that they leave an organization than their counterparts in the reserves or guard. Civilian employees could leave immediately when an unexpected job opportunity appears. In contrast, reservists obligate themselves to a specified period of service, giving them little control over the time that they leave the service. These differences justified some modifications to Lee et al.'s (1999) model of voluntary turnover. Before the specific model adaptations are discussed, some background is provided to better understand the nature of the Reserves and National Guard.

Reserve & Guard Background

Reservists and guardsmen are similar in many ways. Both groups are required to serve one weekend per month and an additional two weeks of active duty per year, a total of 38 days per year. During this time, members must maintain existing projects or equipment, and complete any necessary training. When guard and reserve members are not serving the required time per year, most members have a full time job or are enrolled in school. The military aspect adds part time responsibilities to their existing lifestyle. Even though the reserves and guard may provide great incentives to join, individuals must be ready to be activated for up to a year if a national emergency occurs.

There are also marked differences between the Reserves and National Guard. The biggest difference between the two organizations themselves is the mission. Guardsmen have a dual state-federal focus. The primary state missions include helping with natural disasters and restoring law and order when civil authorities are unable. The units are mainly supplied with surplus weapon systems and are usually based at civilian airports and other relatively austere locations outside active-force bases. In contrast, the Reserves are completely focused on federal requirements, supporting the active forces and defending the United States. These forces are an integral part of active forces as they respond during times of peace, war, and contingency operations. Reservists train with active duty personnel, train to the same standards, and are equipped with the same aircraft (Bergeson, 2002).

Model Adaptations

The part-time nature of reserve and guard service is the most important difference that warrants changes to the unfolding model before it is applied in this context. Figure 3 presents the adapted model that was used to guide this effort. Lakhani and Fugita (1993) suggested that reserve service has been inappropriately described in terms of moonlighting. Moonlighting theory suggests that reservists hold military jobs in addition to their primary jobs due to underemployment or constraints on work hours. Thus, the military job allows the individual to supplement the income received through his or her primary job. If the second job is lost (i.e., the position in the Reserves or Guard is lost), the moonlighting theory would suggest that members would then seek to replace the income with another part-time job.

Lakhani and Fugita (1993), however, suggest that there is weak support for the moonlighting theory for reservists and guardsman. Instead, patriotism plays a more significant role in a members' involvement. Individuals believe that a taste of military life provides experiences that create a positive self worth through a sense of national service and camaraderie. Moreover, individuals serving in the reserves and guard believe that they are actually being compensated for leisure time when they devote time to the service. Thus, members will not necessarily seek to replace the income that is lost when the relationship with the military is discontinued. Based on this idea, the elements of the unfolding model that suggest that individuals search for and evaluate alternative jobs were removed (Lee et al., 1999). Eliminating these steps would also result in quicker decisions to leave.

Another significant change to the previous model was the addition of several paths. For example, members may not experience a shock, engage in script, and leave without an image violation or negative job satisfaction. This is an appropriate decision path for this sample because members serve in the reserves and guard for a specified period so that they can attain certain benefits. Commonly, individuals serve a period in the reserves and guard to gain nothing more than educational benefits (i.e., a predetermined script). When these members' term of service expires, they move on with the educational benefits they have accrued. These individuals may be satisfied, but still leave without experiencing an image violation or job dissatisfaction. The additional paths help identify any other significant paths that members may follow not previously thought to be significant.

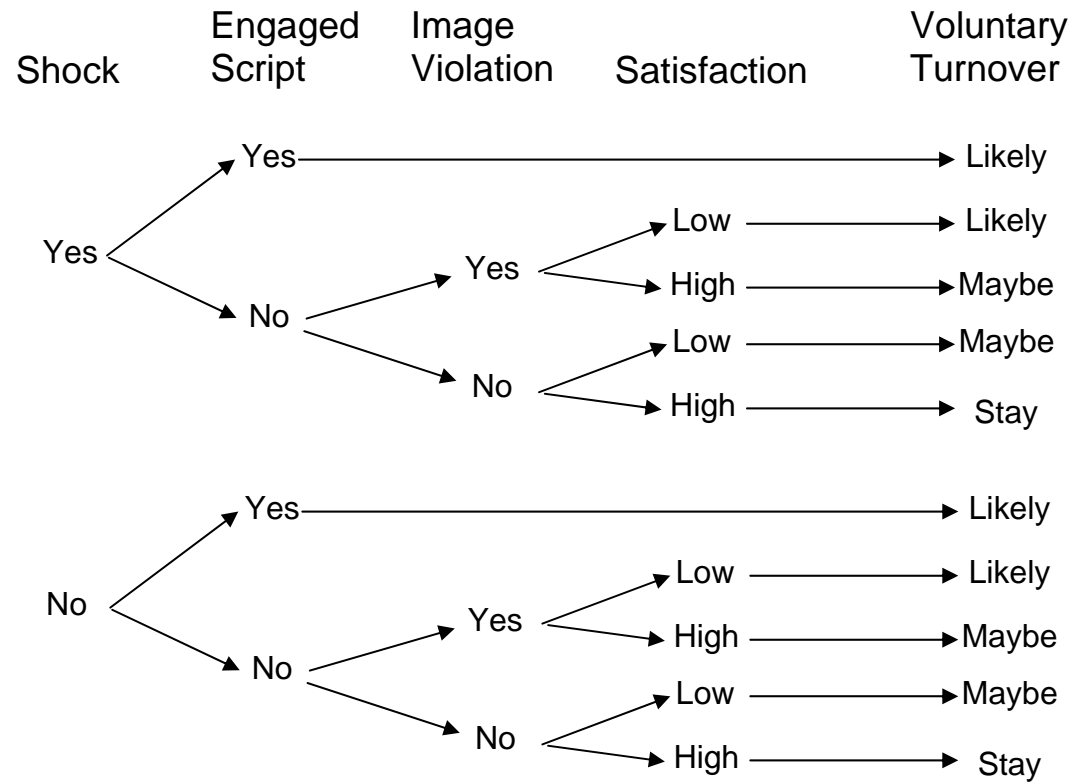


Figure 3 Adaptation of Unfolding Model of Voluntary Turnover

Summary

With the downsizing of active duty forces after the Cold War, the role of reservists has increased dramatically. The military leadership began to rely on the reserves and guard to supplement the total force during Operation Desert Shield and Storm. Since these operations, reserve and guard forces have participated in almost every large foreign deployment from Operation Restore Democracy in Haiti to the current to the War on Iraq. In fact, Reserve and National Guard soldiers make up 40% of the nearly 125,000 U.S. troops in Iraq (Hendren, 2004).

This increased reliance on reserve and guard members makes it important for the leadership to understand these individuals' turnover decisions. This study is designed to take a small step in this direction by applying one of the most contemporary models of turnover to find out where these members are in their decision making process. The unfolding model of voluntary turnover has shown great potential to predict voluntary turnover. It was adapted for this study and used to assess the thoughts of a group of Air Force Reservists and Air National Guard members. The subsequent chapters of this thesis will provide insight into why reserve and guard members separate, and recommendations on what issues should be addressed to better retain personnel. This information will be conveyed by discussing the process behind adapting the model and questionnaire, and the findings from the administration of the questionnaire.

CHAPTER 2

METHOD

To determine the likelihood that reservist and guard members would voluntarily leave the service, an adapted version of the Unfolding Model of Voluntary Turnover created by Lee et al. (1999) was tested among officer and enlisted members in the Air Force Reserves and Air National Guard. Both full and part time members of the traditional reserves and guard were targeted as the sample population. Most members are assigned to mobilization units and must participate in 48 drills and at least 2 weeks of active duty annually (General Accounting Office, 1991). Attempts were made to ensure the data collected was a representative sample consisting of a diverse range of occupations and geographic locations.

Study Procedures

The study was done in two phases. Prior to the actual study, the first phase involved a pilot study where members of the Air Force Reserves and Air National Guard completed the questionnaire. The data were used to refine ambiguous items, eliminate inappropriate items, and select additional items as necessary (discussed in the subsequent section). After this, the questionnaire was administered to a larger more representative sample of reservists and guardsmen.

Pilot Study

Sample. As noted, a pilot test was conducted to evaluate the questionnaire, identify inappropriately phrased items, and identify important issues that were not addressed. A group of 20 reserve and guard engineering officers participated by

completing the questionnaire. This group was at the Civil Engineering School at Wright Patterson Air Force Base for a two week course on the management of Air Force installation maintenance functions. The group was 90 percent male and had a mean age of 36.7 years. Seventy percent of the participants served on active duty prior to their reserve or guard enlistment for a mean of 5.2 years. The sample population was very similar in education level and undergraduate degrees because of the requirements for their position. All participants had earned at least a bachelor's degree in some engineering discipline and 55 percent had earned graduate degrees. Although all participants had engineering degrees and served as civil engineering officers while on active duty, three participants did not utilize their engineering degree in their civilian jobs. Of the three, two were teachers and one was an airline pilot.

Questionnaire refinements. The pilot study participants identified a number of opportunities to improve the questionnaire. First, they appeared confused about how to proceed through the questionnaire after responding to an item that asked about their most recent deployment experience. If they had experienced a recent deployment, the participants were to complete a series of items about this deployment (i.e., duration and location of the deployment). If they had not experienced a recent deployment, participants were to skip this series of items. Yet, many of those that reported no recent deployments still completed the subsequent items asking for details regarding deployments. To avoid this in the actual administration, instructions were added to describing what an activation or deployment was (i.e. non drill periods, annual training, or professional military education). Additional instructions were also given to ensure that if the participant had not deployed they were to advance to the next question that pertains

to them. The web version of the survey automatically advanced the participant to the next question based on their response to whether they had ever been deployed or activated.

Next, the participants identified a number of relevant issues that should be included. The distance the member had to travel to reach their duty location, was one such issue. The arrangement the member had with their civilian employer concerning pay and leave while completing the annual training requirements were other issues that had not been included. This led to two additional questionnaire items.

Field Study

Procedures. To collect the study data, a group of reserve and guard unit commanders were invited to have their units participate in this study. Each commander that was contacted received an official letter stating the purpose of the study and gave them researcher contact information. In addition, they were assured that all data that was to be collected from their organizations' members was to be collected anonymously. When each agreed to have their units participate, the letter that outlined the study's intent and gave assurances of anonymity was forwarded to their organizations' members along with a link to the questionnaire that was available on the World Wide Web.

Sample. To ensure that a representative sample of reservists and guardsmen was attained, a series of demographic questions were included in the questionnaire. Demographic questions included: current service, current paygrade, length of time at that paygrade, time served on active duty if any, gender, age, highest education level, profession (private sector and military), and current marital status. The paygrade will be categorized according to the grade (e.g., E1, E2, E3...O1, O2 etc.). The current service

reflects whether the participant is a member of the Air Force Reserves or the Air National Guard. The paygrade was categorized according to the grade (e.g., E1, E2, E3...O1, O2 etc.). The length of time at that paygrade and time served on active duty was measured as a continuous variable (in years and months). Gender was a categorical variable coded as 0 for male and 1 for female. Age was measured as a continuous variable (in years) where the participants fill in the open ended item. Highest education level was categorized as 0 for some high school education to 3 for a graduate degree.

Measures

While the pilot test participants offered a number of suggestions, the focal measures appeared sound. These measures, which were derived from Lee et al.'s (1999) study that tested the Unfolding Model of Voluntary Turnover, are discussed in detail below. In addition, items from an Army National Guard retention questionnaire were included. The complete questionnaire can be found in Appendix A.

Descriptive Measures

Individual characteristics. Individual characteristics relate to the attributes associated with an individual employee. In addition to demographic factors such as age, tenure, education, and skill level, other variables include dispositional factors such as personality and family obligations. Demographic variables, the reasons why the member joined the guard or reserves, and why they remain in the guard and reserves were the only additional personal information requested above and beyond that for the adapted model.

Organizational characteristics. Questionnaire items that refer to the interface between individual workers and organizations are considered organizational characteristics. In the adapted model, these characteristics were defined as the

compatibility of the participants' personal and professional goals. Although it is important for personal and professional goals to be compatible with the organization, individuals must also trust subordinates and supervisors. Therefore, leadership items from an Army National Guard Survey on retention were included to determine if individuals were experiencing problems with officers or noncommissioned officers (NCOs) that lack military skills and/or lack teamwork and cooperation among members in their unit. Members were also asked if they experience any of the same type of problems in their civilian position.

Mobilization and deployments are not a construct specifically found in Lee et al.'s (1999) Unfolding Model of Voluntary Turnover; however, the effects of mobilizations have a significant impact on the member/service interface. Therefore, this is another important variable when trying to understand the psychological process of military members. Participants were asked several questions regarding their activations/deployments such as: where they went and how long they were there for. Did the member experience any significant problems with school, family, or their civilian employer as a result of the deployment? How supportive were a range of organizations while deployed ranging from their family to their unit chain of command?

Environmental characteristics. Variables such as unemployment rates, labor market perceptions, and the probability of finding another job are the environmental characteristics that are typically studied. In the case of guardsman and reservists, these variables and a few others should be considered. Variables such as if the member is granted time off with or without pay for annual training, scheduling conflicts that occur

between required service time and family events, and scheduling conflicts that occur between required service time and their civilian job.

Elements of the Unfolding Model

Shock. A shock is a jarring experience that is expected or unexpected, positive or negative, or personal or organizational (Lee et al., 1999). This event initiates the psychological evaluation of an existing job. Consistent with Lee et al., participants were coded as having experienced a shock if they had reported any one of the following experiences: (a) a single event that caused you to think about leaving the reserves (participants are also asked to identify the event); (b) problems with pay; (c) problems with employer; (d) problems with family; or, (e) problems with school. Responses were coded on a Likert scale from 1 no problem to 4 major problem. Members were considered to have experienced a shock if they had moderate or major problems with any of the items.

Script. According to Lee et al., a script is a preexisting plan of action that the individual developed based on past experiences, observation of others, or social expectations (Lee et al., 1999). For this study, an individual was coded with script if they planned to leave the service after the completion of their present obligation. Individuals were coded as having a script based on their responses to two questionnaire items. First, when the member joined the reserves or guard, did they have a specific amount of time they thought they would serve? Has this time frame changed? The member indicated a script of voluntary turnover if they selected that they would leave the guard or reserves at the completion of their current obligation.

Image Violations. Image violations occur when an individual's goals, values, and strategies for goal attainment do not fit those of the employing organization or those implied by the shock (Lee et al., 1999). Participants were asked about the compatibility of personal ethics and beliefs as they pertain to both the reserve or guard position and civilian job. An individual indicated image violations if he or she indicated incompatibility to any of the following items: personal and professional values/ethics, personal and professional goals, and if the personal and professional goals were progressing as they expected. Image violations were based on a four point Likert scale, ranging from 1 not compatible to 4 very compatible. Members indicated an image violation had occurred if any of the items were either not compatible or slightly compatible.

Job Satisfaction. Job satisfaction is a measure of the extent to which the job provides the individual intellectual, emotional, or financial benefits they desire (Lee et al., 1999). Job satisfaction was measured for the individuals reserve or guard job and civilian job. An individual indicated job satisfaction or dissatisfaction by how they responded to the wide array of items ranging from supervision they receive to fringe benefits to the quality and amount of training they receive. Responses ranged from 1 not satisfied to 4 very satisfied. Members were considered to have job satisfaction if they were moderately satisfied or very satisfied to any of the items.

Path Identification

Other significant paths were demonstrated during a study of active duty members of critical Air Force Specialty Codes that had separated in the past 5 years (Lin, 2003). In this study, a significant portion of participants fell into unclassified paths such as

experiencing a shock, engaging in a preexisting script, searching for alternatives, and then leaving without an alternative offer, or engaging in personal scripts and leaving without having experienced a shock or negative image violation. The military may have unique circumstances and follow paths not laid out by Lee, Mitchell, Holtom, McDaniel, and Hill (1999).

Summary

The research conducted by Lee et al. (1999) suggests that individuals follow similar psychological and behavioral patterns as they make the decision to voluntarily leave an organization. The study found that 93% of the sample followed the five discrete paths of this model. This research will attempt to see if Air Force Reservists and Air National Guard members follow the same five paths or if they follow other discrete paths that may be more applicable to the military environment. With this modified model, leaders will gain understanding about why members separate, and be able to make recommendations on what issues should be addressed to better retain personnel.

CHAPTER 3

RESULTS

This chapter provides a summary of the results. First, a very brief summary of the results from the pilot study are discussed. Second, the results from the field study are discussed. Participants of the survey were a representative sample of the guard and reserves. Units from all over the United States were represented, from Florida to Alaska. Some participants were even activated and deployed at the time they responded to the questionnaire. Eighty-four percent of the participants were male, which is the approximate gender ratio seen in the active duty force. The proportion of officers to enlisted members in the field study was fairly close to that seen on active duty. Active duty has an approximate ratio of 20% officers and 80% enlisted and the field study yielded a ratio of 28.4% officers ($n = 94$) and 71.6% enlisted members ($n = 237$). Consistent with the traditional models of turnover that were explained, the individual, organizational, and environmental characteristics that were measured were examined. Then, the data were subjected to the adapted unfolding model of voluntary turnover that was developed to hypothesize the likelihood that many members would leave guard or reserve service.

Pilot Study

To summarize the responses provided by the participants during the pilot study, it appeared that the most significant problems occurred with having less of an income, notifying their employer of the mobilization, and arranging for their employer to continue employment benefits when serving on active duty. Service to country, retirement pay and benefits, and earning extra income were the most significant reasons why people

joined and why the member would choose to stay. When asked about conflicts between guard or reserve service commitments and civilian work and family commitments, seventy percent reported that they had experienced difficulty balancing civilian jobs and guard or reserve service. Seventy percent also reported problems balancing family events with guard or reserve service. The morale for the different groups and the trust in their leaders and subordinates was fairly high across the group. When asked why and if the participant were to look for another position, the answer was dissatisfaction with the job itself or lack of promotion opportunities. Surprisingly, only 30 percent of the group would look for another part-time job if they chose to leave the guard or reserves. Fifty-five percent of the sample group had never been deployed; however, many still filled out the deployment centered questions (as discussed). Therefore, the results in this section of the questionnaire may be skewed. The most significant problems with the activation or deployment were with the civilian employer. Most of the participants belonged to the unit program and were assigned to selected (traditional) category and so these questions were removed from the questionnaire.

Field Study

Individual Characteristics

As noted in the literature review, individual characteristics relate to the attributes associated with an individual employee. These variables include demographic factors such as age, tenure, education, and skill level (see discussion in methodology).

Additional individual variables include dispositional factors such as personality and

Table 1

Questionnaire Results Regarding Individual Characteristics

Questionnaire Item	Summary Statistics		
	Frequency*	Mean	SD
Length of time (years) in the Guard or Reserves		13.97	8.90
Length of service on active duty (years)		6.40	3.58
Difficulty in arranging for child care when on active duty (responses ranged from 1=no problem to 4=major problem)		1.78	1.02
Distance (miles) traveled to Guard or Reserve base		56.08	117.12
Previously served on active duty			
No	115		
Yes	285		
When you joined, how long did you plan to stay in the Guard or Reserves (participants checked appropriate response)			
Until retirement	385		
Beyond present obligation, not necessarily retirement	49		
Completion of present obligation	36		
Did not know	100		
Right now, how long do you plan to stay in the Guard or Reserves (participants checked appropriate response)			
Until retirement	445		
Beyond present obligation, not necessarily retirement	20		
Completion of present obligation	28		
Did not know	54		
If you left the Guard or Reserves, would you look for another part-time job			
No	233		
Yes	315		
Why did you join the Guard or Reserves (participants checked all that applied)			
Service to your country	434		
Retirement pay and benefits	405		
Extra money	317		
Educational benefits	214		
Experience to help in civilian job opportunities	182		
Experience overseas training and travel opportunities	175		
Experience military life	153		
Physical and mental challenge	148		
Keep friendships in the military	142		

*Due to missing data, frequency may not total 581

Questionnaire Item	Summary Statistics		
	Frequency*	Mean	SD
Why did you join the Guard or Reserves (participants checked all that applied)			
Other	96		
Develop discipline and confidence	82		
Bonus money	50		
Right now if you were to stay in the Guard or Reserves, why would you stay (participants checked all that applied)			
Retirement pay and benefits	463		
Service to your country	409		
Extra money	274		
Keep friendships in the military	217		
Experience overseas training and travel opportunities	151		
Physical and mental challenge	132		
Experience military life	114		
Experience to help in civilian job opportunities	113		
Educational benefits	110		
Develop discipline and confidence	49		
Other	48		
Bonus money	44		
Current marital status (participants checked appropriate response)			
Not married	203		
Married to a civilian	252		
Married to an active duty member	11		
Married to a reservist/guard member	36		
Other	22		

*Due to missing data, frequency may not total 581

family obligations. Table 1 summarizes the results relating to the individual characteristics.

Participants were asked about how long they thought they would stay in the guard and reserves now and what they thought when they joined. When members initially joined, most thought they would stay until retirement ($n = 385$) and a few were undecided ($n = 100$). When asked about what they would do now, approximately 78 percent of participants said they would remain in the guard or reserves until retirement ($n = 445$). This result appeared consistent with the mean time in service where

participants reported 13.97 years of service ($SD = 8.9$) on average. This is not unusual given the generous retirement that is gained at 20 years in service.

The findings also gave some insights into why people choose to join the guard or reserves and why they would choose to stay. Participants indicated that they originally joined the guard or reserves to serve their country, attain retirement pay and benefits, earn extra money, and attain educational benefits. The reasons they planned to remain in the guard and reserves were similar in that they wanted to earn retirement pay and benefits, to serve their country, to earn extra money, and to maintain friendships in the military.

When asked about current marital status, approximately 48 percent ($n = 252$) were married to civilians and 38 percent ($n = 203$) were single. Regardless of marital status, participants still experienced personal difficulties with their part-time service requirements. For example, on a scale of 1 (no problem) to 4 (major problem), members reported ($M = 1.78$, $SD = 1.02$) problems arranging for child care when on active duty. Some members also suggested difficulties with the distance required to travel to the guard or reserve base. The mean distance to travel to the guard or reserve location was 56.1 miles ($SD = 117.12$).

On a more positive note, the participants suggested that the guard and reserve service organizations were helpful when the member is deployed or activated. Specifically, of those that had deployed at some point in their career, the level of help the family had received had a mean of 2.31 ($SD = 1.84$). Responses ranged from 1 (not helpful) to 4 (very helpful). In contrast, the community appeared less helpful with a mean of 1.88 ($SD = 1.76$).

Organizational Characteristics

Organizational characteristics refer to the interface between individual workers and organizations and include variables such as commitment to the organization; alignment of personal goals and values to that of the organization; perceptions of supervision (e.g. recognition, feedback); pay, and attitudes toward promotion, job autonomy, and job content. Table 2 lists the frequencies and mean responses, as appropriate, for the measures of organizational characteristics.

Participants were asked if they were to leave the guard or reserves right now, why they would leave. The most frequently cited reasons stemmed from the civilian or military jobs or leadership and administrative difficulties. Other than leadership, the most common difficulties personnel encountered that would cause them to leave were conflicts between service and civilian job ($n = 194$), and lack of promotion ($n = 177$). Other less significant issues that had an effect of the decision to leave include pay problems ($n = 56$), too much time waiting around ($n = 74$), and boring or inadequate training ($n = 91$). Other possible difficulties such as arranging for military pay to be sent to a bank, receiving money once on active duty, and having less of an income did not appear to be significant.

Leadership plays a key role in the decision of whether or not to remain in the guard or reserves. Of those that responded, 56.7 percent of participants have searched for another position in the guard or reserves because they were not satisfied with the leadership in their unit ($n = 310$). Many participants felt the leaders lacked military skills ($n = 222$). There was also some concern about officers and NCOs that do not look out

Table 2

Questionnaire Results Regarding Organizational Characteristics

Questionnaire Item	Summary Statistics		
	Frequency*	Mean	SD
Right now if you were to leave the Guard or Reserves, why would you (participants checked all that applied)			
Leaders who lack military skills	222		
Conflicts between service and civilian job	194		
Lack of promotion	177		
Leaders who don't look out for airman	153		
Conflicts between service and family life	136		
Working on unnecessary things	111		
Boring or inadequate training	91		
Too much time waiting around	74		
Pay problems	56		
Other	26		
Participants rated difficulty (responses ranged from 1=no problem to 4=major problem)			
In arranging for military pay to be sent to a bank		1.07	0.35
Receiving pay once on active duty		1.31	0.68
Having less of an income		1.87	1.10
Have you searched for another position in the Guard or Reserves because you were not satisfied with the leadership in your unit (participants checked appropriate response)			
No	237		
Yes	310		
To what extent have the following been problems in your unit (responses ranged from 1=no problem to 4=major problem)			
Officers who lack military skills		1.82	0.92
Officers who don't look out for airman		2.02	1.00
NCOs who lack military skills		1.94	0.89
NCOs who don't look out for airman		1.96	0.93
Lack of teamwork and cooperation among airman		1.72	0.85
Airman who don't look out for each other		1.72	0.86
The extent you agree with the following concerning your unit (responses ranged from 1=strongly disagree to 4=strongly agree)			
The officers do their job well		3.01	0.77
The NCOs do their job well		3.04	0.70
Officers most always get willing and whole-hearted cooperation from airman in unit		2.93	0.70
* Due to missing data, frequency may not total 581			
The extent you agree with the following concerning your unit (responses ranged from 1=strongly disagree to 4=strongly agree)			
NCOs most always get willing and whole-hearted cooperation from airman in unit		2.94	0.66

Questionnaire Item	Summary Statistics		
	Frequency*	Mean	SD
Officers would lead well in combat		2.78	0.91
NCOs would lead well in combat		2.99	0.76
The extent you agree with the following concerning your unit (responses ranged from 1=strongly disagree to 4=strongly agree)			
I would ask NCO with help for a personal problem		2.65	0.97
I would ask an officer for help with a personal problem		2.50	0.99
Officers are interested in your personal welfare		2.79	0.92
NCOs are interested in your personal welfare		2.92	0.82
Concerning the last deployment			
Length of activation (months)		5.90	6.75
Length of advanced notice (months)		1.68	2.19
Difficulty experienced from being a student (responses ranged from 1=no problem to 4=major problem)		2.45	1.10
Problems caused to your family (responses ranged from 1=no problem to 4=major problem)		1.89	0.92
Overall rating of the deployment or activation (responses ranged from 0=indifferent to 4=very good)		1.91	1.53
Helpfulness of Unit/Base Family support center to spouse or family (responses ranged from 1=not helpful to 4=very helpful)		2.55	1.16
Helpfulness of unit "chain of command" to spouse or family (responses ranged from 1=not helpful to 4=very helpful)		2.74	1.16

* Due to missing data, frequency may not total 581

for their airman and many participants would not go to their NCOs or officers for help with a personal problem. Even with the problems with the leadership aspect, most participants seemed to feel that the officers and NCOs did their jobs well. On a scale of 1 (strongly disagree) to 4 (strongly agree), participants rated the officers and NCOs on doing their job well with a mean of 3.01 ($SD = .77$) and 3.04 ($SD = .70$) respectively.

With the increased role that guard and reserve members are playing in the total force, member experiences during deployments and activations are critical. Of the participants 280 responded that they had been activated or deployed in addition to the annual training requirement. Advanced notice of deployments ranged from a couple of hours to multiple months. The mean notification time was 1.7 months ($SD = 2.2$). Once

activated, members were deployed for a mean of 5.9 months ($SD = 6.8$). Participants were deployed to various locations throughout the United States, Europe, Middle East, and the world (e.g., Florida, Germany, Saudi Arabia, Antarctica, South America). On a scale of 1 (not very good) to 4 (very good) members gave an overall rating of 1.9 ($SD = 1.53$) to their deployment or activation. According to the participants, they did not experience many difficulties from being a student. Few problems were also caused to the families because of the deployments. Even though there did not appear to be many difficulties to the member, the level of helpfulness from their unit/base family support center and from the unit chain of command to the spouse or family was only somewhat helpful.

Environmental Characteristics

Research has suggested that of the three general characteristics that may trigger turnover, the environment has a very significant impact on individuals' decisions to leave. Environmental characteristics refer to the variable such as unemployment rates, labor market perceptions, and the probability of finding another job. However, in the case of guardsman and reservists, external events are considered to be items from the environment that may affect guard or reserve duty. Additional environmental factors applicable for guardsman and reservists include: pay and benefits received from civilian job during training or activation, contact with civilian employer while activated, anticipated workload upon returning to civilian positions, and the extent of change or break from the daily routine the mobilization creates. Table 3 lists frequencies and means for the measure of the environmental characteristics.

On average, members reported ($M = 2.80, SD = 7.29$) the number of conflicts between their civilian work obligations and their annual military training requirements. Members also experienced conflicts with family events that were scheduled during annual training with a mean of 3.86 times ($SD = 4.00$). Pay and time off are other important issues that can create conflicts. Participants reported that during the weekend drills and annual training, 31 percent ($n = 169$) reported they were granted time off with full pay. However, 23 percent ($n = 126$) were granted time off with no pay.

Once again, when deployments occurred for the 280 participants, the opportunity for difficulties arose. On a scale of 1 (no problem) to 4 (major problem), there were very few problems with notifying the employer of mobilizations ($M = 1.43, SD = .80$), arranging for employer to continue benefits ($M = 1.75, SD = 1.02$), and having to leave school ($M = 1.78, SD = 1.02$). Most participants did not believe the deployment was a major change or break from the daily routine ($M = 1.90, SD = 1.74$), nor did they anticipate the workload or returning to work ($M = .81, SD = 1.22$). Very few participants ($M = .78, SD = 1.03$) felt they had experienced problems with their employer at the time of the last mobilization. The question regarding if the member had contact with their colleagues from work concerning job-related matters was an open ended question. Due to the range of answers and comments, this question was recoded into never, monthly (1-2 times a month), weekly (1-2 times a week), or daily (3 or more times per week). Fifty-five percent ($n = 181$) of the respondents never even had any contact with their civilian

Table 3

Questionnaire Results Regarding Environmental Characteristics

Questionnaire Item	Summary Statistics		
	Frequency*	Mean	SD
How many times last year were you scheduled to work at your civilian job for all or part of scheduled training		2.80	7.29
While participating in scheduled training, are you (participants checked appropriate response)			
Granted time off with full pay	169		
Granted time off with no pay	126		
Receive differential pay	30		
Take vacation in order to keep pay	45		
Other	176		
How many times last year did family events happen during scheduled training		3.86	4.00
To what extent did you experience problems with the following due to last mobilization (responses ranged from 1=no problem to 4=major problem)			
Notifying employer of being mobilized or deployed		1.43	0.80
Arranging for employer to continue benefits		1.75	1.02
Having to leave school		1.78	1.02
With employer		3.37	0.77
While deployed or activated (responses ranged from 0=not at all to 4=a lot)			
Extent of change and break from daily routine		1.90	1.74
Anticipated workload upon returning bothered you while on active duty		0.81	1.22
Amount of communication with civilian job while deployed (participants checked appropriate response)			
Never	181		
Seldom (monthly)	55		
Often (weekly)	43		
Frequently (daily)	51		
When returning from deployment, did you return to the same civilian job (participants checked appropriate response)			
Does not apply, not employed	168		
Same job	21		
Better job at the same company	1		
Lesser job at the same company	0		
Not offered job back	1		
Company was no longer in business	0		
Decided not to return to the same job	1		

* Due to missing data, frequency may not total 581

employers regarding job-related matters while they were mobilized. When the member returned from the deployment, their spouses and employers were not extremely supportive or helpful. On a scale of 1 (not very supportive or helpful) to 4 (very supportive or helpful), means were 1.11 and 1.83, respectively. A possible error in data collection occurred because it says that 168 of the 192 participants that filled out the questionnaire were not employed before they were mobilized and so they could not return to any company.

Civilian and Guard or Reserve Job Comparison

Table 4, lists the questionnaire items and statistical values for the responses associated with comparing the participants guard or reserve job to the civilian job. In order to better compare the overall satisfaction the member has with the guard or reserves, several questions were asked about both the service and their civilian jobs. Forty-three percent ($n = 228$) of the participants believe that their civilian jobs and guard or reserve jobs are very similar; however, due to an error while collecting data on the web based survey, almost all the data regarding the satisfaction with their civilian job was lost. The personal and professional goals and values/ethics of the member were found to be highly compatible with their unit. According to a wide range of satisfaction items, most participants were moderately satisfied with their guard or reserve job regarding such items as coworkers (mean = 3.24, $SD = .81$), as an employer (mean = 3.22, $SD = .85$), nature of work (mean = 3.19, $SD = .92$), and the autonomy of their work (mean = 3.15, $SD = .84$). Of the questionnaire items that could be compared regarding satisfaction, the guard or reserve units had a higher mean of satisfaction.

Table 4

Comparison of Civilian and Guard or Reserve Job

Questionnaire Item	Summary Statistics		
	Frequency*	Mean	SD
Similarity between civilian and Guard or Reserves job (participant checked appropriate response)			
Very similar	228		
Similar	33		
Somewhat similar	60		
Not similar at all	83		
Do not have a civilian job	32		
Currently a Guard/Reserve technician	89		
Compatibility with Guard or Reserves job (responses ranged from 1=not compatible to 4=very compatible)			
Personal values/ethics		3.53	0.73
Professional values/ethics		3.57	0.73
Personal goals		3.16	0.87
Professional goals		3.22	0.86
Career progression		3.04	1.00
Personal goal progression		3.01	0.97
Degree of satisfaction with the GUARD or RESERVE unit (responses ranged from 1=not satisfied to 4=very satisfied)			
Supervision you receive		3.00	0.94
As an employer		3.22	0.85
Career opportunities		2.97	0.99
Financial rewards		2.88	0.98
Coworkers		3.24	0.81
Nature of the work		3.19	0.92
Fringe benefits		3.03	1.01
Recreational activities		2.87	0.96
Autonomy of work		3.15	0.84
Pressures at work		2.90	0.94
Time flexibility		3.11	0.99
Quality and amount of training		2.80	1.00
Duties performed		3.14	0.95
Mechanical condition of equipment		3.11	0.92
Availability of modern equipment		2.95	1.04
Training to prepare for mobilization and deployment		2.73	0.99
Level of training		2.80	0.97
Degree of satisfaction with CIVILIAN JOB (responses ranged from 1=not satisfied to 4=very satisfied)			
Duties performed		2.44	1.59
Mechanical condition of equipment		2.15	1.66
Availability of modern equipment		2.23	1.60
Level of training		2.09	1.55

*Due to missing data, frequency may not total 581

Test of the Adapted Unfolding Model of Voluntary Turnover

Instead of relying on Lee et al.'s unfolding model as presented, it was adapted to reflect the nature of guard and reserve service. Although Lee et al.'s (1999) model progresses through a psychological process, much information can be determined from the model in a static view point. For example, many participants ($n = 221$) reported experiencing some sort of shock. Shocks ranged from difficulty arranging for child care, problems with current employer, to receiving pay when on active duty. Few participants ($n = 61$) claim to have some sort of script to leave the organization after their present obligation is completed. When asked about their guard or reserve position, 203 participants experienced some sort of image violation and 283 experienced low levels of job satisfaction. When asked if the member had searched for another position, 387 responded that they had searched for another position within the guard or reserves. The key reasons participants chose to search for another position were because of lack of promotion opportunities, lack of leadership, location, and poor training. Of the 581 participants, 291 had previously served on active duty. Most members left active duty for a guard or reserve position because they were pursuing higher education, deployments, were tired of relocating, lack of stability, job was not challenging, and passed over for promotion.

The participants were fairly evenly distributed among the paths with the majority following the last two paths (41.48%). These paths suggest that with no shock, no script to leave, no image violation, high or low job satisfaction has little impact on the decision to stay or leave. Based on the numbers found for each path, it appears that most guard and reserve members do not have a specific plan to leave the service after their current

obligation ends. Even without a shock many will still engage their script and either leave or stay.

Based on the principles stated in preceding chapters, categories of predicted to leave, likely to leave, or stay were developed and added to the model. For example, someone who experiences a shock, has no script to leave, does not have an image violation, but has low job satisfaction might leave the organization. The likely to leave category included those that had the script to leave, or a combination of shocks, image violations and low job satisfaction. According to the data below, approximately 211 personnel (36.32%) will most likely leave the organization after the completion of their obligation. Roughly 32% of the participants ($n = 186$) appeared to be undecided about whether to leave or stay and 197 (33.91%) would be likely to stay regardless of various characteristics. Figure 4 illustrates the number of participants that followed each path of the adapted unfolding model.

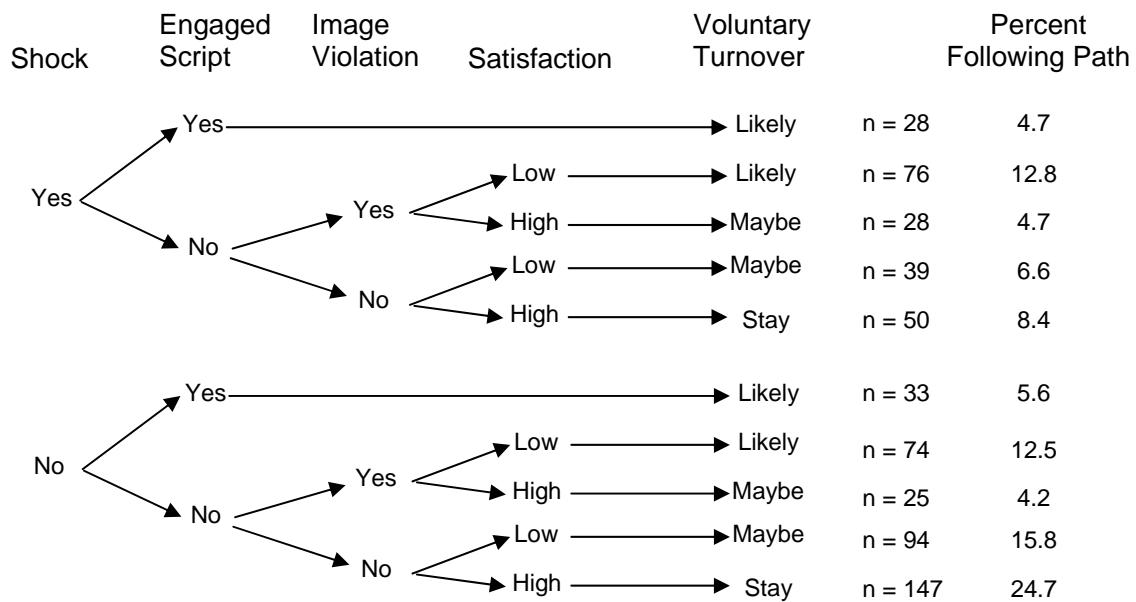


Figure 4. Participants reported to follow distinct paths on the adapted model

Summary

This chapter provided results from the turnover questionnaire and the test of the adapted unfolding model of voluntary turnover. Values were given for the various individual, organizational, and environmental characteristics. The results also indicate that the participants followed similar proportions to the distinct paths that were found by Lee and his colleagues. The adapted model also displays the range of paths that guard and reserve members are most likely to follow. Few people had a preexisting script to leave after their current obligation was completed. This proves that the service must create an environment to entice others to remain in the service.

CHAPTER 4

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was two fold. First, Lee et al.'s (1999) model has shown promise in predicting the turnover of active duty military members as well as the samples discussed previously. Therefore, it was adapted to reflect the unique nature of reserve and guard service, providing leaders with a better understanding of the causes of turnover decisions. More studies need to be conducted on the guard and reserves because they are a critical part of all recent military operations and they are having the same retention problems experienced by the active duty branches. Therefore, the second purpose of the study was to apply the adapted model to a sample of Air Force Reservists and Air National Guardsmen to see which distinct path members were following. From this, leaders would get a more complete understanding of turnover intentions of these members a vital issue since reservists and guardsman make up 31.8% of the total force.

Adaptation

The research conducted by Lee et al. (1999) suggests that individuals are under unique circumstances, yet they follow similar psychological and behavioral patterns as they decide whether to stay in an organization or leave. These patterns were captured by Unfolding Model of Voluntary Turnover. After applying this model to guard and reserves, only 24.8% of the participants followed one of Lee et al.'s five distinct paths. However, this model still explains more turnover than other traditional models. Since reservists and guardsman have special circumstances (e.g., part-time employment/moonlighting) compared to civilian positions, modifications were made to better categorize those that will leave or stay.

The part-time nature of reserve and guard service is the most important difference that warranted the changes to the unfolding model. Yet patriotism guides members' involvement choices in the reserves and guard more than the motivations associated with typical moonlighting. Therefore, reserve military service provides individuals a taste of military life that fosters a positive self worth through a sense of national service and camaraderie. It is not viewed simply as a second job providing supplemental income (i.e., moonlighting theory). Thus, members will not necessarily seek to replace the income that is lost when the relationship with the military is discontinued.

Based on this idea, the elements of the unfolding model that suggest that individuals search for and evaluate alternative jobs were removed. Most part-time military members hold full time jobs, choose not to work, enrolled in school, or maintain part-time employment and would not necessarily have to replace the lost income. Eliminating these steps may also result in result in quicker decisions to leave. Another significant change to the previous model was the addition of several paths to help identify any other significant paths that members may follow.

The adapted model was created to help inform leaders about the members' intentions to leave or stay. For instance, there are many members that joined the service for particular benefits and will have already decided to leave after their obligation has been fulfilled. These members are likely to leave but there are others that will most likely stay or are on the cusp of leaving. Through further testing and evaluation of the adapted model, areas of concern that the leaders need to further investigate and information about the intentions of the member to stay or leave the service will be revealed.

Implications for the Air Force

The Department of Defense relies heavily on guard and reserve members. As noted previously, the role these members play has increased dramatically in the last few years and will most likely not decrease. Undoubtedly, the increase in participation will have an effect on the service members, their families, and their places of employment. While certain problems that the members and their employers confront have been addressed through research (i.e., differences in pay between reserve and civilian positions; the influence lengthy activations have on members and employers), the extent to which these service members have reevaluated their decisions to remain in the reserves deserves further investigation.

Voluntary turnover represents a significant cost to organizations in terms of money and knowledge. That is, new members must be recruited, selected, and trained. The new employees must receive basic military training, specialty training for different career fields, become proficient in their career field, and become accustomed to the Air Force's culture. Because of the costs associated with voluntary turnover, the Air Force needs to make every effort to minimize the loss of quality employees.

The guard and reserves are only slightly different than the active duty members. Many people join the guard or reserves for the retirement pay and benefits, service to their country, and extra money. However, if money is the primary issue, participants could find extra money at a different job. In this study, over 50% said they would look for another part-time job if they left the guard or reserves. Additionally, many civilian organizations like to employ people who have a military affiliation because usually they will already have training and the personnel are most likely fairly responsible.

While there are some constraints that prevent the leadership from retaining some personnel (e.g., financial), there are other things that could be done to help reduce voluntary turnover. The service could attempt to get rid of less stellar performers and allow those that are performing well to advance. Promotions were a key issue of concern for the guard and reserve members and therefore may have a great effect on retention. Members have also mentioned that they have difficulties receiving their pay and benefits promptly when they are called to active duty, therefore, possibly more could be done to ensure the prompt payment. Policies and procedures should also be in place that maximizes the members' time while they are on active duty and minimize wasted time. Perhaps members would serve only when things needed to be done. Or perhaps, commanders and supervisors need better training on how to handle personnel and prioritize issues. Supervisors also need to be better trained in different retention strategies and personnel management.

Implications for Researchers

While a multitude of studies have been conducted on voluntary turnover, this research was one of the few on turnover of guardsman and reservists. When data from this study was applied to the Unfolding Model of Voluntary Turnover, 24.8% of the respondents followed one of Lee et al.'s distinct paths. Although this figure seems low, it still explains far more than most turnover models (4-5%). This model and the adapted model may identify specific areas that need to be addressed further in order to mitigate unwanted voluntary turnover. Modifications, refinements, and further testing of the model may also reveal more valuable information and areas that need to be addressed when trying to reduce turnover.

Although the adapted model expressed a lot of information, refinements should be made to the questionnaire and the model. Additional information could be asked about the shock instead of if the member reported experiencing difficulty with several items. For example, the path for each type of script should be distinguished (e.g., stay until retirement, do not know) instead of just having a script to leave after completion of the current obligation. More detailed explanations about the image violation could prove to be very beneficial instead of just whether or not they experienced a violation. In order to keep this questionnaire applicable to a multitude of people, several of the questions had to be very general. However, a more specialized questionnaire based on career fields and/or locations could reveal more important information.

Of the problems reported, most stemmed from promotion opportunities, leadership, or the lack of predictability and stability. Of the participants, only one-third indicated that they had a script to leave after the completion of their current obligation and so there are many people that can still be influenced to stay in the service. Therefore, the leadership must make a concerted effort to work on these problems before more people start to leave at the completion of their current obligation.

Limitations

This study had several limitations that should be noted. The first few revolve around the procedures used to collect the data. The web-based questionnaire that was used had no formal distribution system and people were not required to complete the questionnaire. Therefore, the data collected may or may not be a representative sample of the various locations, ranks, and career fields. Many people believe that electronic surveys increase the efficiency, availability, and quality of the data; however, there are

some drawbacks to a questionnaire on the World Wide Web. Possible drawbacks to a questionnaire administered on the web include: only personnel with computers and internet access would be able to complete the questionnaire, problems may occur with the programming, and control of data may be difficult. In this study, we were unable to compare the participant's guard or reserve position with their civilian position due to some of these drawbacks. Human error is another possible limitation to this study. Human error could be a result of the quality of the instrument or participant recall. Some of the questions could have been clarified or removed to avoid any possible confusion. For instance, the "does not apply" option could have been removed from the Likert scale for the deployment questions. Some data were also categorized which could add error to the researcher's part. For example, when asked how many times members talked to their civilian jobs while deployed, options could have been given instead of having an open ended question that was eventually categorized. Additionally, not every question from Lee et al.'s original questionnaire was repeated in this questionnaire.

Future Research

With improvement and revisions to the adapted model, this model could have more explanatory power. More research is needed to determine if these are viable paths for reservists and guardsman, or if more items are needed to further develop these paths. Different categories of reservists could be studied separately. Comparing members who share a common occupation in the military job might reveal some relevant information. For example, a career field that tends to deploy frequently like the security forces may have a higher turnover rate than career fields that would most likely not deploy. Additionally, the Air Force could follow the results from other branches to determine if

items like the retention bonus helps in retaining members. Implications of other benefits that apply to active duty members could also be offered to Guard and Reserve members. This may include items such as full time medical coverage or having base privileges all the time. Another item that could be considered is setting reserve and guard units on an Air Expeditionary Force rotation cycle. A longitudinal study may provide insight by observing whether the members follow their script or if the additional measures influenced the retention. Moreover, the Unfolding Model and the adapted model could be applied to other groups (e.g., other Armed Services guard and reserve units, active duty members, and government employed civilians) to see if they follow the model.

Conclusion

The purpose of this study was to make strides in developing a model that could explain where members of the Air National Guard and Air Force Reserves are in the psychological process of voluntary turnover. With future research and an improved or expanded model, this model could explain more variance of voluntary turnover. With the information provided from this model and questionnaire, the Air Force can take specific measures to attempt to reduce voluntary turnover. Hopefully leaders will gain a better understanding about why members separate, and be able to make recommendations on what issues should be addressed. Many retention strategies have been developed and tested in the civilian world with much success. It is up to the manager to determine what will work best for the organization and the member. However, maybe the service needs to do more to train the leaders on the different retention techniques practiced in the civilian world.

Appendix A: Turnover Questionnaire

A Study of Voluntary Turnover

Purpose: Our team is investigating the voluntary turnover process. The goal of this questionnaire is to help the senior leaders fully understand your concerns regarding reserve/guard service so they can more effectively address them.

Anonymity: We would greatly appreciate your participation. Your input is important for us to completely understand your concerns and better serve you. **ALL ANSWERS ARE STRICTLY ANONYMOUS.** Thus, you should not include your name anywhere on this questionnaire.

Contact information: If you have any questions or comments about the survey contact Captain Jennifer Kulick at the number, fax, mailing address, or e-mail address provided below.

Captain Jennifer C. Kulick

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INSTRUCTIONS

- Base your answers on your own thoughts & experiences
- Please print your answers clearly when asked to write in a response or when providing comments
- Make dark marks when asked to use specific response options (feel free to use an ink pen)
- Avoid stray marks and if you make corrections erase marks completely or clearly indicate the errant response if you use an ink pen

MARKING EXAMPLES

Right



Wrong



A Study of Voluntary Turnover

<i>To what extent have any of the following been problems when serving on active duty:</i>	① Does Not Apply	① No Problem	② Slight Problem	③ Moderate Problem	④ Major Problem
1. Arranging for my military pay to be sent to a bank.	①	①	②	③	④
2. Receiving my military pay once on active duty.	①	①	②	③	④
3. Having less of an income.	①	①	②	③	④
4. Notifying my employer of my being mobilized and deployed.	①	①	②	③	④
5. Arranging for my employer to continue employment benefits, such as medical benefits for my family.	①	①	②	③	④
6. Having to leave school.	①	①	②	③	④
7. Arranging for child care for my children.	①	①	②	③	④

Please describe any other event(s) _____

8. When you joined the reserves/guard, which of the following were your reasons for joining? (Check all that apply)
- | | |
|--|-----------------------------------|
| Obtain educational benefits | Earn extra money |
| Receive bonus money | Earn retirement pay and benefits |
| Gain experiences that help my civilian job opportunities | Provide service to my country |
| Experience overseas training and travel opportunities | Experience military life |
| Be physically and mentally challenged | Develop discipline and confidence |
| Keep friendships in the military | Other _____ |
9. Right now, if you were to stay in the reserves/guard, which of the following would be your reasons for staying in the reserves/guard? (Check all that apply)
- | | |
|--|-----------------------------------|
| Obtain educational benefits | Earn extra money |
| Receive bonus money | Earn retirement pay and benefits |
| Gain experiences that help my civilian job opportunities | Provide service to my country |
| Experience overseas training and travel opportunities | Experience military life |
| Be physically and mentally challenged | Develop discipline and confidence |
| Keep friendships in the military | Other _____ |
10. How many times over the last year were you scheduled to work at your civilian job during all or part of a weekend drill or annual training period? _____
11. How far do you have to travel to reach your reserve/guard base? _____ miles

<i>To what extent have any of the following been problems in your reserve/guard unit:</i>	① Does Not Apply	② No Problem	③ Slight Problem	④ Moderate Problem	⑤ Major Problem
23. Officers who lack military skills.	①	②	③	④	⑤
24. Officers who don't look out for airman.	①	②	③	④	⑤
25. NCOs who lack military skills.	①	②	③	④	⑤
26. NCOs who don't look out for airman.	①	②	③	④	⑤
27. Lack of teamwork and cooperation among airman.	①	②	③	④	⑤
28. Airman who don't look out for each other.	①	②	③	④	⑤

29. What other, if any, type of problems do you experience in your civilian position? (e.g., lack of leadership, relations among co-workers, etc.) _____

<i>Indicate how satisfied you are with your reserve job and your civilian job for the following items:</i>	① Does Not Apply	② Not Satisfied	③ Slightly Satisfied	④ Moderately Satisfied	⑤ Very Satisfied					
	Reserve/Guard Job				Civilian Job					
30. The supervision you receive.	①	②	③	④	⑤	①	②	③	④	⑤
31. As an employer.	①	②	③	④	⑤	①	②	③	④	⑤
32. Career opportunities.	①	②	③	④	⑤	①	②	③	④	⑤
33. Financial rewards.	①	②	③	④	⑤	①	②	③	④	⑤
34. Your coworkers.	①	②	③	④	⑤	①	②	③	④	⑤
35. Nature of the work.	①	②	③	④	⑤	①	②	③	④	⑤
36. Fringe benefits (i.e., vacation, holiday time, insurance coverage, retirement plans, sick leave, family leave).	①	②	③	④	⑤	①	②	③	④	⑤
37. Recreational activities.	①	②	③	④	⑤	①	②	③	④	⑤
38. Autonomy of work.	①	②	③	④	⑤	①	②	③	④	⑤
39. Pressures at work.	①	②	③	④	⑤	①	②	③	④	⑤
40. Time flexibility.	①	②	③	④	⑤	①	②	③	④	⑤
41. Quality and amount of training.	①	②	③	④	⑤	①	②	③	④	⑤
42. Duties you perform.	①	②	③	④	⑤	①	②	③	④	⑤
43. Mechanical condition of equipment.	①	②	③	④	⑤	①	②	③	④	⑤
44. Availability of modern equipment.	①	②	③	④	⑤	①	②	③	④	⑤
45. Training to prepare for mobilization and deployment.	①	②	③	④	⑤	①	②	③	④	⑤
46. The level of training.	①	②	③	④	⑤	①	②	③	④	⑤

<i>Indicate the extent to which you agree with each of the following:</i>	① Does Not Apply	② Strongly Disagree	③ Disagree	④ Agree	⑤ Strongly Agree
47. The officers in this unit really do their job well.	①	②	③	④	⑤
48. The NCOs in this unit really do their job well.	①	②	③	④	⑤
49. Officers most always get willing and whole-hearted cooperation from airman in this unit.	①	②	③	④	⑤
50. NCOs most always get willing and whole-hearted cooperation from airman in this unit.	①	②	③	④	⑤
51. Officers in my unit would lead well in combat.	①	②	③	④	⑤
52. NCOs in my unit would lead well in combat.	①	②	③	④	⑤

<i>Indicate the extent to which you agree with each of the following:</i>	① Does Not Apply	② Strongly Disagree	③ Disagree	④ Agree	⑤ Strongly Agree
53. I would go for help with a personal problem to my unit NCOs.	①	②	③	④	⑤
54. I would go for help with a personal problem to my unit officers.	①	②	③	④	⑤
55. My officers are interested in my personal welfare.	①	②	③	④	⑤
56. My NCOs are interested in my personal welfare.	①	②	③	④	⑤

<i>Have you searched for another position in the reserves/guard because:</i>	① No	② Yes
57. You were not satisfied with your job.	①	②
58. You were not satisfied with the leadership in your unit.	①	②
59. For other reasons (i.e. lack of promotion, location).	①	②

If yes, why? _____

60. If you chose to leave the reserves/guard, would you look for another part-time job?
 Yes No

61. When was the last time you were deployed or activated (times other than drill periods, annual training, and professional military education schools)?
 _____ (Month/Year)
 I have never been deployed or activated (please skip to question 80).

For those who have been deployed or activated, please answer the following questions regarding your most recent activation and/or deployment. If you have never been deployed or activated please skip to question 80).

62. How long were you deployed or activated for (months)? _____

63. How much advance notice was given regarding your activation or deployment? _____

64. Where were you deployed or activated to? _____

65. Were you married at the time of your recent mobilization and deployment?
 Yes No

<i>Due to the mobilization, to what extent did you experience problems with the following:</i>	① Does Not Apply	② No Problem	③ Slight Problem	④ Moderate Problem	⑤ Major Problem
66. If you were enrolled as a student at the time of your mobilization, to what extent did this cause problems for you?	①	②	③	④	⑤
67. To what extent did your recent mobilization cause problems in your family?	①	②	③	④	⑤
68. If you were employed at the time of your recent mobilization, to what extent did your recent mobilization cause problems for you?	①	②	③	④	⑤

<i>During your recent mobilization, consider all components in combination (physical conditions, the break from routine, companions, and so on):</i>	① Indifferent	② Not Very Good	③ Average	④ Good	⑤ Very Good
69. What is your overall rating of the deployment or activation?	①	②	③	④	⑤
<i>While deployed or activated:</i>	① Not at all	② A Little	③	④ A Lot	
70. To what extent was your reserve service a change and a break from your daily routine?	①	②	③	④	
71. Did the anticipated workload after coming back bother you while you were on active duty status?	①	②	③	④	

72. On average, how often did you have contact with your colleagues from work concerning job-related matters during the mobilization? _____

73. When you returned to civilian life, did you return to the civilian job you had before your recent mobilization and deployment? CHECK ONE ANSWER.

Does not apply; I was not working before I was mobilized and deployed.

Yes, I took the same job.

Yes, but I took a better job at the same company.

Yes, but I took a lesser job at the same company.

No, I was not offered my job back.

No, the company where I worked is no longer in business.

No, I decided not to return to the same job.

<i>In general how supportive were the following when you returned from your recent mobilization:</i>	① Does Not Apply	② Very Unsupportive	③ Unsupportive	④ Supportive	⑤ Very Supportive
74. Your community.	①	②	③	④	⑤
75. Your family.	①	②	③	④	⑤
76. Your current employer.	①	②	③	④	⑤

<i>During your recent mobilization and deployment, how helpful to your spouse or to your family members were the following:</i>	① Does Not Apply	② Not Helpful	③ Slightly Helpful	④ Somewhat Helpful	⑤ Very Helpful
77. Unit/Base Family Support Center.	①	②	③	④	⑤
78. Employer Support to Guard/Reserve.	①	②	③	④	⑤
79. Unit "chain-of-command".	①	②	③	④	⑤

Section V

This final section contains items regarding your personal characteristics. These items are very important for statistical purposes. Respond to each by FILLING IN THE BLANK or CHECKING THE BOX that best describes you.

80. Are you a member of the... Air National Guard Air Force Reserves
81. What is your current pay grade? _____ Indicate as E1, E2, E3...or O1, O2, O3, etc.
82. How long have you been in your current pay grade? _____ Years _____ Months
83. Did you previously serve on active duty (besides initial training)? Yes No
If yes, for how long? _____ Years _____ Months
Why did you separate? _____
84. Are you... Male Female
85. What is your current age? _____ Years
86. What is the highest level of education you have obtained?
Some high school College graduate
High school diploma Graduate degree
Some college or technical training
87. What is your current profession? _____
88. What is your current Air Force Specialty Code (AFSC)/Military Occupational Specialty(MOS)? _____
89. How similar is your civilian job to your Reserve duty?
Very similar Not similar at all
Similar Does not apply, I don't have a civilian job
Somewhat similar Does not apply, I am a Guard/Reserve Technician
90. What is your current marital status:
Not married Married to an active duty member
Married to a civilian Married to a reservist/guard member
Other _____

MAKE ANY ADDITIONAL COMMENTS ON THE BACK OF THESE PAGES

Thank you for your participation!

Appendix B: Human Subject Research Review Forms

10 Jun 03

MEMORANDUM FOR AFIT/ENV
AFIT/ENR
AFRL/HEH
IN TURN

FROM: AFIT/ENV/GEM

SUBJECT: Request for Exemption from Human Experimentation Requirements (AFI 40-402): Thesis Research, AFIT/ENV/GEM, A Study of Voluntary Turnover or Air Force Reservists.

1. Request exemption from Human Experimentation Requirements of AFI 40-402 for the proposed study of voluntary turnover of Air Force Reservists to be conducted in conjunction with thesis research at the Air Force Institute of Technology. This study is designed to test a model that outlines the psychological process individuals go through to make the decision to leave the service. By testing this model, leaders will better understand where in the turnover process members are and what might influence their decision to leave. The results of this study are to help the leaders understand the process individuals go through when evaluating their decision to voluntarily leave the reserves. With this information, the leaders will be able to make changes to the environment in order to retain those knowledgeable and mission critical members.

2. This request is based on the Code of Federal Regulations, title 32, part 219, section 101, paragraph (b) (2); Research activities that involve human subjects will be exempt when the research involves the use of survey procedures provided (i) information obtained cannot be directly or through identifiers linked to the subjects, and (ii) disclosure of subjects' responses does not place the subjects at risk of criminal or civil liability, financial strain, employability or reputation ruin. Methodology used to collect information for voluntary turnover research is based on questionnaire procedures. The following information is provided to show cause for such an exemption:

2.1. Equipment and facilities. No special equipment or facilities will be used.

2.2. Subjects. Subjects will be officer and enlisted members attached to various Air Force Reserve units. A cross section of specialty codes will be surveyed.

2.3. Timeframe. Data will be collected in between June 2003 and March 2004.

2.4. Description of the survey. The survey will be administered in a web-based and paper format, depending on the participating units capabilities (see Attachment 2 for the paper version). The content on both formats is identical and includes open-ended and closed-ended items. The questionnaire will measure

personal experiences such as positive or negative jarring events, engaging in a preexisting plan of action, determining if the personal goals and values match those of the organization, and if the individual is experiencing job satisfaction or professional/personal fulfillment.

2.5. Data collected. No identifying information is obtained through the survey.

2.6. Informed consent: All subjects are self-selected to volunteer to participate in the survey. No adverse action is taken against those who choose not to participate. Subjects are made aware of the nature and purpose of the research, sponsors of the research, and disposition of the survey results. A copy of the Privacy Act Statement of 1974 is presented for their review.

2.7. Risks to Subjects: Individual responses of the subjects will not be disclosed. This eliminates any risks to the subjects as noted in paragraph 2. There are no anticipated medical risks associated with this study.

3. If you have any questions about this request, please contact Captain Jennifer Kulick - Phone 255-3636, ext. 6191; E-mail – Jennifer.Kulick@afit.edu or Major Daniel T. Holt who will serve as the Faculty Advisor (primary investigator) – Phone 255-3636, ext. 4574; E-mail – daniel.holt@afit.edu.

//SIGNED//

JENNIFER C. KULICK, Captain, USAF
Graduate Student, AFIT/ENV/GEM

//SIGNED//

DANIEL T. HOLT, Major, USAF
Assistant Professor of Management
Faculty Advisor, AFIT/ENV/GEM

Attachment:
A Study of Voluntary Turnover of Air Force Reservists

**Protocol Outline
For
Voluntary Turnover of Air Force Reservists**

- 1. Title:** A Study of Voluntary Turnover of Air Force Reservists.
- 2. Principal Investigator:** Major Daniel T. Holt; AFIT/ENV; 255-3636, ext. 4574; daniel.holt@afit.edu.
- 3. Associate Investigator(s):** 1st Lt Jennifer C. Kulick, AFIT/ENV/GEM, 255-3636, ext. 6191; jennifer.kulick@afit.edu.
- 4. Medical Monitor:** Not applicable.
- 5. Contractor and/or Facility:** Not applicable.
- 6. Objective:** The primary objective of this study is to adapt the Turnover Model developed by Lee et al. (1999) to the unique circumstances associated with reserve service. The adapted model will then be applied to a sample of reserve members to determine where in the turnover decision-making process reserve members may be.

7. Background:

Air Force Reserve members make up approximately 13.4 percent of the total force. The roles these reserve members play in operations have increased dramatically in the last few years. Undoubtedly, these activations have stressed and influenced these reserve service members, their families, and their places of employment. While certain problems that the members and their employers confront have been addressed through research (i.e., differences in pay between reserve and civilian positions; the influence lengthy activations have on members and employers), the extent to which these service members have reevaluated their decisions to remain in the reserves deserves further investigation.

Therefore, the purpose of this project is to develop an improved turnover model that is applicable to military members. The turnover model created by Lee et al. will be adapted to monitor the decision-making process that unfolds as organizational members voluntarily leave the military. This information will provide the leadership some information to attempt to tailor retention efforts. If this model is adaptable to the military, we will have a better understanding of other important variables in the turnover process. Traditional models tend to focus solely on job satisfaction, the Lee et al. model takes more of an in depth look on the psychological and behavioral decision making process.

- 8. Impact:** There are no immediate benefits to the participants. However, this project should give leadership a better understanding how the recent operations tempo has influenced reserve members' decisions to continue their service. Thus, the data should have a very high payoff for organizational leaders by giving them a more clear understanding of strategies that can be used to retain the knowledgeable and mission

critical members. Personnel assessments will help define the decisions members make when they are considering voluntarily leaving the service.

9. Experimental Plan:

Members of reserve organizations will be questioned at one point in time. The questionnaire used takes approximately 30-35 minutes. It measures personal experiences such as positive or negative jarring events, engaging in a preexisting plan of action, determining if the personal goals and values match those of the organization, and if the individual is experiencing job satisfaction or professional/personal fulfillment.

Data are collected in two formats depending on the participating organizations capabilities. For those units with limited computing capabilities, traditional paper-and-pencil questionnaires will be distributed to organizational members and these will be returned directly to the researchers. Those organizations with significant computing capabilities will be asked to complete a web-based version of the questionnaire. Organizational members will be given advance notice of the questionnaire and data collection from their commanding officer.

To ensure the anonymity of the participants, certain precautions are built into the database used to collect the data with the web-based questionnaire. First, the questionnaire and database are not stored on any of the participating organizations' servers; instead, the questionnaire and database are stored on the Air Force Institute of Technology's secure server. This makes it impossible for leaders from participating organizations to circumvent the researcher and try to access any identifiable data without the researchers knowledge. Second, participants' access to the questionnaire is limited to only their responses. Finally, the database is protected by a password that is known only by the researcher making it impossible to access data. Still, organizational members that do not feel comfortable completing an on-line version of the questionnaire will offered the option to print a traditional paper version of the questionnaire so that they can complete it and return it directly to the researcher by mail.

Because the message inviting participation comes from the member's commanding officer, there may be some risk of coercion. However, the letter inviting participation stresses the decision to participate is voluntary. In addition, the questionnaire's instruction states, "Your participation is COMPLETELY VOLUNTARY. However, your input is important for us to understand the pattern of voluntary turnover. You may withdraw from this study at any time. Your decision to participate or withdraw will not jeopardize your relationship with your organization, the Air Force Institute of Technology, the Air Force, or the Department of Defense."

In addition, all participants will be thoroughly briefed on the project's objective and their role prior to any participation. In addition, there is no deception involved in this study. Participants are told that the researcher is interested in exactly what is being asked and only that. Thus, the researcher does not try to "read between the lines" of any information provided by participants.

10. Medical Risk Analysis: Not applicable.

11. References:

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Vita

Captain Jennifer C. Kulick graduated from Centreville High School in Centreville, Virginia in June 1994. She entered the University of Mississippi in Oxford, Mississippi in August 1994 and graduated in May 1999. She graduated with a Bachelor of Science degree in Civil Engineering and was commissioned.

Her first assignment was at Travis AFB, California in the 60th Civil Engineering Squadron as a Housing/Medical Programmer and Chief of Simplified Acquisition Base Engineer Requirements. She also served as the 60th Support Group Executive Officer while at Travis. While stationed at Travis, she had the opportunity to deploy for 90 days to Eskan Village, Saudi Arabia in support of Operation Southern Watch. While with the 320th Air Expeditionary Group, she served as the Chief of Maintenance Engineering. In August 2002, she entered the Graduate School of Engineering and Management, Air Force Institute of Technology. Upon graduation, she will be assigned to the 612th Civil Engineering Squadron at Soto Cano Air Base, Honduras.

REPORT DOCUMENTATION PAGE			<i>Form Approved</i> <i>OMB No. 074-0188</i>		
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13. SUPPLEMENTARY NOTES					
14. ABSTRACT Retention is an important issue for every organization due to the high costs of replacing members. This issue is becoming increasingly important as the role of guard and reserves has continually increased over the past several years, and so research needs to be conducted on the retention of these groups. Therefore, a web-based questionnaire was administered to Air National Guard and Air Force Reservists from various units and locations. The data from 581 participants was applied to an adapted version of an unfolding model of voluntary turnover originally developed by Lee, Mitchell, Holtom, McDaniel, and Hill in 1999. Data collected indicated that very few people actually have a script to leave the service at the completion of their present obligation. Therefore, many people can still be influenced to remain in the service and so the leaders need to understand what will retain these members and what will cause them to leave. Hopefully leaders will gain a better understanding about the psychological process members go through when deciding to separate, and be able to make recommendations on what issues should be addressed. Recommendations on retention issues and future research are discussed.					
15. SUBJECT TERMS Voluntary turnover, retention, Air National Guard, Air Force Reserves, unfolding model					
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U	U	U	UU	85	Daniel T. Holt, Major, USAF (937) 255-6565, ext 4800 (Daniel.holt@afit.edu)

