



**U.S. Army Research Institute  
for the Behavioral and Social Sciences**

**Research Report 1845**

**Deployment Consequences: A Review of the  
Literature and Integration of Findings into a Model of  
Retention**

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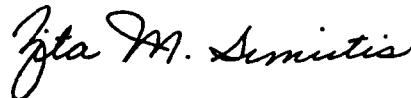
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# DEPLOYMENT CONSEQUENCES: A REVIEW OF THE LITERATURE AND INTEGRATION OF FINDINGS INTO A MODEL OF RETENTION

## EXECUTIVE SUMMARY

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### Research Requirement:

Deployment activity for all of the armed services increased during the 1990s, and with the onset of the Global War on Terrorism (GWOT), the deployment tempo continues to be high, particularly deployments to hostile locations. This makes understanding the consequences of these deployments for manpower and personnel areas such as readiness, retention, and performance particularly important.

The link between deployments and Soldier retention is of particular interest to current manpower planners. There is concern that the high rate of deployments and long length of deployments could weigh heavily on a Soldier's decision to reenlist. If deployments lead to lower reenlistments, this would create a decrease in personnel at a time when the demand for Soldiers is increasing. A literature review was required to identify and summarize the knowledge that exists regarding the consequences of deployments.

### Procedure:

Sticha, Sadaaca, DiFazio, et. al. produced an initial review of the literature on deployment consequences in 1999. We used this as a foundation for our review and searched for subsequent research that provided information regarding the relationship between deployments and a variety of personnel areas, focusing primarily on reenlistment. In the first section of this report, we summarize research we found regarding the effects of deployments. We then propose a framework for understanding the effects of deployments on reenlistment, using an existing model of organizational turnover and emphasizing the role of organizational commitment.

### Findings:

Research identified in the literature review has reported both positive and negative effects of deployments on reenlistment. Quantitative analysis of Soldier retention between fiscal years (FY) 1996 and 1999 found Soldiers with one or two deployments actually had higher rates of reenlistment, although this trend leveled off or reversed with three or more deployments (Hosek & Totten, 2002). Sticha et al. (1999) suggest a moderate level of deployments is beneficial for retention, although too many could have a negative effect. Importantly, with the current involvement in Afghanistan and Iraq, and the pervasiveness of the GWOT, a higher level of deployments could be expected. Some data collected since 9/11 suggests that deployments longer than 3 or 4 months to hostile locations are having a negative impact on first term attrition (Wardynski, 2003).

Survey data has consistently indicated that the amount of time Soldiers are separated from their families is one of the top reasons that Soldiers consider leaving the Army (Sample Survey of Military Personnel, 2005b). While research suggests that deployments do have a negative impact on the spouse and family, most spouses reported being able to cope with the absence for at least up to 6 months (Survey of Army Families IV, 2001). While it is clear that the family impacts



retention, this is due not only to deployments but a number of aspects of a military career such as frequent moves and separations caused by factors other than deployments.

Research suggests that deployments also affect Soldier health, although the subsequent effect of this on reenlistment is not clear. The effect of deployments on other personnel areas such as morale, finances, and readiness, has been inconclusive. While number and length of deployments are important, research indicates that other characteristics of a deployment such as the perceived fairness of decisions, conditions during the deployment, and supervisor support may play a more important role in Soldier and family reactions to deployments. This suggests that while the number and length of deployments are important factors to consider when making decisions about deployments, they are not the only factors to consider.

In order to understand how deployments and other factors affect reenlistment decisions, we argue that it is imperative to develop a model of retention that demonstrates the role of deployments in the decision to reenlist. We suggest a retention model and predictors of retention from the broader literature on organizational turnover to use as a foundation. This literature indicates that a variety of factors impact retention, including experiences on the job, commitment to the organization, commitments to family or hobbies, ties to the surrounding community, and unanticipated events, such as an unsolicited job offer.

While many of these factors are largely outside the control of the Army, the Army's actions can have a significant impact on two of these elements: an individual's job experiences and their commitment to the Army as an organization. The remainder of the report emphasizes the importance of organizational commitment to retention, and suggests that deployments are a contextual factor that impact organizational commitment and subsequent retention through variables such as the perceived fairness of Army policies, job conditions, supervisor support, and work-family conflicts.

Three different types of organizational commitment are identified as relevant. First, the Soldiers' sense that they *want* to remain in the organization, called *Affective Commitment*. Second, the Soldiers' sense that they *need* to stay in the organization, either due to lack of other alternatives, or to a significant investment in the organization, such as time earned in the retirement plan. This is called *Continuance Commitment*. Finally, the Soldiers' sense of obligation to the organization, the organization's mission, and/or to their work unit, called *Normative Commitment*.

Understanding what influences each of these three types of commitment provides leaders with insight that can be used to inform decisions, develop policies, and shape leader actions. Army leaders who are interested in mitigating the effects of deployments on retention can consider the extent to which current deployments are having an impact on each type of commitment and work to reduce and minimize the impact. Suggestions for how to do this in each area of commitment are discussed.

#### Utilization and Dissemination of Findings:

This report provides researchers with a description of the state of the literature on deployments that can be used to inform and direct future research efforts. The report also provides a framework within which to understand the impacts of deployments on retention decisions. Having this type of framework can clarify equivocal results from the literature and can help leaders identify ways to minimize the negative effects of deployments. Finally, suggestions made

in the report can provide policy makers and leaders with a reference tool to inform future policies and decisions.

Importantly, ongoing research at the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) and other organizations may provide information that changes in minor or major ways the tenets of the models presented. This is a desirable and useful aspect of developing a more lucid understanding of complex psychological relationships.

This report represents the first widespread dissemination of these findings.



# DEPLOYMENT CONSEQUENCES: A REVIEW OF THE LITERATURE AND INTEGRATION OF FINDINGS INTO A MODEL OF RETENTION

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# **DEPLOYMENT CONSEQUENCES: A REVIEW OF THE LITERATURE AND INTEGRATION OF FINDINGS INTO A MODEL OF RETENTION**

## **Introduction**

Deployment activity for all of the armed services increased during the 1990s (Sticha, Sadacca, DiFazio et al., 1999), and with the onset of the Global War on Terrorism (GWOT), the deployment tempo continues to be high, particularly deployments to hostile locations. This makes understanding the consequences of these deployments for manpower and personnel areas such as readiness, retention, and performance particularly important.

The link between deployments and Soldier retention is of particular interest to current manpower planners. There is concern that the increasing number of deployments and increasing length of deployments could be a significant factor in a Soldier's decision to reenlist. If deployments lead to lower reenlistments, this would create a decrease in personnel at a time when the demand for Soldiers is increasing.

This report will review historical research that describes the relationship between deployments and a variety of personnel areas, focusing primarily on reenlistment. We will then provide a framework for understanding the effects of deployments on reenlistment, using an existing model of organizational commitment and turnover.

## **Background**

Understanding the effects of deployments on personnel issues is complicated by the fact that research in this area has differed in how "deployment" is defined and measured. Some of the research focused on one deployment for a specific unit, examining Soldier opinions across a variety of issues before, during and/or after the deployment. In other situations, researchers measured deployments at an individual level, using a measure such as personnel tempo (PERSTEMPO), defined as the number of days away from home station for any reason (Sticha et al., 1999).<sup>1</sup> This latter method allows examination of correlations between the number of days deployed or type of deployments and Soldiers' attitudes or actions. Because different approaches provide different types of information, results cannot be combined across the studies. This review will provide an inclusive summary, describing differences in approach as well as differences in results.

Overall, research on the effects of deployments on personnel factors has been sparse. The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) conducted a thorough review of the literature in 1999 to provide a summary of the findings to date as well as conduct additional analyses using existing data (see Sticha et al., 1999). Researchers searched for articles that explored the relationship between PERSTEMPO and retention, readiness, and/or quality of life for any of the services. They found eight studies that examined the relationship between PERSTEMPO and retention, six for readiness, and five for quality of life. Although these studies provided tentative conclusions about the effects of PERSTEMPO in these areas, they emphasized that the research generally demonstrated inconsistent results. Sticha et al. suggested that a level of complexity existed in the relationships that was not yet clearly understood.

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<sup>1</sup> Additional information about the definition and measurement of PERSTEMPO can be found in Sticha et al. (1999).

Since the 1999 review by Sticha et al., a number of organizations, including RAND, the Walter Reed Army Institute of Research (WRAIR), the U.S. Government Accountability Office (GAO), the Center for Naval Analyses, and ARI have reported results related to this topic. The samples and nature of the analyses differ among the projects, and the results continue to be equivocal. Nevertheless, none of the reports provides evidence that substantially contradicts the 1999 review. Of the research located since the review that included information about deployments and retention, many reflect data from before the events of 9/11, and a number of them focused on attitudes of Soldiers in units deployed to the Balkans. Most recently, an initial report by the Office of Economic and Manpower Analysis (OEMA) at the U.S. Military Academy described the implications of deployments for retention under the current GWOT (Wardynski, 2003). It suggests the deployments to Iraq and Afghanistan are related to higher first-term attrition.

We will focus first on research that has specifically examined the relationship between deployments and Soldiers' intentions for reenlistment or actual reenlistment. Then we will review the relationship between deployments and other personnel issues including family, finances, personal health, morale, and readiness. While the effects of deployments on these secondary factors are important because they influence the Soldiers' general quality of life, they are also important because, as our model will illustrate, all of these factors combine to affect reenlistment. In order to be maximally inclusive, all research using the term "deployments" will be included and descriptions will be provided regarding how the authors defined deployments.

### **Deployment Effects on Reenlistment**

After reviewing the existing eight studies that linked deployments to retention, Sticha et al. (1999) concluded that there was no evidence that PERSTEMPO levels were having large adverse effects on the majority of Soldiers. They reported that PERSTEMPO was related to both increases and decreases in retention. The type of effect depended on the number of deployments as well as other characteristics of the deployments. We will review research related to these factors, then review research that has been conducted specifically regarding deployments for the GWOT.<sup>2</sup>

#### ***Number and Length of Deployments***

While some research did not find a relationship between number of deployments and reenlistment (e.g. Alderks, 1998), Sticha et al. indicated that the most convincing research concluded that at low levels of deployment, increasing time away from home station was associated with higher retention and greater Army career intentions. At higher levels of deployment, however, the positive effect was reduced and then became negative (Cooke et al., 1992; Hosek & Totten, 1998). Specifically, Hosek and Totten (1998) found that having at least one deployment over a 24-month period prior to their reenlistment had a positive effect on reenlistment, but higher rates of deployments, particularly deployments to hostile locations, had a negative effect on reenlistment. Sticha et al. (1999) provided similar conclusions based on an analysis of Soldiers with expiration of their first or second term of service between FY96 and FY98, and Fricker (2002) provided similar conclusions for the effects of PERSTEMPO on officer retention.

In follow up research in 2002, Hosek and Totten used personnel data from active duty records to examine a model of reenlistment utility. The analyses included service members who were facing

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<sup>2</sup> To prevent redundancy, the research reviewed by Sticha et al. (1999) is not described in detail in this review; factors highlighted as critical by Sticha et al. are included in the appropriate section.

a reenlistment decision during FY1996-1999, and they counted deployments for 3 years prior to their reenlistment decision. Their conclusions were similar to those from their earlier research: that reenlistment was either higher among members who deployed than those who did not or remained constant. Again, however, reenlistment rates began to show either a leveling or a decline for service members with the most deployments. Specifically, for first-term Soldiers, reenlistments increased with the number of non-hostile deployments and showed no change with increasing hostile deployments. For second-term members, reenlistment increased with non-hostile deployments and with the first and second hostile deployments, with a decline in reenlistments for members with three or more hostile deployments. Importantly, the researchers noted that the reenlistment rate for Soldiers with three or more hostile deployments was still higher than for those Soldiers with no hostile deployments. Results varied slightly for the different services.

The Hosek and Totten, Sticha et al., and Fricker (2002) analyses examined the relationship between deployments and retention using data from personnel files, capturing actual reenlistment choices. Hosek and Totten (2002) emphasize that their results are dependent upon the types of deployments and deployment pays that occurred between FY93-99. Their research is unique in using objective data to reflect deployments and reenlistment; other research has examined self-reported measures of deployments and reenlistment intentions, rather than actual reenlistment. One weakness of using file data is that Soldier's deployments are only captured if they fit the pre-established criteria. Badger (2004) provides an example of this weakness, indicating that Fricker (2002) used imminent danger pay (IDP) and family separation allowance (FSA) to determine number of deployments, and therefore did not capture, for example, deployments of single officers to nonhostile areas.

On the other hand, a weakness of the self-report method is that Soldiers could misremember or not perceive a relationship. For example, Ramsberger and Wetzel (1998) indicated that the service members in their special operations sample did not perceive that PERSTEMPO had an impact on retention; however, the data revealed that service members with higher rates of deployment actually indicated lower intentions to stay in the service. Despite inherent weaknesses, both methods can provide valuable information.

Measuring Soldier perceptions, Adler and Golembe (1998) surveyed more than 2,000 Soldiers and measured the total number of deployments in which each Soldier had participated throughout his or her career as well as the average number of deployments over their number of years of service. They labeled this second value the "deployment load." Results indicated that Soldiers with fewer years of service had fewer deployments, but had higher deployment loads. Of those Soldiers in the sample who were planning to get out, 33% reported that having too many deployments was the reason.

Research by the GAO also found frequent deployments cited as a reason to leave the military. They investigated retention across the services specifically in "retention critical specialties," such as intelligence analysts, military police, computer programmers and operators, electronics technicians, and pilots (GAO, August 1999). "Frequency of deployments" was listed as one of the top 10 things with which service members in these areas were dissatisfied. Out of 44 items from which they could select, "Frequency of deployments" was one of the most commonly selected reasons to leave the military for both enlisted service members and officers.

Castro, Bienvenu, Huffman, and Adler (2001) surveyed 1,718 troops both prior to a 6-month deployment to Kosovo and during mid-deployment. They found that, while only 14% of the Soldiers in the pre-deployment survey planned to leave the military due to too many



deployments, 32% planned to leave due to too many deployments when surveyed at mid-deployment. Based on the data they collected, they concluded that Soldiers prefer an average of 1-2 deployments of about 5 months over a 3-year period.<sup>3</sup> Results did not specifically indicate, however, how this deployment preference was linked to their intentions to stay or leave.

While Castro et al. (2001) suggested 5-month deployments are optimal, little empirical data is available regarding the relationship between length of deployments and retention. Analyzing data from Soldiers at their first and second expiration of term of service between FY96 and FY98, Sticha et al. (1999) found that average length of deployment was negatively related to retention. This suggests that Soldiers with longer deployments generally had lower retention.

Based on DoD survey data, the GAO found that personnel away from home for more than 5 months during the previous 12 months were more likely to report being dissatisfied in general than those away for 1 month or less (GAO, 2000, as cited in GAO June 2001). Phelps and Farr (1996) found a decline in reserve Soldiers' willingness to stay in the Army during a 6-month peacekeeping mission on the Sinai Peninsula. The 5-6 month mark was also highlighted in a survey of Army Special Forces (SF) Soldiers in the Spring of 2000. Results indicated that, while most SF soldiers were "willing" or "very willing" to deploy up to 5 months over a 12-month period, 75% were reluctant or very reluctant to deploy for 8 months or more. This was true even though SF Soldiers list "Being involved in 'real world' missions" as one of their top three reasons to stay in SF (Zazanis, Sanders, & Carpenter, 2001). While each of these studies provide some insight into attitudes of Soldiers with respect to deployment length, only the Sticha et al. (1999) analyses statistically linked the number of months deployed with Soldier retention.

Finally, another GAO investigation reviewed the effects of military operations other than war (MOOTW) on the services (GAO, 1999). Based on information collected from service members deploying to Bosnia, they indicated that two significant negative aspects of the deployments were the length of the deployments and the uncertainty about when they would return home. Given their findings, however, GAO concluded that while MOOTW might contribute to retention problems, for the most part, the services were meeting their retention goals. The Army, specifically, was meeting its retention goals, and, in fact, U.S. Army Europe's (USAREUR's) retention rates for initial and mid-term enlisted Soldiers for the most part had met or exceeded the rate of the overall Army since 1994. Ultimately, given the equivocal findings, no conclusions can be reached regarding the relationship between length of deployments and reenlistment based on existing research.

### ***Other Important Factors***

Some research has suggested that there are deployment factors other than length and number of deployments that are related to intentions to reenlist. Data from special operations personnel indicated a number of deployment factors that appeared to be more important: whether they had appropriate training and adequate time between deployments, whether their unit provided support when their job demands conflicted with personal responsibilities, the adequacy of family support activities, and perceived support from their chain of command (Sticha et al., 1999).

Research on two Patriot missile battalions suggested the importance of Soldier expectations and perceptions of leader and organizational support (Segal, Rohall, Jones & Manos, 1999). In this research, 50% of married soldiers in a Patriot missile battalion deployed to Korea reported they

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<sup>3</sup> Note that the fact that these values are averages indicates that some Soldiers actually preferred more deployments and some preferred fewer.

would leave if future assignments required long family separations (Segal et al., 1999). This particular battalion was deployed to South Korea and had been promised a two-year tour at Fort Bliss following their tour in Korea. They were then told they had to stay unaccompanied in Korea for an additional six months.<sup>4</sup> Not surprisingly, this created a negative reaction. When the replacement unit was surveyed six months later, attitudes toward family separations were not as negative: only 25% of the married members said they would leave if long family separations were required. Segal et al. concluded that the high propensity to leave in the first unit was due primarily to a sense of betrayal by senior Army leadership for the sudden change of unit assignment as well as perceived problems with battalion leadership and a sense of inadequate family support.

The data from Segal et al. (1999) suggest that expectations and perceptions of fairness can play an important role in Soldiers' reactions to deployments. Expectations also appeared to affect Navy sailor reactions to deployment. Cooke, Marcus, and Ouester (1992) found that sailors were more likely to reenlist when their deployment was a typical length (106-205 days) as opposed to being particularly long (244-350 days). Ambiguity regarding the redeployment date is also viewed as highly negative (Castro et al., 2001).

Finally, in 1998 Foley and Steinberg conducted interviews and surveys of Soldiers deployed to Bosnia for Operation Just Endeavor (OJE). They reported that about one quarter of the Soldiers said they would leave the Army sooner than planned as a result of their OJE deployment, although this differed somewhat for officers and enlisted and for active duty versus reserve component Soldiers. Somewhat fewer reserve Soldiers indicated they would leave earlier due to the OJE deployment (18%). Areas in which Soldiers tended to report negative effects of the deployment included their marriage or other significant relationship, their children, and the likelihood they would volunteer for a similar operation. Some viewed the deployment as having negative effects on their Army career and level of commitment to the Army, but others viewed these as positives. A number of these topics will be discussed further in later sections of this report.

### ***Global War on Terror (GWOT)***

A recent report from the Office of Economic Manpower Analysis (OEMA) at the U.S. Military Academy examines reenlistment data from an individual perspective following the initiation of the GWOT. They found that reenlistment probabilities for first term personnel rose by about 7 to 8% after 9/11 when examining first-term reenlistments between FY1996 and FY2003 (Wardynski, 2003). The author suggests that this increase may be due to an increase in patriotism. Deployments to hostile locations such as Iraq and Afghanistan, however, were associated with lower reenlistment likelihood. In particular, deployments over 3 to 4 months in length resulted in a decline in reenlistment rates. As an example, a 12-month deployment to Iraq or Afghanistan was associated with a 13 percentage-point drop in Soldier reenlistment, as compared with non-deploying Soldiers. These findings suggest a somewhat greater impact on first term reenlistments than the impact on overall reenlistment reported by Sticha et al. (1999).

Golding and Griffis (2003) examined Navy attrition data from Desert Shield/Desert Storm (DS/DS) to provide an estimate of the retention implications of the GWOT. Data from DS/DS indicated that attrition dropped during the conflict, particularly for ships deployed to the region,

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<sup>4</sup> The term "unaccompanied" indicates that their spouse and children are not authorized to live at that location with the military member.

then spiked following the end of the conflict. The extent to which it is logical to apply the DS/DS pattern of attrition to the current situation is not clear, however.

A number of other reports have been published since the start of the GWOT that discuss retention issues and the potential impact of deployments on retention, but they do not provide empirical evidence to describe a relationship between deployments and retention (e.g., Devlin, 2003; Fetter, 2004; Hansen, MacLeod, & Gregory, 2004; Proctor, 2004; Sthultz, 2004). While the information in these reports is thought-provoking, it is limited in providing insight to determine the relationship between deployments and retention.

Results from a *Stars and Stripes* survey are of some interest, although it should be noted that they did not use a scientific sampling method to obtain their respondents. In August 2003, reporters from *Stars and Stripes* interviewed and obtained questionnaire responses from nearly 2,000 service members across Iraq about a variety of topics, including retention (Josar, 2003). They reported that some brigades had no trouble meeting their reenlistment goals, citing the 101<sup>st</sup> Airborne Division's 3<sup>rd</sup> Brigade as an example. This Brigade was meeting its reenlistment goals for careerists (over 10 years), and exceeding its goals for "first-termers" and mid-careerists (less than 10 years). Anecdotally, however, one article indicated that some service members (not necessarily in the 3<sup>rd</sup> Brigade or 101<sup>st</sup> Airborne Division) were using reenlistment as a way to get reassigned to another location (Boyd, 2003). When asked whether they planned to stay in the military after their current obligation, 49% of the *Stars and Stripes* sample indicated that it was either not likely or very unlikely (Josar, 2003).

Scientific data regarding intentions to remain in the military have indicated that intentions have remained stable since the onset of the GWOT. For example, the Army Sample Survey of Military Personnel reported that from 1996 to 2002 about 60% of all officers reported that they probably or definitely planned to remain in the Army until retirement and about 20% reported that they probably or definitely planned to leave the Army before retirement (Sample Survey of Military Personnel, 2005a). In 2003 the percent who planned to probably or definitely stay in the Army until retirement actually increased to 68% and remained at that level in 2004.

For enlisted Soldiers, between 1996 and 2004 slightly more than 40% reported they were probably or definitely intending to leave the Army at the end of their present obligation and slightly less than 40% indicated they were probably or definitely intending to stay until retirement (Sample Survey of Military Personnel, 2005a).

Although importantly the SSMP data did not include responses from Soldiers who are in units preparing for deployment, currently deployed, or recently returned from Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF), the data from Fall 2003 and 2004 does include Soldiers who had previously deployed for OIF or OEF. When their career intentions were examined, results showed that Company Grade officers and junior enlisted Soldiers who had deployed for OIF or OEF had similar career intentions to those who had not deployed. For the junior NCO's, however, Soldiers who had deployed for OIF or OEF were more likely to report that they planned to leave after their current obligation. In 2004, for example, 34% of junior NCOs who had deployed to OIF/OEF indicated that they would probably or definitely leave upon completing their present obligation; whereas 27% of junior NCOs who had not deployed to OIF/OEF indicated they would probably or definitely leave.

## ***Summary***

Some research reviewed in this section described service members who were concerned with their level of deployments, and some who planned to leave the Army sooner than expected because of those deployments. The numbers were moderate, however, and it is not known whether these service members actually left or only expressed a desire to leave. The GAO (1999) emphasized the point that, despite the high level of deployments to Eastern Europe, the services, including USAREUR, specifically, were meeting their goals for retention. Therefore, while deployments may have an effect on service member attitudes, the effect was not translating into a wide spread effect on retention.

Data from the Hosek and Totten (2002) utility analysis suggested that deployments actually had a positive effect on reenlistment behavior, supporting the conclusions of the previous literature review (Sticha et al., 1999). Notably, however, that trend leveled off or reversed with three or more deployments, a point that is important given that current deployments are expected to be both longer and more frequent than those in the mid-1990s, the timeframe of their data collection. In addition, while Hosek and Totten measured differences based on "hostile" and "non-hostile" deployments, the "hostile" deployments in their research were primarily peacekeeping or peacemaking operations, which present substantial differences from the current wartime deployments. The impact of these differences in mission on the relationship between deployments and reenlistment is not clear. Importantly, data from Wardynski (2003) suggests that the long deployments to the hostile locations of Iraq and Afghanistan are having a negative impact on first-term retention.

Taken together, these findings suggest that although deployments have not had a significant negative impact on reenlistment in the past, long deployments and high levels of deployments in current and future conflicts have the potential to negatively impact reenlistment. Importantly, research suggests that reenlistment decisions are affected by more than simply the length or frequency of deployments.

Hosek and Totten purport that the service members' reenlistment decisions are affected by their deployment preferences and deployment satisfaction, as well as the financial gain or loss they might incur due to deployments. The potential importance of these elements suggests the need to better understand factors that are related to Soldier attitudes about deployments. The next section reviews research concerning the effects of deployments on factors such as family, finances, morale, and soldier health.

## **Deployment Effects on Families**

Sticha et al. (1999) concluded that high levels of PERSTEMPO were related to measures of strain on the family. This is not a surprising finding, and has been supported in research conducted since then as well (e.g., Adler & Golembe, 1998; Castro et al., 2001; Foley & Steinberg, 1998; Sample Survey of Military Personnel, 2005b; U.S. Army Surgeon General, 2003). Surveying Soldiers deployed to Kosovo, Castro et al. (2001) found that 59% of the married personnel agreed that the number of deployments put a big strain on their family. For Soldiers deployed to Bosnia, 54% of the married Soldiers agreed that the deployments put a strain on their family (Adler & Golembe, 1998).

One factor that is not clear, however, is the point at which the deployments become such a strain on the family that they affect reenlistment decisions. The Survey of Army Families IV (2001),

conducted prior to the GWOT, found that the percentage of spouses who expected to have problems coping with deployments increased with increasing length of deployment; while 64% indicated they would not have a problem or would have only a slight problem coping if their spouse was away for 3 to 6 months, only 30% said they would not have a problem or would have only a slight problem coping if their spouse was away for more than a year. Bell, Bartone, J., Bartone, P.T., Schumm, and Gade (1997a) reported that spouses had difficulty with year-long deployments for OJE in Bosnia and Hungary, and Foley and Steinberg (1998) reported that Soldiers on a 12-month rotation for OJE were more likely to indicate that the deployment had an adverse effect on their children and marriage. On the other hand, research by Phelps and Farr (1996) of Soldiers on a 6-month rotation to the Sinai did not find a notable impact of the deployment on families.

How much of a problem would you have coping if your spouse had to go away on an Army assignment, such as a deployment, for . . . ?

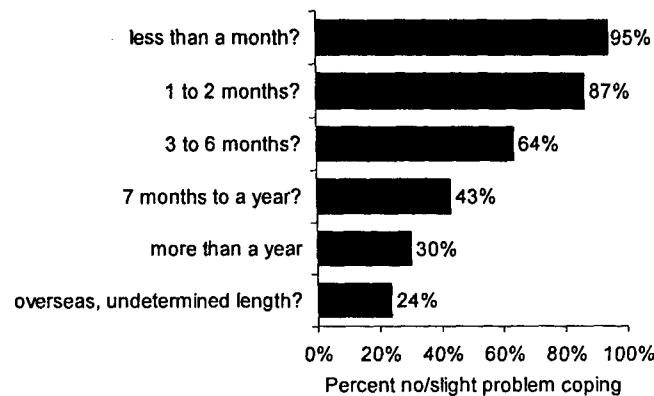


Figure 1. Coping during deployments from Survey of Army Families IV (2001)

Some research suggests that between 6 and 7 months is a turning point at which the majority of spouses begin to have trouble coping with the deployment (see Figure 1) (Survey of Army Families, 2001), but this still does not necessarily mean that longer deployments would affect reenlistment decisions. In one survey of special operations personnel, over half of the respondents agreed that PERSTEMPO had a negative impact on their families, but nearly two-thirds agreed that the problems were manageable if the family worked together (Ramsberger & Wetzel, 1998). Bell, Stevens, and Segal (1996) indicated that while families of Soldiers deployed to the Persian Gulf were twice as likely to experience stress during Operation Desert Shield/Desert Storm as families of non-deployed Soldiers, 85% of both groups said that they were able to meet the family, work, and social demands that they faced.

Two recent studies provide some insight regarding the effects of deployments for military families involved in the GWOT. A report for the U.S. Army Surgeon General (2003) indicated that some of the most frequently reported deployment stressors for Soldiers included separation from their family and poor communication with their family, with 57% of Soldiers reporting high or very high concern or trouble being separated from their family. Surveying military spouses, Ricks (2004) reported that 41% had difficulty sending or receiving communications with their spouse who was deployed at some time after 9/11, although communications reportedly improved late in 2003 for many. Despite these communications problems, however, 76% of these spouses

reported either no problem or only a minor problem coping with their spouse's deployment. On the other hand, 76% also indicated that they believe the Army is heading for personnel problems as Soldiers and their families decide to leave the service due to the pace of deployments.

While deployments disrupt family life, there are other aspects of the military job that disrupt family life as well, including family separations that are not considered deployments, certain types of assignments, and permanent change of station (PCS) moves. Castro et al. (2001), for example, reported that Soldiers were concerned about family separation not necessarily because of their 6-month deployment to Kosovo, but because lengthy training exercises had kept them away from their families for several months just prior to the deployment.

Further, when analyzing Army data from a spouse survey, Bell, Schumm, & Martin (2001) found that length of separation did not predict whether or not the spouse supported the idea of staying in the service; support was determined by whether the spouse thought the pay and benefits were better than in the civilian sector and whether the spouse was satisfied with the amount of family life disruptions they were experiencing.

This suggests that the impact of deployments on families must be examined in conjunction with the other aspects of military life that disrupt or create conflict within the family. These factors, along with whether the spouse supports a military career, can be good predictors of whether the soldier will remain in the service (Bell et al., 2001).

While research in this area has been somewhat inconclusive, it is clear that the impact of deployments on families is important. A 1987 Rand report found that family separation was one of the top five reasons why married soldiers leave the Army (Vernez & Zellman, 1987), and Whitlow (1990) reported that, based on interview data, "Too much family separation" was the primary reason for Marines in the sample to leave. Further, the Sample Survey of Military Personnel conducted by ARI has found that "amount of time separated from family" has consistently been one of the top reasons that Soldiers consider leaving the Army (Sample Survey of Military Personnel, 2005b). In addition, the percentage of Soldiers who select this as a reason to consider leaving has increased over the last few years (Sample Survey of Military Personnel, 2005b). For example, while about 15% of officers selected this reason in 2001, this increased to 18% in the fall of 2002, 26% in the fall of 2003, and 30% in the fall of 2004. For enlisted Soldiers, about 11% selected this reason in 2001, 14% in the fall of 2002, and 18% in the fall of 2003 and 2004.

## **Deployment Effects on Morale and Health**

### ***Effects on Morale***

The review by Sticha et al. (1999) did not find a consistent relationship between deployments and morale. While some samples reported poor morale, it was not necessarily linked to the length or frequency of deployments, as much as the management of the deployments. Specifically, the research cited earlier on the Patriot missile battalions (Segal et al., 1999) concluded that it was not the deployments alone that predicted low morale within the first Patriot battalion that was surveyed, but rather a sense of betrayal by senior Army leadership for the sudden change of unit assignment, perceived problems with battalion leadership, and a sense of inadequate family support. Another problem cited with the management of deployments is insufficient recovery time between deployments, which has also been found to decrease morale (Sticha et al., 1999).

A number of recent research studies have provided additional information about morale.

Castro (1998) measured the morale of Soldiers deployed to Bosnia for OJE. He found a moderate level of morale prior to and during the deployment, with 68% rating their morale as moderate to high prior to the deployment, and 62% rating morale as moderate to high during the deployment. One month after redeploying to Germany, morale increased considerably, however, with 82% of the Soldiers rating morale as moderate to high. Castro et al. (2001) then surveyed troops deployed to Kosovo, and again found moderate levels of morale; 71% reported their morale was medium to very high. For these Soldiers, morale was relatively high despite the fact that 74% reported that their level of burnout was medium, high, or very high. Adler and Golembe (1998) also surveyed troops deployed to the Bosnia Theater; they concluded that the number of deployments was not related to personal morale.

On the other hand, interviews and surveys from OJE by Foley and Steinberg (1998) reported that Soldiers believed the long deployment (one year) led to lower morale and increased stress. One potentially important factor with this deployment is that the Soldiers did not know initially how long the deployment would last, and they were surprised to find out that it would be one year.

Recent data from the Fall 2003 Sample Survey of Military Personnel (SSMP) measured morale for officers and enlisted Soldiers who were not currently deployed for Operation Iraqi Freedom (OIF) or Operation Enduring Freedom (OEF) (U.S. Army Research Institute, 2004).<sup>5</sup> These results indicated a moderate to high level of morale, with 84% of officers and 72% of enlisted Soldiers reporting their personal morale as Moderate, High, or Very High. These levels of morale were similar to the levels of morale reported for previous years, and morale has been relatively consistent both prior to and after 9/11.

Although they did not use a scientific sampling method, a 2003 survey by *Stars and Stripes* provides the only published glimpse into the issue of morale in Iraq. Results indicated that conditions varied greatly from one camp to the next, and, not surprisingly, opinions about issues such as morale and living conditions seemed to vary as well (Josar, 2003). Fifty percent of the service members surveyed rated their unit's morale as average, high, or very high. And 64% rated their own personal morale as average, high, or very high. The results for personal morale are similar to those from reported by Castro for Bosnia and Kosovo, and suggest moderate levels of morale.

To summarize, research on the relationship between deployments and morale indicates that morale has remained moderate during a number of recent deployments. While the length and frequency of deployments may have some effect on morale, perceived fairness in the way the deployment is managed may be even more important. This includes factors such as sufficient notice for deployments, adequate time with families prior to and following deployments, and management of any financial burdens caused by the deployment.

### ***Effects on Soldier Mental and Physical Health***

Sticha et al. did not specifically cite research from their review that examined the relationship between deployments and Soldier health. "Soldier health" was included as a component in their definition of "Quality of Life," however, which also included topics such as morale and family. We found a number of reports from WRAIR in our review of the recent research that provided insight into the effects of deployments on Soldier health, particularly mental health.

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<sup>5</sup> While Soldiers who had previously deployed for OIF or OEF may have been represented in the sample, the survey was not specifically targeted for Soldiers who had recently returned or would soon be deploying.

Overall, research suggests that deployments have a negative effect on Soldier health after a prolonged amount of time. Castro (1998) found that rates of post traumatic stress disorder (PTSD), depression, and alcohol abuse all increased for Soldiers deployed to Bosnia for OJE, with the first increase occurring after 5-6 months, then continuing to increase throughout the year-long deployment. Fortunately the percentage of Soldiers exhibiting these problems remained small in magnitude; however, the increases were consistent. Over the year's time, the rate of PTSD rose from 3% to 6%; for depression, 7.5% to 12%; and for alcohol abuse, 7.5% to 11%. Huffman, Adler, and Castro (1999) subsequently confirmed these findings using a sample of military and civilian personnel who had deployed for 30 days or longer in the Bosnia theater.

Foley and Steinberg (1998) also concluded that the OJE deployment had a negative impact on Soldier health. Enlisted soldiers were more likely to report that the deployment negatively rather than positively affected their emotional well-being. Officers were more likely to say the deployment negatively rather than positively affected their physical health.

For Soldiers deployed to Kosovo, Castro et al. (2001) found that those who reported being exposed to violent or traumatic events and those who saw dead or injured civilians demonstrated higher rates of depression than those who did not. Based on the effects of deployments on Soldiers' health and morale, Adler and Castro (2001) recommended that upon redeployment Soldiers be given at least a 6-month break from future deployments, and at least 2-3 months in garrison before conducting training exercises.

Proctor (2004) has reported that recent data on Soldier health and deployments for Army National Guard has been collected by the U.S. Army Medical Research and Materiel Command, and should be available in reports soon.

While research suggests that Soldier health is affected by deployments, the subsequent effect of this on reenlistment is not clear. Wilcove et al. (2003) found a direct effect of various personal factors such as health and family on reenlistment intentions, as well as an indirect effect through organizational commitment. Saxton, Phillips, and Blakeney (1991) found that emotional exhaustion was significantly related to intentions to leave and actual job change in a study using personnel from the airline reservations service sector. Sticha et al. (1999) suggest that the sum of the Quality of Life factors, such as marriage and family life, income, standard of living, and health combine to create more global individual attitudes such as morale and job satisfaction. These global attitudes, in turn, affect job outcomes such as performance and retention. Empirical tests of retention models that include these variables are required to provide a more definitive understanding of the relationships.

### **Deployment Effects on Finances**

The Sticha et al. (1999) review found little research regarding deployment effects on finances. The research they did report indicated that there were some negative financial implications for deployments, such as loss of commuted ration allowance and the high cost of international telephone calls. When they analyzed Army special operations data they found that high levels of PERSTEMPO were somewhat predictive of financial strain on the Soldier and his/her family (Sticha et al., 1999).

Logically, the financial impact of deployments would be expected to differ greatly depending on a number of factors specific to the mission and unit, such as the length of the mission, the destination (e.g. hostile or not hostile), whether the deployment is during peacetime or wartime,



whether the mission is considered a deployment or TDY travel, and the Soldiers' activities during the deployment. While the SOF data suggested PERSTEMPO was predictive of financial strain (Sticha et al., 1999), the SOF survey was conducted during peacetime, which suggests that some of the financial benefits awarded during conflicts and war could be assumed to not have applied to those Soldiers (e.g., Hostile Fire/Imminent Danger Pay, Combat Zone Tax Exclusion). In addition, SOF Soldiers often deploy to remote parts of a country without the logistics footprint of conventional units; this results in a lack of support systems such as communication lines to contact home (other than for emergencies).

The financial impact of deployments also can differ for Active Component (AC) Soldiers versus Reserve component (RC) Soldiers. For Soldiers on a 6-month peacekeeping mission on the Sinai Peninsula, Phelps and Farr (1996) found that members of the AC suffered a small financial loss, while members of the RC experienced a small financial gain. In other cases, the effect may be reversed; Foley and Steinberg (1998) found that the OJE deployment had a positive impact on finances particularly for AC Soldiers, especially AC officers.

Given that the current deployments to Afghanistan and Iraq are wartime deployments, there are a number of additional pays to which Soldiers may be entitled, including Family Separation Allowance, Imminent Danger Pay, Hardship Duty Pay, Hazardous Duty Incentive Pay, and Combat zone income tax exclusion (Boyd & Burgess, 2003). Based on anecdotal information from interviews, *Stars and Stripes* (Boyd & Burgess, 2003) reported that the deployment to Iraq is typically providing Soldiers with financial gain, and they view the additional pay they are receiving as a positive factor.

The relationship between deployment pay and reenlistment has not been determined. Hosek and Totten (2002) indicated a belief that deployment pay played a role in reenlistments, but they did not have the data required to actually test the relationship. They suggest that a Soldier assesses the utility of continuing in the military based on their changing preferences for deployment as well as associated deployment pays and costs.

### **Deployment Effects on Readiness**

Sticha et al. (1999) found six studies that explored the relationship between deployments and readiness and/or performance. The research they found was based largely on interviews with service members. They found reports of both positive and negative effects of deployments on readiness, but concluded that there was no evidence of quantitative links between PERSTEMPO and readiness (Sticha et al., 1999).

Rumsey (2002) concluded that, for peacekeeping missions, time away from home station is associated with reductions in readiness. He indicated that units are frequently broken up before they are deployed, equipment experiences wear and tear, and the Soldiers do not get a chance to practice certain war fighting skills. These conclusions were based in part on those of Foley and Steinberg (1998), who found that Soldiers deployed for 12 months for OJE (a peacekeeping mission) perceived that their readiness was decreased.

Logically the effect of a deployment on the readiness of an individual or unit would depend on their actual duties for that particular deployment, and the extent to which that is commensurate with their assigned individual job or primary unit mission. If the deployment enables them to rehearse or practice skills required for their primary mission, Soldiers would be likely to report that the deployment enhanced their readiness; on the other hand, if the deployment required that they perform duties collateral to their primary mission, it would be likely that they would report

negative effects on readiness. The latter situation may be common for combat units deployed on peacekeeping missions.

This is essentially what a sample of senior-level Army SOF Soldiers indicated to the GAO, who reported that 60% of the Army SOF Soldiers believed that their readiness has been or could be adversely impacted by the current level of unit deployments and that DoD could reduce this negative impact by using conventional forces for collateral activities, such as embassy support (GAO, 1997).

No research was identified in this review that linked perceptions of readiness with Soldier reenlistment. A possible effect, if any, might be through the effect of readiness on morale.

### **Summary of Research Literature**

Quantitative analysis of Soldier deployments and retention found that Soldiers with one or two deployments actually had higher rates of reenlistment, although this trend leveled off or reversed with three or more deployments. Researchers suggested a moderate level of deployments is beneficial for retention, although too many could have a negative effect. Importantly, with the ongoing wars in Afghanistan and Iraq, and the pervasiveness of the GWOT, a higher level of deployments could be expected. Some data collected since 9/11 suggests that deployments longer than 3 or 4 months to hostile locations are having a negative impact on first-term attrition.

In addition, survey data has consistently indicated that the amount of time a Soldier is separated from his/her family was one of the top reasons that Soldiers consider leaving the Army. Research has suggested that deployments do have a negative impact on the spouse and family, although most spouses reported not having a problem coping with an absence for at least up to 6 months. While it is clear that family considerations impact retention, this is due not only to deployments but a number of aspects of a military career such as frequent moves and separations due to factors other than deployments.

Deployments also affected Soldier health, although the subsequent effect of this on reenlistment is not clear. The effect of deployments on other personnel areas such as morale, finances, and readiness, has been equivocal. Poor management of deployments has been linked with low morale. This includes deployment issues such as insufficient notice for deployments, inadequate time with families prior to and following deployments, failure to manage financial burdens caused by the deployment, and overall perceived unfairness in the way the deployment is managed. Sticha et al. (1999) suggested that the sum of Quality of Life factors, such as marriage and family life, income, standard of living, and health combine to create more global individual attitudes such as morale and job satisfaction, and that these global attitudes, in turn, affect retention. Some support for this is provided by Sinclair (2004) who found that, although there were some direct effects of Quality of Life factors on retention intentions, the strongest effects on retention intentions came from the more global constructs of commitment to the military and job satisfaction.

For the most part the research reviewed here has examined either simple descriptive responses or bivariate relationships – that is, focusing on the relationship of just two factors to the exclusion of other related factors (e.g., the effects of deployments on retention to the exclusion of morale or

family impact)<sup>6</sup>. The large number of equivocal findings we found provides a strong suggestion that these bivariate relationships are not providing sufficient detail. While a bivariate correlation accurately describes the existing relationship between two variables, it is not sufficient to predict one of the variables from the other. Only by developing a model that can examine the combined effect of these factors on retention, can we begin to understand how the factors interact as a system and how deployments affect this system. This requires that we define a model of the factors that affect retention.

### **Modeling the Effects of Deployments on Retention**

There has been considerable research in the area of predicting retention in organizations, typically under the label “turnover.” Although the name is different, both terms refer to the choice of staying in or leaving an organization. Because the literature uses the term “turnover,” we will use this term as well.

An individual’s decision to stay in or leave an organization is affected by a variety of factors, including their attitudes toward their job and the organization, the availability of job alternatives, their family commitments, conflicts between work and family responsibilities, and the extent of the person’s ties to the organization as well as the surrounding community (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Research also suggests that the level of fit between a person and organization (Kristoff, 1996) or some type of precipitating event, such as a spouse changing jobs or an unsolicited job offer, can stimulate a decision to leave (Lee & Mitchell, 1994; Lee, Mitchell, Holtom, McDaniel, & Hill, 1999). The manner in which these factors combine to predict turnover is likely complex. Lee et al. (1999) suggest that individuals use one of four decision processes depicted by flowcharts to take all of the factors into consideration. Other research suggests a more additive and compensatory approach (e.g., Mitchell, et al., 2001). The manner in which all of these factors combine and the relative importance of the factors have not yet been established. While empirical research is required to determine an accurate model, we provide a depiction of relevant variables in Figure 2.

Notably, an organization has very limited influence over several of the factors in this model. The exception to this is the individual’s commitment to the organization, which is highly determined by their experiences at work and experiences with that particular organization (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). As a work event, a deployment would logically impact the Soldier’s work experiences, and could therefore be hypothesized to impact their decision to stay in or leave the Army through organizational commitment (e.g., Sinclair, 2004). This does not preclude possible direct effects of deployments on turnover, but rather provides an initial theory-based rationale for how to capture the impact of deployments within a model of turnover.

Research with military samples has repeatedly found that an individual’s organizational commitment is an important predictor of their intentions to stay in or leave the military service (e.g., Diana, 1998; Farkas & Tetrick, 1989; Gade, Tiggel, & Schumm, 2003; Heffner & Gade, 2003; Kelley et al., 2001; Kim, Price, Mueller, & Watson, 1996; Sinclair, 2004; Teplitzky, 1991; Wilcove et al., 2003). Given this, we will focus specifically on understanding the organizational commitment elements of the turnover model, to the exclusion of the other macro-level variables that may affect turnover, such as unanticipated events, person-organization fit, and other commitments (see variables in Figure 2).

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<sup>6</sup> The Hosek and Totten (2002) utility model and Sinclair (2004) research are exceptions, although they do not capture the realm of constructs that have been shown to predict retention.

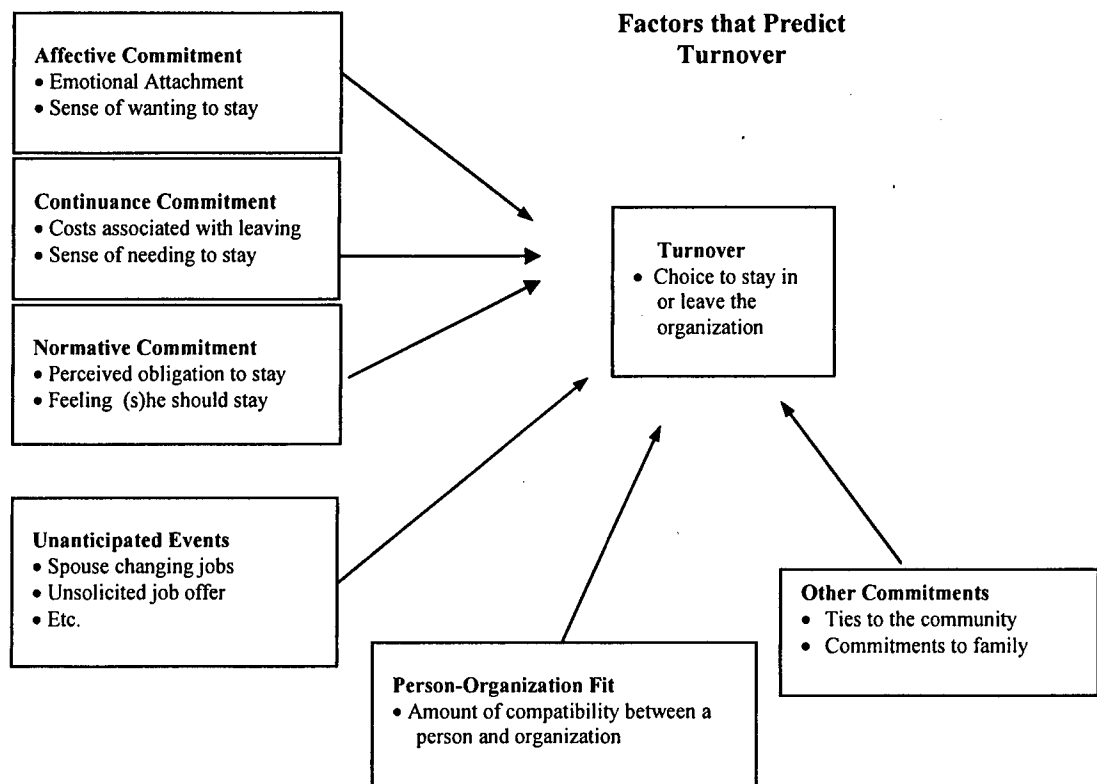


Figure 2. Model of Factors that Predict Turnover

### ***Organizational Commitment as a Predictor of Turnover***

Three types of commitment have been identified that predict whether an individual is likely to leave an organization (Allen & Meyer, 1990), although the precise way in which these combine is still under debate (Meyer et al., 2002). These can be seen in both Figure 2 and Figure 3, and are labeled , Affective Commitment, Continuance Commitment, and Normative Commitment.

The first type, affective commitment, is an emotional attachment to and involvement with an organization. This is probably the concept most commonly associated with the term organizational commitment. The second type, continuance commitment, reflects perceived costs that are associated with leaving the organization, due to factors such as lack of alternatives, financial obligations, or retirement vestment. The third type, normative commitment, refers to a perceived obligation to stay in the organization. In simple terms, affective commitment is often viewed as a measure of whether an individual *wants to stay* in an organization, continuance commitment as a measure of whether the individual feels he or she *needs to stay* in, and normative commitment as a measure of whether the individual feels he or she *should stay* in.

Predicting whether Soldiers plan to reenlist or leave the Army, then, requires determining whether they want to stay, whether they feel that they need to stay, and whether they feel an obligation to stay. In order to understand the role of deployments in creating organizational

commitment, we need to examine the complete set of variables that create a Soldier's attitude in each of these areas.

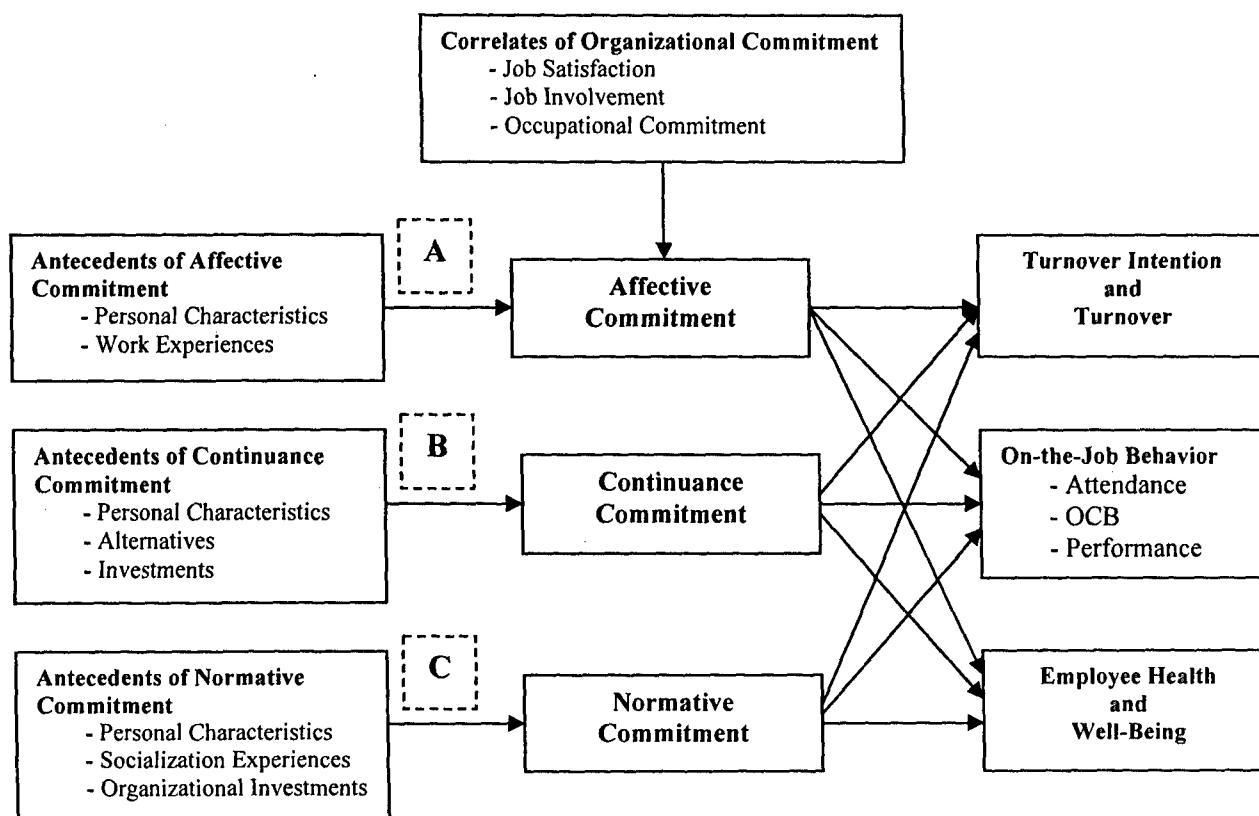


Figure 3. Meyer, Stanley, Herscovitch, and Topolnytsky (2002) Model of Organizational Commitment

A recent meta-analysis reported a number of variables that consistently predicted the three dimensions of commitment (see the links labeled A, B, and C in Figure 3) (Meyer et al., 2002). These included categories such as personal characteristics, perceptions of work experiences, and alternatives/investments, abbreviated here as “alternatives”. Personal characteristics included demographic variables (e.g., age, gender) as well as two individual attribute variables (locus of control and self-efficacy).<sup>7</sup>

The meta-analysis indicated that while some of the demographic variables showed significant correlations with the three forms of commitment, the magnitude of these correlations was generally small, typically .15 or less. Results did, however, suggest a moderate relationship between locus of control and affective commitment, such that individuals with an internal locus of control reported higher affective commitment. This relationship is important because it indicates that, to some extent, regardless of the Soldiers’ deployments or other work experiences,

<sup>7</sup> Bandura (1997) defines self-efficacy as the belief that you can produce a certain action and locus of control as a belief about whether actions affect outcomes. These beliefs influence courses of action chosen, how much effort is put forth, perseverance, levels of stress, and ultimately performance.

their personal attributes may affect their commitment to the Army and their subsequent reenlistment decision.

Because of the generally weak performance of the personal characteristics predictors, however, for the purposes of the current model we will focus on the work experience and alternatives variables, both of which showed strong prediction of organizational commitment (also, see Meyer & Allen, 1997). The work experience variables showed particularly strong relationships with affective and normative commitment, and alternatives showed particularly strong relationships with continuance commitment, which makes intuitive sense. A list and description of the work experience and alternatives variables from the meta-analysis can be found in Table 1.

Table 1. Description of predictor variables from Meyer et al. (2002) meta-analysis

Variable	Description
<b><i>Work Experiences</i></b>	
Perceived organizational support	Employees' beliefs about the extent to which the organization "values their contributions and cares about their well-being" (Eisenberger et al., 2002).
Transformational leadership	Leaders who, through charisma and personal abilities, are able to create a vision for an organization, develop commitment to the vision among subordinates and implement strategies to accomplish it (Yukl, 1989).
Role ambiguity	Role information is unclear to the point that an individual is unsure of what he or she is supposed to do to perform the role (Jex, 2002).
Role conflict	Having two or more sets of pressures in which complying with one pressure creates difficulty in complying with the other pressure(s) (Greenhaus & Beutell, 1985).
Interactional justice	The perceived fairness of interpersonal treatment of employees by managers (Cohen-Charash & Spector, 2001).
Distributive justice	The perceived fairness of outcomes (Cohen-Charash & Spector, 2001).
Procedural justice	The perceived fairness of the process used to achieve an outcome (Cohen-Charash & Spector, 2001).
Work/Family conflict	A form of interrole conflict in which participation in the work role (or family role) makes it difficult to perform in the other role (Greenhaus & Beutell, 1985).
Morale	The degree to which individuals are enthusiastic and committed to their work (Harrell, 1997).
<b><i>Alternatives/Investments</i></b>	
Alternatives	The perception of the number of alternative employment opportunities that exist beyond one's present job (McGee & Ford, 1987).
Investments	Things such as time, effort, and money that an employee has invested in an organization, such as through relocation or specialized training (Meyer & Allen, 1997).
Transferability of education	The extent to which an individual's education will apply to work in other organizations.
Transferability of skills	The extent to which an individual's skills will apply to work in other organizations.

For each type of commitment, we will next describe the variables that predict that type of commitment. That is, we will describe in more detail the links labeled as A, B, and C in Figure 3 that predict affective, continuance, and normative commitments. We will present a more detailed “sub-model” for each of these links (see Figures 4, 5, and 6) that includes the variables tested in the meta-analysis (Meyer et al., 2002) as well as predictors identified through other research. We will then discuss how these variables apply to the Army and the role of deployments in each sub-model.

We should note that, while Figures 3 – 6 suggest that organizational commitment completely mediates the effects of the antecedents on turnover and turnover intentions, this may not be true for each of the antecedents (e.g., Wilcove et al., 2003). The pattern of direct and indirect effects for these variables must be determined empirically.

### **Predicting Affective Commitment**

The strongest predictor of affective commitment identified in the meta-analysis was perceived organizational support, with an average corrected correlation of .63 across 18 studies. A number of other work experience variables showed strong relationships as well: transformational leadership (.46), role ambiguity (-.39), role conflict (-.30), interactional justice (.50), distributive justice (.40), and procedural justice (.38).<sup>8</sup>

This indicates that employees are more emotionally committed to their organization when: (1) they perceive that their organization supports them, (2) they perceive a high level of fairness or justice in organizational outcomes, decisions, and interactions with supervisors, (3) their leader demonstrates transformational actions, and (4) they perceive low levels of ambiguity and conflict in their job. Other research has also indicated that individuals with lower levels of work-family conflict (Allen, Herst, Bruck, & Sutton, 2000) and lower stress (Meyer & Allen, 1997) reported higher levels of affective commitment. Based on the research identified, we will discuss five categories of predictors for affective commitment: organizational support, organizational policies/decisions, quality of supervisor support, work-family conflict, and morale.

#### ***Organizational support***

The variable that showed the strongest relationship with whether an individual wants to stay in the Army is perceived organizational support. Because research on perceived organizational support has identified a variety of predictors, for the sake of parsimony we identified three predictor categories that would summarize these variables: organizational policies/decisions, job conditions, and quality of supervisor support (see Figure 4). These categories provide a framework to discuss the predictors and are not intended to represent latent constructs.

Many of these variables have been discussed both as predictors of perceived organizational support and of affective commitment, but evidence has suggested that perceived organizational support mediates the relationship of these predictors with affective commitment (Rhoades, Eisenberger, & Armeli, 2001; Allen, Shore, & Griffeth, 2003). This indicates that these variables affect an individual’s perceived organizational support, which in turn affects their level of affective commitment. Given this evidence of mediation, we depict a mediated relationship in Figure 4, although we leave open the possibility that these variables have both a direct

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<sup>8</sup> Note that the number of studies for each variable differs. See Table 3 in Meyer et al. (2002) for more specifics on the meta-analysis.

relationship with affective commitment as well as an indirect relationship through perceived organizational support. The next three sections describe each of these categories of predictors.

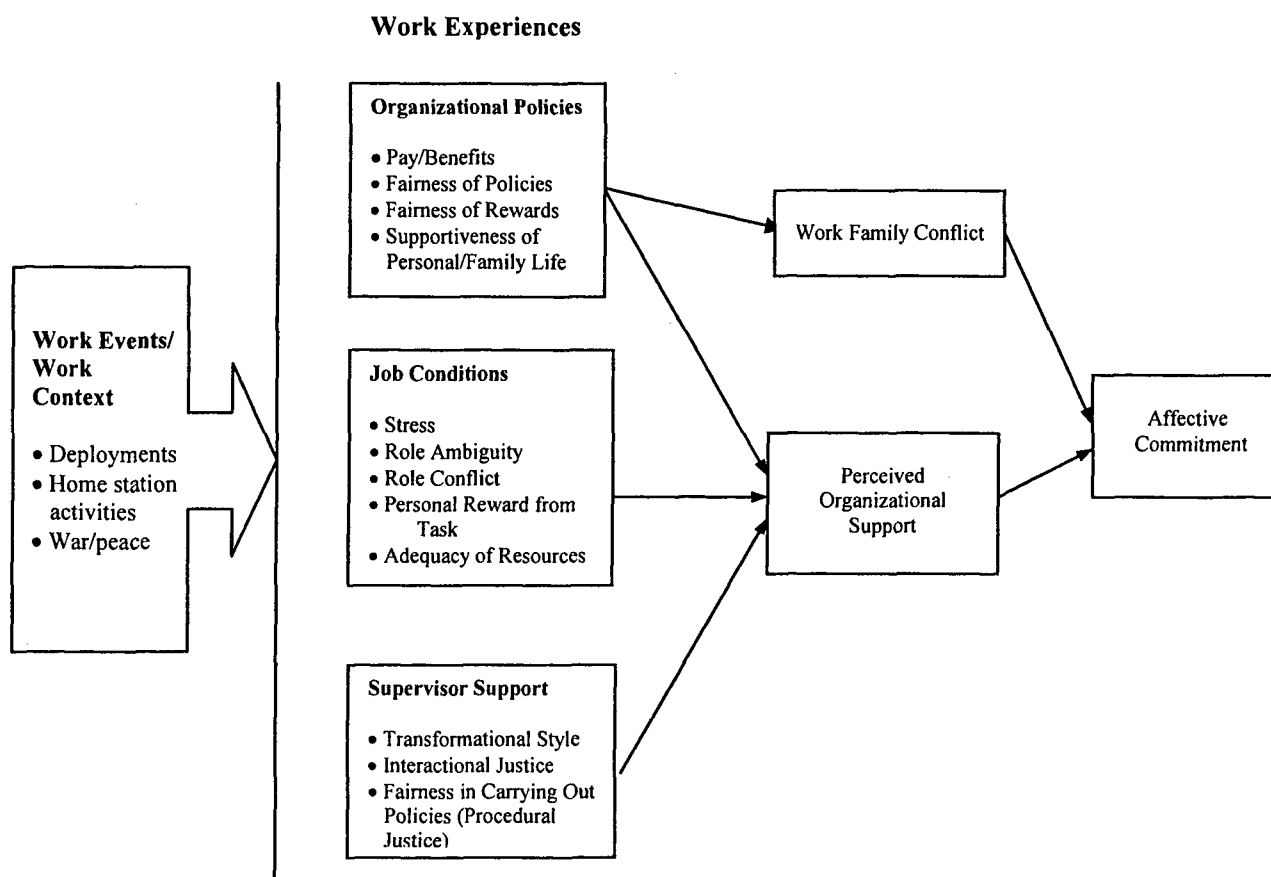


Figure 4. Model of the Antecedents to Affective Commitment

### ***Organizational Policies/Decisions***

The organizational policy dimension captures the extent to which the individual believes that the policies or decisions of the organization are fair and sufficient to meet their expectations and requirements. This includes the adequacy of pay and benefits, distributive and procedural justice, and the extent to which organizational policies and culture are supportive of one's personal and family life. The perceptions are based both on the actual policy or decision as well as the individual's expectation for or interpretation of it. Research has found that if an organization does not meet employee expectations in critical areas those employees are more likely to intend to leave (e.g., Turnley & Feldman, 2000).

For the Army, then, this would include a wide range of factors such as base pay, retirement policies, promotion procedures, assignment procedures, bonuses, awards, health care, housing and post facilities. Parker (1998) found a direct relationship between perceived Army support for family and Soldiers' work/family conflict, job satisfaction, and affective commitment. Policies and decisions regarding deployments would have an impact as well, such as deployment-related pays, and decisions regarding who deploys, when they deploy, and for how long. The critical



factor with each of these issues is that the individual must believe that the organizational policies and decisions are fair and meet their expectations.

The potential impact of deployments in this area is illustrated by several of the research studies cited earlier. Steinberg and Foley (1998) found that Soldiers perceived their deployment as too long if they believe they have been deployed too frequently, if their previous deployments had been long, if their deployment was longer than that of others involved in the operation (e.g., other U.S. services, militaries of other countries), and if the projected length of their deployment had been increased. Each of these illustrates a perceived lack of fairness in the organization's deployment decisions.

Another example is the Patriot battalion deployed to South Korea that was told they had to stay unaccompanied in Korea for an additional six months (Segal et al., 1999). The highly negative reaction of these Soldiers to future separations was a result of the perceived unfairness of the decision and the perceived disregard for their personal and family lives.

Along the same line are the findings of Cooke et al. (1992) that Sailors were more likely to reenlist when their deployment was a typical length as opposed to being particularly long. This also emphasizes the importance of Soldier expectations in their reactions to organizational policies and decisions.

While it may be impossible to meet every Soldier's expectation of fairness, it is clearly important for leaders from the squad level to the Department of the Army level to take perceived fairness into consideration in decision-making processes and to closely monitor Soldiers' views of policies and decisions. It is also critical to shape appropriate expectations, a theme emphasized by Segal et al. (1999), in preventing negative reactions to deployment decisions. Survey information from Operation Iraqi Freedom suggests that problems do exist with perceived inequities in personnel and deployment policies there (U.S. Army Surgeon General, 2003).

### ***Job Conditions***

This dimension captures the extent to which the conditions of the job create either anxiety and stress or personal reward. This includes the physical environment of the job and working conditions, role ambiguity and role conflict, the adequacy of resources provided, and the extent to which the individual gains a sense of personal reward from the task. In a recent report that used a Navy sample, job factors such as those related to shipboard life and the Sailors' global quality of life predicted reenlistment intentions through organizational commitment (Wilcove et al., 2003). Again, the critical factor here is not just the actual job conditions, but the individual's expectations and perceptions of them.

In the Army, physical working conditions can be meager and stressful, although roles are typically well defined. The adequacy of resources and extent to which the Soldiers gain a sense of personal reward from their task are likely to vary by situation and by military occupational specialty. Deployments could potentially impact each of these areas. The physical environment and working conditions typically become more difficult and stressful, and the importance of adequate resources is more acute. In addition, roles can sometimes become more ambiguous and conflicted as Soldiers work within shifting political climates and vary from warfighting to peacekeeping and nation building situations, as well as working within joint and combined commands.

On the other hand, Soldiers may gain an increased sense of reward from their job during deployments, with an increased sense of satisfaction from participating in a real-world mission. This explanation was suggested by Adler et al. (2000, as cited in Adler & Castro, 2001), who found that Soldiers reported high levels of job commitment during a deployment, and lower levels post-deployment. It is also reflected in the findings from Special Forces research that "Being involved in 'real world' missions" was listed as one of the top three reasons for SF Soldiers to stay in SF (Zazanis et al., 2001).

Also relevant here are the findings that deployments can have a negative effect on Soldier health after prolonged periods of time (Castro, 1998; Huffman et al., 1999), which may be physical health or emotional well-being (Foley & Steinberg, 1998). The fact that job conditions on deployments can create physical and mental health problems suggests that these are particularly stressful conditions, and therefore ones that would have a negative impact on perceived organizational support and affective commitment.

While military leaders may have no control over factors such as shifting political climates and have limited control over physical conditions and stress, it is important to recognize the potential impact of these conditions on Soldier commitment. Research suggests that support from leaders can significantly impact subordinates' perceptions of their work, such as their perceived workload (Kirmeyer & Dougherty, 1988). In some cases intervention strategies could minimize the effects or actions could be taken to provide some type of compensation (not necessarily monetary) for conditions perceived to be substandard. At a minimum, leaders can develop communication strategies aimed at developing realistic expectations for job conditions.

### *Quality of Supervisor Support*

Quality of supervisor support reflects whether the supervisor is viewed as doing what he or she can to facilitate individual and unit success and provide for individual and unit needs. This includes using a transformational style and demonstrating fairness in his or her interactions ("interactional justice").

Perceived supervisor support has been specifically linked with perceived organizational support, particularly if the supervisor is viewed as being representative of the organization (Eisenberger, Stinglhamber, Vandenberghe, Sucharski, & Rhoades, 2002). Affective commitment has been linked with supervisor supportiveness, leader consideration, and using a transformational leadership style (Meyer & Allen, 1997).

Some research has also linked satisfaction with supervisor support directly with higher re-enlistments (Cakmak, 2004). This included actions such as leaders' efforts to keep people informed about issues and leaders' provision of resources to do jobs. Along these lines, Devlin (2003) emphasizes the importance of job satisfaction and provides a quotation from a Marine Corps commandant who said, "...retention is the daily responsibility of every leader...I expect commanders and leaders at all levels to create a command climate that makes our Marines want to stay Marine."

Leader actions will impact subordinates' commitment to the organization regardless of whether an individual is deployed or has been deployed; deployments, however, can potentially change the nature of what is expected and required from the leader. They could also influence the nature of the vision the leader needs to develop for the unit.

The critical role of leadership could explain equivocal findings regarding the effects of deployments on Soldier attitudes and actions. For example, while Wardynski (2003) reported that deployments to hostile locations such as Iraq were generally associated with lower reenlistment likelihood, the Army Times reported that the 101<sup>st</sup> Airborne Division's 3<sup>rd</sup> Brigade was exceeding their goals for "first-termers" as well as mid-careerists (less than 10 years) (Boyd, October 2003). This could be due, at least in part, to leader actions and support within the unit that create a desire in the Soldiers to remain in the service. Transformational leaders may also engender a sense of duty and obligation to remain in, something we will discuss further under the topic of normative commitment.

The role of leadership in creating affective commitment is pivotal because the position enables them to manage the effects of the other two key predictor areas – organizational policies/decisions, and job conditions. While there are limits to their authority, leaders can control job conditions to minimize negative effects and maximize personal reward. For example, leaders may be able to minimize levels of role ambiguity and conflict and provide attention to personal and family needs and work-family conflicts. There may be less latitude in this, however, during deployments, particularly wartime deployments. Even in situations that dictate poor job conditions or policies that cannot be changed, however, leaders can use communication strategies to create realistic expectations and to provide rationale for decisions.

### ***Work-family Conflict***

Work-family conflict is considered a form of role conflict in which responsibilities or pressures experienced in one domain (work or family) create difficulties for meeting the requirements associated with the other domain (Greenhaus & Beutell, 1985). It is unique from the role conflict that occurs within the organization in that the interests of the organization are in competition with the interests of an outside entity, in this case, the family. Work-family conflict is particularly important in the military services because the Soldier and his or her family are so highly immersed into the military culture and organization. As an example of this, while many organizations may issue identification cards to employees, it is rare for organizations to issue mandatory identification cards to family members, as they do in the uniformed services.

Some researchers have made a distinction between family interfering with work and work interfering with family, suggesting that the conflict that results from each type may differ with respect to causes and consequences (Gutek et al., 1991). The essence of the problem remains the same, however; there is insufficient time, resources, or capacity for an individual to accomplish both roles successfully. To maintain simplicity, we will focus only on the general concept of work-family conflict.

Work-family conflict was examined briefly in the Meyer et al. (2002) meta-analysis as a consequence of commitment, although convincing evidence has not been presented to establish whether it functions as either a predictor or consequence. Meyer et al. reported a significant negative correlation of -.20 between work-family conflict and affective commitment across 10 studies. Similarly, Allen et al. (2000) found a weighted mean correlation of -.23. This indicates that higher work-family conflict is related to a lower emotional connection with the organization. When there is conflict between work and family domains, individuals want to avoid the strain associated with having to reconcile these two roles, and in fact, work-family conflict has also been associated with lower job satisfaction and higher intentions to leave the organization.

While a number of features of life in the services can cause strain on the family, deployments can create an added level of strain, as shown in the research reviewed earlier, and can therefore create

a high potential for work-family conflict. The physical absence of an individual due to deployment prevents their participation in the daily activities of the family. As Foley and Steinberg (1998) indicated, many Soldiers reported that deployment negatively affected their personal relationships with their children and spouse, and others have found that high levels of PERSTEMPO and longer deployments create a strain on the family (Sticha et al., 1999; Survey of Army Families, 2001). In a sample of female active duty enlisted Navy Sailors who had children, Kelley et al. (2001) found that ship assignment, which is associated with deployments, long hours, and overnight duty, was an important consideration for these women when considering reenlistment, and that reenlistment intentions were predicted by work-family concerns.

Despite the strain that deployments can create on the family, other research suggests that most spouses are able to adapt well to deployments (Bell & Schumm, 2003). Orthner and Rose (2003) found that a number of assets enabled some spouses to adjust better to separations than other spouses. These assets included knowledge of Army systems (e.g. medical, other agencies, emergency contact procedures), having a personal and social network for support, and being satisfied with the unit and post leaders' perceived concern for the members' families. They recommended that the military assist leaders in creating a culture of support in their unit, promote actions such as ensuring spouses know how to deal with Army agencies, and encouraging families to spend time together when service members are not deployed.

These results suggest that, although deployments can create stress and work-family conflict, there are interventions that could potentially minimize this effect. Without these interventions, however, it appears that the conflict between the Soldier's work and family could decrease his or her affective commitment to the Army and lower the likelihood of their reenlistment. Importantly, although not depicted in Figure 4, work-family concerns may have a direct effect on turnover intentions as well, not just an indirect effect through organizational commitment.

### ***Morale***

"Morale" is considered a general sense of well-being, and is viewed as a variable that is relatively fluid and changing (Liefoghe, Jonsson, Conway, Morgan, & Dewe, 2003). Methods for measuring morale have varied greatly and included items tapping job satisfaction, motivation, stress levels, commitment, and enthusiasm, as well as items that ask individuals directly about their "level of morale" (Liefoghe et al., 2003). There are also debates regarding whether morale should be considered an individual or group level issue.

As discussed previously, Sticha et al. (1999) found inconsistent relationships between deployment and morale. Some research has reported moderate levels of morale during deployments (Castro, 1998, Castro et al., 2001), and Reed and Segal (2000) reported a significant negative relationship between number of deployments and morale. The relationship between morale and organizational commitment is not clear, nor is the relationship between morale and turnover, although a theoretical model proposed by Liefoghe et al. (2003) includes morale as a predictor of reenlistment intentions.

Given the general concept of morale as fluid and changing, however, it may be a variable that is too unpredictable to be useful for this type of a model. It can be affected by a myriad of day-to-day factors and could therefore arguably fluctuate daily. For these reasons we will not include this construct in our current model, although we agree it should be used as an indicator of underlying systematic problems that need to be addressed.

### ***Multivariate Prediction***

One disadvantage of the Meyer et al. meta-analysis results is that they only provide information regarding bivariate relationships. The consequence of this is that based on the meta-analysis we do not know the extent to which the variables overlap in their prediction of perceived organizational support or affective commitment. Fortunately, research using modeling techniques provides some information. This research has indicated that each variable provides a unique contribution to the prediction of perceived organizational support, and the magnitude of the relationships is similar to those reported for the bivariate relationships in the meta-analysis (e.g., Allen et al., 2003; Rhoades et al., 2001).

### **Predicting Continuance Commitment**

As described previously, continuance commitment reflects the perceived costs that are associated with leaving the organization, due to factors such as lack of alternatives, financial obligations, or retirement vestment. Results from the Meyer et al. (2002) meta-analysis indicated that variables from both the alternatives and work experience categories were significantly correlated with continuance commitment. Specifically, fewer perceived alternatives and less perceived transferability of education and skills were related to higher levels of continuance commitment. This is logical, given that the concept of perceived alternatives is embedded in the definition of the construct. While correlations with work experience variables were significant, they were small in magnitude: perceived organizational support, transformational leadership, role ambiguity, role conflict, interactional justice, and procedural justice.

This indicates that individuals felt a greater need to stay in their organization primarily if: (1) they perceived that their skills did not transfer well outside of the organization, (2) their educational training was limited in how well it transferred outside of the organization, and (3) they did not believe that they had many alternatives outside of the organization (see Figure 5). As with the predictors of affective commitment, the individual's perception is critical – in this case, the perception of his or her investments and alternatives. Meyer and Allen (1997) suggest that some sort of “triggering event” can have a great influence on an individual's continuance commitment if it focuses the individual's attention in a particular area. As an example, if one employee heard of the successful job search and increased salary of another employee, this could bring the concept of alternatives to the forefront and impact his or her continuance commitment – in this case, lowering their continuance commitment. A deployment might be another example of a triggering event – the possible effects of deployments are discussed in a subsequent section.

It is important to note that an individual's assessment of perceived alternatives includes not only the availability of alternate jobs and their corresponding salaries, but also the other benefits provided by the jobs, such as medical insurance, retirement benefits, or company perks. In some cases, one benefit may be particularly salient to an individual, such as when someone in a family has a medical condition that requires continuing treatment. In this case, medical insurance may be particularly important to that individual's perception of their other options. If there is another job opportunity, but it does not provide the sufficient health care benefits, it would not be viewed as a feasible alternative. Another factor that would affect an individual's perception of alternatives is having time invested in a retirement plan, since the time invested may be lost upon leaving the organization.

In addition to the factors in the meta-analysis, research has also indicated that work-family conflict is related to higher levels of continuance commitment (Casper, Martin, Buffardi, &

Erdwins, 2002), demonstrating a moderate correlation ( $\rho=.24$ , Meyer et al. 2002;  $r = .30, p < .05$ , Lyness & Thompson, 1997). This indicates that employees who report higher levels of conflict between work and family also report a greater sense that they need to stay in an organization. Payne, Huffman, & Tremble (2002) reported that the more family responsibilities Army officers had, the greater their continuance commitment to the Army.

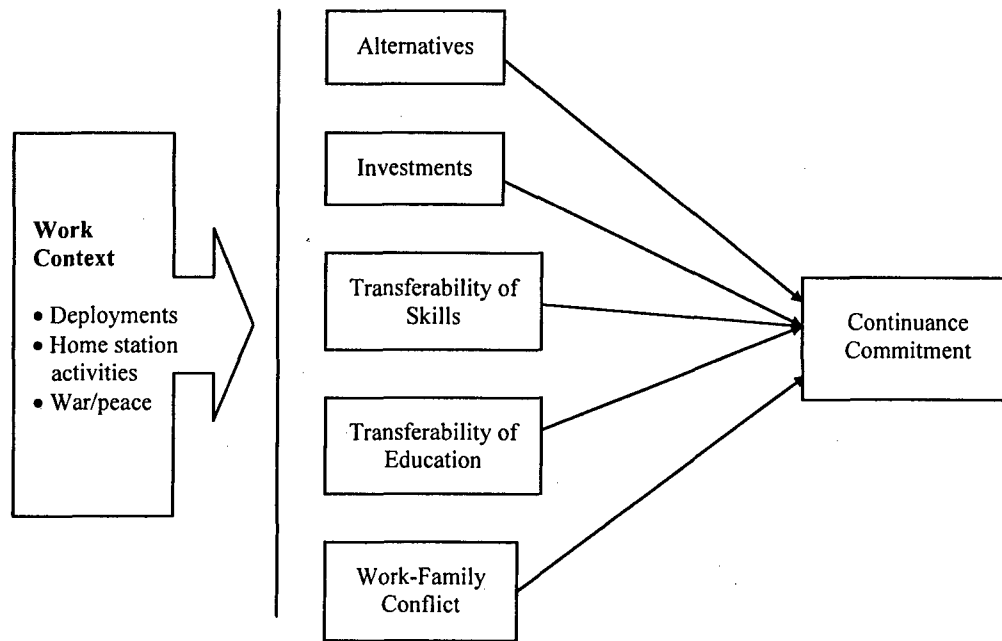


Figure 5. Model of the Antecedents to Continuance Commitment

### *Continuance Commitment in the Services*

With respect to the services, the retirement system creates a very marked relationship between the number of years a service member has invested and their decision to remain in the service. Army retention data indicates that the percent of Soldiers who continue with Army service after four years is around 70% (Defense Manpower Data Center (DMDC), 2003). After 10 years it increases to around 90%, and at 18 years it is around 99%. At 20 years, the mark of retirement vestment, retention drops to 55%. This demonstrates the strong draw of the retirement vestment at 20 years. Accordingly, Payne et al. (2002) did find that officers with more time in service reported a higher level of continuance commitment. This type of system directly influences an employee's perceived need to stay in the organization.

As the services are well aware of this relationship, they offer reenlistment bonuses to maintain a high level of reenlistment among Soldiers with fewer years in the service. Bonuses are also offered to maintain reenlistments in specialty areas in which service members have a high level of perceived alternatives, such as pilots and special operations.

With respect to transfer of education and skills, there is evidence that those who perceive a lower likelihood of obtaining a good civilian job, or believe their skills will not be highly marketable in the civilian sector are more likely to stay in the military (Cakmak, 2004). However, a Soldier's perception of the transferability of his or her education and skills is likely to differ by military occupational specialty. While some of the specialized training Soldiers receive is specific to the

Army, other skills could be transferred to a civilian equivalent, such as those of medical personnel, truck drivers, or firefighters. In addition, the attacks of 9/11 and GWOT brought security issues to the forefront for many organizations, both in government and in the private sector, so there is higher demand for personnel knowledgeable about security issues, such as special operations personnel (Burgess, 2004; Schmitt & Shanker, 2004).

### *The Effect of Deployments*

The strength of the relationship between years-in-service and continuing in the service suggests that deployments would have a diminishing impact on Soldier turnover as the Soldier has a greater number of years invested toward retirement. Once Soldiers are eligible for retirement, however, it is logical that deployments would again have an impact.

With respect to perceived transferability of skills or education, deployments may have some impact. For Soldiers who are focused on achieving higher education goals while in the service, a high level of deployments may make this goal difficult or impossible to achieve; this would serve to decrease their continuance commitment. In addition, the activities in which they engage on the deployment could provide new skills or experiences that could be transferred to the civilian world. This would serve to increase their perceived alternatives and also decrease their continuance commitment.

The effect of deployments on perceived alternatives may be a primary avenue of impact of deployments on continuance commitment. Particularly for certain specialty areas, deployment skills acquired and experiences may make Soldiers more marketable to security or contract organizations. Contract salaries have been reported to exceed \$100,000 a year for Soldiers with special operations experience (Crawley, 2004a; Schmitt & Shanker, 2004). This would increase their perceived alternatives and decrease their continuance commitment. Importantly, however, for less specialized personnel, the additional combat duty pays and tax benefits of deployments may reduce the number of alternatives outside the military that provide equivalent or greater monetary compensation. For these Soldiers, deployments could serve to increase the Soldier's level of continuance commitment.

As mentioned previously, the current deployments to Afghanistan and Iraq provide a number of additional pays to which Soldiers may be entitled. Based on anecdotal information from Iraq, the additional pay is providing financial gain that the Soldiers view as a positive factor (Boyd & Burgess, 2003). It is important to note that salary and bonuses not only affect the Soldier's continuance commitment, but can also affect their affective commitment, through perceived organizational support and fairness.

In addition to the higher salaries outside the services that could increase members' perceived alternatives, the level of casualties on deployments could also make other alternatives more attractive, decreasing continuance commitment. Thus, deployments during war could have a stronger effect on continuance commitment than deployments during peacetime, if the potential cost of staying in is viewed as holding an extremely high likelihood of death or disability.

To summarize, some aspects of the military, such as the retirement system, reenlistment bonuses, and specialized training may serve to increase a Soldier's sense that he or she needs to stay in the service. With respect to deployments, deployment pays may function in this way as well. This is a positive factor from the standpoint that the Soldier's commitment to the organization is high and he or she is retained. On the other hand, if the deployments are associated with high levels of expected casualties, this could decrease continuance commitment.

Importantly, high levels of continuance commitment should be considered cautiously, however; some research has associated high levels of continuance commitment with negative impacts in other areas such as lower performance (Meyer & Allen, 1997). This suggests the importance of maintaining high levels of affective commitment in addition to continuance commitment, since high performance is important in addition to retention. Thus, while high continuance commitment will likely motivate Soldiers nearing retirement to stay in regardless of deployments, developing affective commitment through fair policies and decisions, job conditions, and other means of support is still highly critical to overall health of the force.

### **Predicting Normative Commitment**

Normative commitment refers to an individual's feeling that he or she has an obligation to stay in an organization; that staying in is the "right and moral" thing to do (Meyer & Allen, 1997). Of the three types of organizational commitment, the least research has been conducted on normative commitment. The correlation between normative commitment and affective commitment in the meta-analysis is high ( $\rho = .63$ ), and the same variables in the meta-analysis that predicted affective commitment also predicted normative commitment. The correlations are lower in magnitude, however, and based on the pattern of results, Meyer et al. (2002) conclude that the constructs do represent distinct dimensions of commitment.

Meyer et al. suggest that the positive experiences that contribute to affective commitment may also contribute to a sense of obligation to the organization to reciprocate. Meyer and Allen (2002) suggest that investments by the organization can create a feeling of indebtedness, which creates higher normative commitment. We reflect these hypotheses by showing perceived organizational support predicting perceived indebtedness, which in turn predicts normative commitment (see Figure 6).

Wiener (1982) has suggested that normative commitment is based on "socialization" – both from family and culture as well as one's socialization into a given organization. "Socialization" refers to a series of experiences that provide messages about the appropriateness of particular attitudes and behaviors. Through these experiences, individuals internalize a sense of what is valued and what is expected of them (Meyer & Allen, 2002). Little to no research has investigated predictors specifically relevant to the development of normative commitment such as certain individual characteristics or the impact of parental values or behaviors (Meyer & Allen, 1997).

One final variable that could logically function as a predictor of normative commitment is an individual's commitment to the mission of the organization. This would be particularly salient in organizations that serve the public or have a "cause," such as nonprofit organizations. In these organizations, a sense of obligation to the "cause" or to the greater good of the general public could create a sense of obligation to the organization, which is the vehicle for the cause or mission. Normative commitment may be particularly strong if there are either few or no other organizations that fulfill that mission or if there are relatively few people willing or able to do the job. Organizations that might fit within this classification include the military services, civil service professions such as the Federal Bureau of Investigations or Central Intelligence Agency, the Peace Corps, environmental groups, the Red Cross, and religious groups. These types of service organizations may also attract individuals who are predisposed to have a high level of normative commitment, although individual differences that predict normative commitment have not been identified (e.g., Meyer et al., 2002). This and the other hypothesized predictors can be seen in Figure 6.



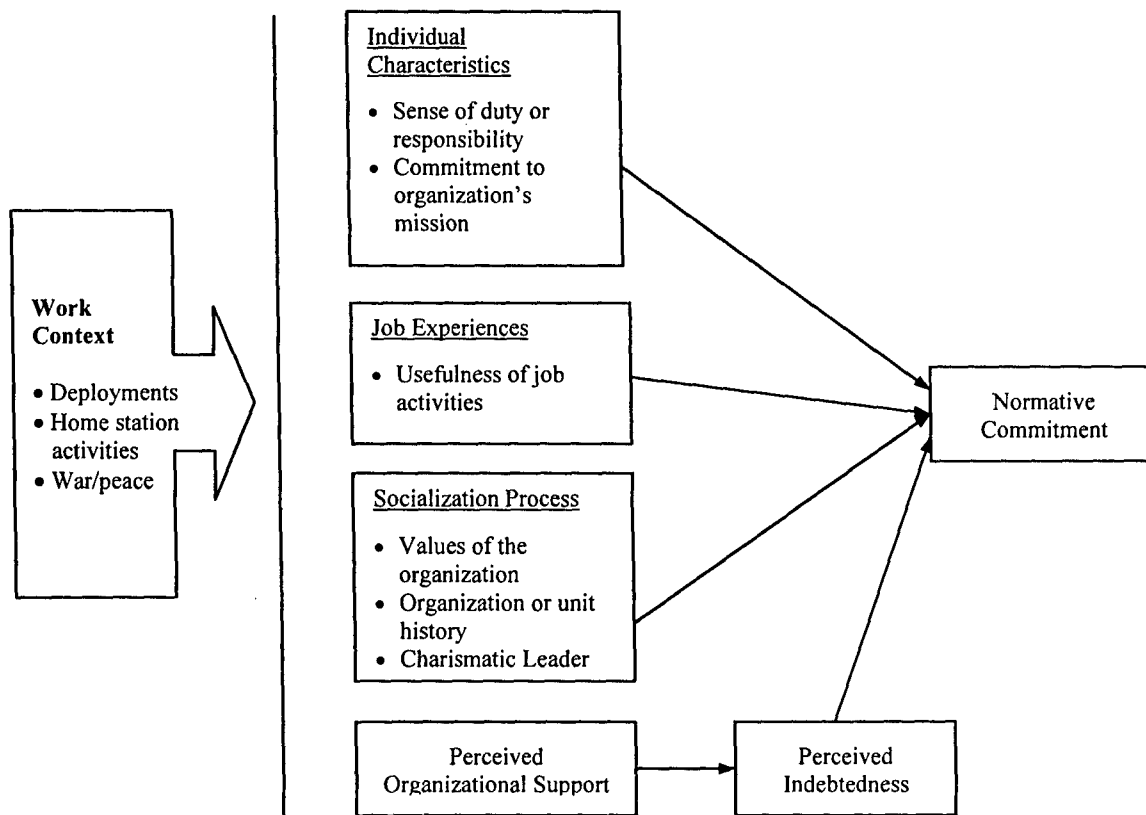


Figure 6. Model of the Antecedents to Normative Commitment

### *Normative Commitment in the Services*

The military provides a strong setting for high levels of normative commitment, particularly through a commitment to the organization's mission. The mission of the military is clearly for the benefit of the general public, and there is a choice of only a few services, all under one government agency. A large percentage of individuals who join the Army report a desire to serve their country, espousing a commitment to a higher cause. Data from the SSMP in the spring of 2002 indicate that the desire to serve their country is one of the top three reasons why both officers and enlisted Soldiers joined the Army (Sample Survey of Military Personnel, 2002).

Comparisons with SSMP data from 1996 to 1999 suggest this finding is stable over time. On the other hand, data from recent recruits suggests that commitment to the country and the military mission may be affected by patriotism and public support for the troops. For example, when incoming recruits were asked for reasons why they joined the Army in FY99, 49% cited "Serve country," while 68% indicated this as a reason in FY03 (Legree, 2004), possibly due to a surge in patriotism post 9/11. Empirical research in industry has suggested that the values of the society around an organization affect normative commitment in the organization (Vardi, Wiener, & Popper, 1989).

The military socialization process provides further emphasis on a sense of duty and obligation. For example, the Army promotes seven values as "Army Values" - loyalty, duty, respect, selfless

service, honor, integrity, and personal courage. Three of these reflect the theme of duty and obligation: loyalty, duty, and selfless service. In addition, individual units often promote reverence for the unit history, ensuring that service members have a sense of pride in the unit's involvement in past conflicts and a commitment to honoring the unit's reputation. This could develop a sense of obligation to the unit, which could in turn increase their sense of obligation to the organization. The role of leaders in the socialization process is critical, and charismatic or transformational leaders can engender feelings of obligation to the unit as well.

Perceived indebtedness would not seem to be an important predictor of normative commitment in the services. While the military provides educational and training investments in service members as well as benefits such as reenlistment bonuses, these benefits that are provided on a case-by-case basis are typically provided as part of a contract that obligates the Soldier to provide a certain number of years of service. Presumably this creates a sense of repayment of the investment rather than indebtedness. As Meyer et al. (2002) suggest, however, positive experiences may contribute to a general sense of obligation to the organization to reciprocate. These would operate in a similar manner to that described in the section *Predicting Affective Commitment*.

### ***Effects of Deployments***

Deployments are hypothesized to affect normative commitment primarily through two of these predictors, perceived organizational support and commitment to the organization's mission. With respect to perceived organizational support and indebtedness, the effects of deployments would be the same as those discussed with respect to affective commitment. The fairness of decisions and policies with regard to deployments, supportiveness of leadership, and job conditions could all impact the Soldier's perception of organizational support and therefore sense of obligation to the organization.

With respect to their commitment to the organization's mission, if an individual has a high level of commitment to the cause of the Army, and he or she views the deployment as furthering this cause, then the deployment could have a positive impact on normative commitment and turnover. On the other hand, if the individual views the deployment as a waste of time or not a worthwhile cause, the deployment could have a negative impact on normative commitment, since the organization is no longer enabling the Soldier to meet their sense of duty and obligation. Individuals who are not particularly committed to the cause of the Army may not be affected either way. Because no research has been conducted in this area, these ideas are concepts that have not been supported by empirical research.

Along these lines, however, Foley and Steinberg (1998) reported that Soldiers deployed for one year for Operation Joint Endeavor (OJE) overwhelmingly indicated that the length of their deployment to Bosnia was too long. There were a number of reasons listed, including the belief that Soldiers should not be deployed for longer than 6 months for a mission other than war, and that they should be allowed to return home when their mission was completed. They felt that their mission was completed when it changed to a force protection and training mission. In addition, about half of the AC enlisted (51%) and a third of AC officers (35%) said they often or very often spent their time waiting around. Foley and Steinberg (1998) suggest that negative views of the mission and deployment length contributed to concern in these Soldiers about future deployments, and that about one-quarter of the Soldiers said they would leave the Army sooner than planned due to their deployment in Bosnia.

While negative publicity regarding a deployment - such as negative press reports and protests - could decrease normative commitment, personal experiences that suggest the importance of the mission could potentially counteract those. Finally, individuals may have a strong sense of obligation to their unit, and a feeling that they do not want to let their friends and unit down when they are needed most. As mentioned previously, transformational leaders may engender a sense of duty and obligation in Soldiers to remain in the Army, thereby increasing normative commitment and decreasing turnover.

## Summary and Conclusions

Our review of the literature on deployment consequences found that deployments impact Soldiers across a range of important personnel areas, including retention, families, health, finances, and readiness. Understanding the specific nature of the effects, however, has been somewhat elusive. The effects of deployments seem to depend largely on the circumstances of the deployment and the expectations of the deploying Soldiers and their families. Number and length of deployments have been found to have varying effects on retention, with a moderate level of deployment activity showing the most positive effect on retention. Research indicates that other characteristics of a deployment, such as the perceived fairness of decisions, conditions during the deployment, and the predictability of redeployment may play an even more important role in Soldier and family reactions to deployments. This suggests that while the number and length of deployments are important factors to consider when making decisions about deployments, they are not the only factors to consider, and may not be the most important factors to consider.

Predicting the effect of deployments on retention requires that we develop an understanding of how reenlistment decisions are made. Research in the area of retention indicates that there are a variety of factors that combine to determine an individual's decision to stay in or leave an organization. This includes their experiences on the job and commitment to the organization, commitments to family and hobbies, their ties to the surrounding community, and unanticipated events that may occur, such as an unsolicited job offer.

Many of these factors are largely outside the control of the organization (e.g., commitment to family or hobbies, unanticipated events). An individual's job experiences and commitment to the organization, however, are greatly affected by the actions of the organization and therefore present an opportunity to motivate members to stay.

With respect to the Army, there are a number of factors that can either strengthen or weaken a Soldier's emotional commitment to the Army. Through their experiences, Soldiers develop beliefs about the fairness of Army policies and decisions. They also develop opinions about the job conditions, the supportiveness of their chain of command, and the level of conflict they experience between their work and family responsibilities. These beliefs are likely to be created in part by deployment experiences and in part by experiences while the Soldier is at home station or in training or other activities. We predict that all of these experiences combine to create an overall sense of the supportiveness of the Army toward them, which, in turn, creates a certain level of emotional commitment to the organization (affective commitment). Because the decision to reenlist is based on many factors, any one experience, such as deployments, would provide only part of the motivation for the Soldier to either reenlist or leave the service.

In addition to this emotional commitment, there are two other sources of commitment toward the organization. One is an employee's sense that he or she *needs* to stay in the organization, either due to lack of other alternatives, or to a significant investment in the organization, such as time earned in the retirement system (continuance commitment). The military retirement system makes

this form of commitment highly relevant to Soldiers. The other source of commitment is a sense of obligation to stay that the employee may have to their organization, the organization's mission, and to his or her work unit – that he or she *should* stay (normative commitment). Due to the nature of the Armed Service's mission and culture, this type of commitment is also highly predicted to be highly relevant for the Army.

Taken together, these three types of commitment combine to form a Soldier's overall level of commitment to the Army. Understanding what creates each of these three types of commitment can provide leaders with insight that can be used to inform decisions, develop policies, and shape leader actions. The most important next step is to use empirical data to inform and modify the models suggested here. In the interim, however, Army leaders who are interested in mitigating the effects of deployments on retention can consider the extent to which current deployments are having an impact on each type of commitment and work to minimize any negative impact. Possible suggestions for how to do this based on our current understanding of each type of commitment follow.

### ***Monitoring Affective Commitment***

Research suggests that the fairness of policies and decisions is paramount to the Soldier's sense that the Army is supportive of them as employees, whether these policies and decisions are related to a deployment or other aspects of their job or career. Importance should be given to Soldiers' perceptions of fairness during the development of new policies and when decisions are being made. While some policies might make sense from a financial or efficiency standpoint, they strike an immediate chord of discontent among Soldiers due to perceived inequities. It would be useful for policy makers to have a process in place that enabled them to obtain a "fairness reality check" by conducting a number of focus groups with boots-on-the-ground Soldiers. This would enable them to test reactions to policies before they are approved and implemented. Even if a policy must be implemented that will be perceived as unfair, the focus groups would provide a forum to determine the level of negative reaction and investigate possible ways to better manage implementation of the policy. A structured set of questions could be developed for these focus groups, designed to obtain reactions regarding fairness. For example: "Who do you think benefits from this policy?" "Is there anyone who 'loses' from this policy?" "Does the policy seem fair to you?" "Who might think this policy is not fair?"

A case in point would be the decisions that are being made regarding separation pay and other deployment-related pays (e.g. Maze, 2004; Army Times, 2004; Tice, 2004; Crawley, 2004c). The general concept of providing additional money to Soldiers who are deployed to dangerous areas and are away from their family for an extended period of time gives Soldiers a sense of support and appreciation for their sacrifices. Questions are currently being considered to determine the best structure for the compensation pays: for example, whether the compensation should emphasize participation in a combat zone or separation from family (e.g., Army Times, 2004; Crawley, 2005). A number of different approaches could be taken to divide the additional money, and doing so in a way that is perceived as fair to the majority of Soldiers is extremely important. Holding a number of focus groups on the topic could not only provide feedback regarding current proposals that are being considered, but could also generate new ideas and approaches. While it is possible that this approach would generate rumors among the Soldiers regarding the decisions that were being made, direct communication sources such as the *Army Times* could be used to ensure that Soldiers are aware that multiple options are being considered and decisions have not yet been made.

While focus groups would probably only be feasible when major policy decisions were being made, any leader could make an effort to do a “fairness check” when making decisions. If time permitted, a leader could simply consider the question of fairness (e.g., “Who might think this decision is not fair?” “Is there anyone who will think they lose from this decision?”). While it may not necessarily change the decision he or she makes, it could alert them to problems that will lead to lower morale and could direct the way in which they convey the message. Optimally the importance of fairness in decision-making would be integrated into the formal training officers receive through military schools or correspondence courses.

Managing Soldier expectations is another theme that was repeated throughout the research on deployments. Having expectations is inevitable. Expectations are tools we use to make the world around us seem more organized and predictable, and expectations about deployments are no exception. Even in the absence of direct information about some aspect of deployments, Soldiers will have formed an expectation based on previous experience, experiences of other Soldiers, information from newspapers, or hearsay. The problem comes when reality does not match up with expectations – this generates negative reactions.

Expectations about redeployment and tour length surface as sources of discontent when dates and times are changed, particularly when they are lengthened considerably. Redeployment expectations are useful because they give Soldiers a goal on which to focus, and represent a light at the end of the tunnel. Moving the date back by an appreciable amount shatters expectations and produces highly negative reactions. On the other hand, withholding redeployment information is not a useful solution to this either, since having that goal to work toward is highly functional for Soldiers and families. While the best solution may be to honor redeployment commitments, in situations in which this is not possible, some type of compensation (although not necessarily monetary) could be offered to try to re-balance perceptions of fairness. This is the essence of the additional \$1,000 a month earned by service members extended in Iraq beyond their 12-month tour (Crawley, 2004b). These service members also had the option to forfeit \$800 of that money in exchange for a guaranteed stabilized tour at their home station once they return home.

Keeping Soldiers well informed of changes that are likely is a valuable way to make the changes less shocking. Although it would be imprecise, a system similar to weather predictions could even be used with leaders providing a periodic forecast such as, “There’s about a 70% chance right now that you will be going home on time.” This would enable Soldiers to moderate their expectations and not become unrealistically hopeful. While weather forecasts are often wrong, they still give people a sense of comfort to have a prediction.

In addition to expectations about redeployment, Soldiers have expectations regarding deployment length. While there is some evidence that longer deployments are related to lower retention, there is also evidence that the service member’s expectations for deployment or tour length affect retention intentions. After years of 6-month rotations to the Balkans, Soldiers may have developed an expectation that typical deployments are 6 months, at the most. This is supported by the fact that the 5-6 month mark was highlighted as a focal point in a number of research studies. If this is true, deployments longer than 6 months would tend to have a negative impact unless or until a new expectation could be established.

Soldiers also have expectations regarding many other aspects of the deployment, such as living conditions, work activities while deployed, amenities available, and the availability of communication with home. Everything leaders can do to create realistic expectations prior to deployment is beneficial for preventing negative reactions by troops and families. It also appears important that leaders work to reduce ambiguity in Soldier’s day-to-day lives on deployments.

While some individuals tolerate ambiguity well or are trained to manage it,<sup>9</sup> most individuals prefer some degree of predictability and control in their lives. With the missions in Iraq and Afghanistan fluctuating from peacekeeping and rebuilding activities to war activities (e.g., see Lowe, 2004), service members can be faced with a situation one hour that requires a wholly different approach for success than the situation he or she faced the previous hour. This role conflict can create uncertainty regarding how to act in different situations. It is important that leaders address changing circumstances with service members and provide knowledge and practice with knowing how to handle them. Toward this end it could be useful to have a brief field handbook for leaders that provides tips on potential problems that can arise from these changing situations, and how to help troops learn how to tolerate them and perform effectively.

Leaders can also manage daily ambiguity by ensuring that service members have a clear vision of what they need to accomplish while deployed and by listening to and communicating with troops. Even if nothing has changed about a situation or condition, it can be useful to communicate this with troops to reduce uncertainty and questions about whether things have changed.

Paying attention to troop morale can provide a surface indicator of problems that need to be addressed. While some morale problems could be due to fluctuating situations like poor weather conditions, others could be indicators of underlying systemic problems a leader needs to address. It is important for leaders to take opportunities to gain information from lower level leaders and even some of the lowest ranking Soldiers regarding morale, perceptions of resources, family concerns, and other reactions to the current mission. While some leaders are very adept at reading subordinates, Soldiers may not show their concerns to leaders very readily. One illustration of a creative approach to communicating with subordinates was a Battalion commander during Operation Desert Storm who opened up a "barbershop" to talk with Soldiers while providing haircuts.

A leader who is able to demonstrate a genuine interest in his or her subordinate's views is likely to become more aware of the problems that they perceive and will also be viewed as more supportive, a benefit in and of itself. Toward this end, a self-assessment tool could be developed that would assist leaders in reflecting on and improving the extent to which their actions create a supportive environment. An example of a self-assessment tool is provided in Appendix A.<sup>10</sup>

Finally, with respect to work-family conflict, there are a number of actions Army and local leaders can take to minimize the negative effects of deployments on the family (see Bell et al., 1996; Orthner & Rose, 2003). These include ensuring that spouses have knowledge of Army systems and how to deal with Army agencies (e.g. medical, other agencies, emergency contact procedures), have realistic expectations for the deployment, and have a personal and social network for support, including strong support from the rear detachment and Family Readiness Group (FRG).

Bell et al. (1996) provide a series of recommendations for ways that the Army and local leaders can provide support to families while a service member is deployed. One key to improve coping with deployments may be to improve communication between the command and the service member and his/her family, and ensure that they have realistic expectations for the deployment (Segal et al., 1999). Unit leaders and FRGs can serve to provide information and assistance, as

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<sup>9</sup> Special operations selection and training programs tend to require a certain level of tolerance for ambiguity and flexibility.

<sup>10</sup> Note that the intention of the assessment tool in Appendix A is to provide a preliminary example only; a thorough development procedure would be required prior to fielding an actual instrument for this purpose.

well as to create realistic expectations regarding the deployment and re-deployment. Schumm, Bell, Segal, and Milan (2000) developed a handbook for FRG leaders that provides information to help families cope with deployments.<sup>11</sup>

Importantly, some recent data from the GWOT suggests that these support elements could be improved; 55% of married Soldiers surveyed from Operation Iraqi Freedom were not satisfied with the rear-detachment support, and 54% were not satisfied with the Family Readiness Group (FRG) support (U.S. Army Surgeon General, 2003).

### ***Monitoring Continuance Commitment***

Due to the investment of their time in the retirement system, it appears that service members would become less likely to leave due to deployments as they have a greater number of years in the service, until they reach retirement eligibility. Even if eligible for retirement, service members who are promoted may be more likely to stay in, given that the increase in pension is typically viewed as worth the additional time. The promotion can also serve as a motivational statement from the organization, identifying the service member as a top performer.

The additional pays that service members receive on deployments provide an incentive to remain in the service, assuming service members view them as fair. For many, these additional pays may serve to reduce the number of alternatives outside the military that could provide equivalent or greater monetary compensation.

The exception to this may be the special operations and other special skill Soldiers. With the high demand for the experience and skills of these Soldiers, additional incentive programs may be required to retain them. Again, existing data suggest that service members who are close to retirement would be unlikely to leave prior to retirement vestment. Those at the greatest risk for leaving to join a contracting firm would be service members with either many years before retirement or those who are already eligible for retirement.

Buddin, Levy, Hanley, and Waldman (1992) reported that promotions are a useful incentive to retain Soldiers. There is some evidence from Air Force pilots, however, that personnel with skills in high demand in the civilian market will turn down promotions to pursue attractive civilian career options once they are eligible for retirement (Hoppe, 1988).

Additional bonuses and incentives can send a message of respect and appreciation for the high level of skill, responsibility and performance of special skill Soldiers in the Army. With salaries available from contractors reportedly ranging from \$100-200K, however, bonuses may not be able to retain personnel who are intent on gaining the money. Leaders of these service members could potentially appeal to other aspects of their commitment to encourage them to stay, such as the importance of their mission, sense of duty and honor, and camaraderie among a group of top-notch performers.

### ***Developing Normative Commitment***

It is likely that most Soldiers hold some sense of obligation to the mission of the Army and needs of the country. It is therefore likely to be important that they view their deployments as worthwhile in furthering the mission of the Army and the needs of the country. Logic would suggest that their personal experiences and the experiences of their unit on the deployment would

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<sup>11</sup> The Schumm et al. (2000) handbook is available through the Defense Technical Information Center.

have the greatest impact on their views in this area, but media coverage and public opinion could have an impact as well. The practice of embedding journalists with troops is probably very useful from this perspective because it increases the likelihood that news stories will capture the events from the perspectives of the service members involved. Troops are remarkably heroic and hardworking so enabling this element of the story to be included is likely to be highly valuable.

In circumstances in which news media seem to be emphasizing negative stories and extreme views, it could be useful at least internally to provide balance to the negative extremism. For example, ensuring that leaders share information reflecting positive outcomes and positive public support with the Soldiers. The goal would be to ensure that Soldiers view what they are doing as important. Both the Soldier and his or her family are making significant sacrifices; these need to be viewed as sacrifices that are worthwhile.

Leaders can also emphasize the importance of their unit's work and show them how their mission fits in with what others are doing on the deployment. They can remind troops how their work provides direct benefits for their country and emphasize the value and uniqueness of choosing to serve your country in the military. Out of a population of close to 300 million people in the U.S. (U.S. Census Bureau, 2004), only 1% serve their country in either AC service or the reserves (U.S. Census Bureau Facts and Figures, 2003). History invariably reads as an account of the causes and consequences of war and its subsequent resolution, which means that today's service members are creating the history books for tomorrow's generation - something that not many people can say.

### ***Conclusions***

None of the ideas described here is necessarily new to Army leaders. What is new is having a comprehensive process for considering how deployments are likely to affect retention decisions. The models presented here provide a systematic approach that increases the likelihood of including all relevant factors. They also provide an organized way of considering strategies to minimize negative effects of deployments in different situations.

Limiting deployment length and number are often discussed as important to maintaining an appropriate level of reenlistment in the services. This approach to minimizing attrition from the force could be useful, particularly if it creates stability and predictability for Soldiers and their families. Importantly, however, models of retention suggest that limiting deployments, alone, would not ensure that Soldiers would remain in the service. In addition, creating expectations for limits or for benefits that cannot be met could be particularly detrimental.

Turnover models suggest that retaining Soldiers requires creating a situation in which the Soldiers develop a sense of commitment to the Army, most importantly through perceptions of fairness and support. This necessitates the constant vigilance of leaders to make the Army, as an organization, demonstrate to its Soldiers the very values it espouses - loyalty, duty, respect, selfless service, honor, integrity, and personal courage.

### ***Future Research***

Finally, the need for additional research was particularly noticeable in a number of areas. First, little research describes how organizational commitment combines with other commitments to determine the individual's action to remain in or leave the organization. While we focused on organizational commitment because it is something over which the organization has a high degree



of control, understanding the process of how it combines with other commitment forces is important to understanding retention. One element that has potential importance in this process is called person-organization fit. Person-organization fit is the degree of compatibility between an individual and an organization based on the similarity of the characteristics of the organization and individual, and the extent to which the organization fulfills the individual's needs (Verquer, Beehr, & Wagner, 2003). A meta-analysis by Verquer et al. (2003) indicated that person-organization fit does have an influence on both organizational commitment ( $\rho = .31$ ) and turnover intentions ( $\rho = -.21$ ).

Related to this, there is evidence that, in addition to the commitment of the service member, the commitment of the military spouse directly affects retention decisions as well (Gade, Tiggle, & Schumm, 2003). Identifying antecedents of spouse commitment and determining how spouse commitment combines or interacts with the service member's commitment would be highly informative. Further, recent research has suggested gender differences in organizational commitment for service members returning from a deployment, with women reporting lower organizational commitment than men (Sthultz, 2004). Possible gender differences within the model could be useful to pursue as well (e.g., see Sinclair, 2004).

Next, regarding organizational commitment, research has found some interactions among the three types of commitment (affective, continuance, normative) in predicting retention. This means that if the level of one is particularly high or low, the other two types of commitment may have little impact on retention. An example would be someone who has fulfilled 19 years out of 20 required to be eligible for the military retirement program, so has a very high level of continuance commitment. If this individual had extremely low affective and/or normative commitment, it is still most likely that they would remain in the service for that last year due to their very high level of continuance commitment. This is supported by the 99% continuance rate cited previously for Soldiers with 18 years in the Army (DMDC, 2003). Despite the intuitive nature of this argument and previous suggestions to investigate it (e.g., Meyer et al., 2000), little research has been done and no theories exist regarding the nature of the interactions among the three types of commitment.

Third, due to the purpose of military organizations and the nature of their mission, normative commitment seems particularly important to the military services. While improvements have been made over time to the definition and measurement of this construct (e.g., Meyer & Allen, 1997), little to no research has focused on demonstrating construct validity or identifying and measuring antecedents and consequences specific to this dimension of organizational commitment. Given the potentially high degree of relevance to the military, it would be particularly useful to research this.

Finally, it is important to note that, while the models and concepts presented here apply to the reserves, the retention situation for the reserves is more complicated. For service members in the reserves, one of the competing commitments they are likely to have is their commitment to their civilian organization and civilian life (see Figure 2). Hansen et al. (2004) found that for personnel in the Guard and Reserve, retention varied with the strength of the service members' civilian earning opportunities, such that personnel with high opportunities for earnings had lower retention. For individuals in the reserves, their reserve job and civilian job represent two sets of potentially competing commitments. Additional research is needed to determine the implications of this and the way in which these competing commitments are resolved.

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**Appendix A:**  
**Self-Assessment of Supportive Leadership Skills**

## Self-Assessment of Supportive Leadership Skills

<p><b>BACKGROUND:</b> Research has shown that the extent to which employees feel supported by their organization and, specifically, by their leader can predict whether the employee will choose to stay with the organization or search for other opportunities. Therefore, engaging in actions that foster a supportive climate in your unit can have a high pay-off for both your unit and for the Army as a whole. This tool provides a way for you to assess some of your actions and how they may or may not impact perceived supportiveness in your unit.</p> <p><b>DIRECTIONS:</b> Read each statement carefully and give yourself a score of 1-5 using the rating scale provided. Please be honest. You may want to think of specific examples of action you have taken to help determine how to rate yourself. After completing the assessment, go back and write down any ideas you have for ways you could improve in each area.</p>		<p><b>Rating Scale:</b></p> <p>1- I never do this</p> <p>2- I hardly ever do this</p> <p>3- I do this to a moderate extent</p> <p>4- I do this to a great extent</p> <p>5- I do this to a very great extent</p>
Statements	Rating (1-5)	Ideas to Improve
I ask my Soldiers for input when making decisions.		
I encourage Soldiers to ask questions or voice concerns.		
I encourage Soldiers in my unit to seek help when they need it.		
I consider the ideas of others as viable options.		
I emphasize the importance of my soldiers' efforts to the accomplishment of our mission.		
I emphasize the importance of our mission to the Soldiers in my unit.		
I do my best to make decisions or policies that support the well-being of my Soldiers.		
I take actions to improve the job conditions of Soldiers in my unit.		
I make sure that Soldiers in my unit clearly understand their mission and how to accomplish it.		
I encourage my soldiers to support one another.		
I watch for Soldiers in my unit who are having family problems.		
I offer positive feedback as well as negative feedback to my Soldiers.		
I reward the extra efforts of my Soldiers.		