NEW MANNING SYSTEM
FIELD EVALUATION
Technical Report No. 4

DEPARTMENT OF
MILITARY PSYCHIATRY
Walter Reed Army Institute of Research
Washington, D.C. 20307-5100
15 DECEMBER 1986
**New Manning System Field Evaluation**

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EXECUTIVE SUMMARY

This is the fourth quarterly report of WRAIR research evaluating the human dimensions of the Unit Manning System (UMS) and the light infantry division concept. This report concentrates almost exclusively on battalion rotation and unit replacement issues pertaining to the UMS. Chapter I provides the background for this research, and sketches the six related but distinct areas of research activity in the WRAIR effort. Chapters II through VI provide detailed analyses and recommendations.

The COHORT concept works. Both survey and interview data at two points in time continue to show small but consistent differences in horizontal cohesion in favor of COHORT units. This finding is not remarkable; it simply confirms what all experienced commanders already know: the longer soldiers train together the better they know one another, and the better they perform.

Remarkable is the persistence of these differences despite almost every type of organizational chaos the Army could throw at COHORT units. COHORT units rotated between Europe and CONUS, and remained better bonded than non-COHORT units. COHORT units endured pronounced leader turbulence, and remained better bonded. COHORT units took up new equipment or resumed using old equipment, yet remained better bonded. COHORT units lived with conflicting information, rumors, resentments (usually by their NCOs), and local disregard of the DA personnel policies, and remained better bonded. The enhanced horizontal bonding in COHORT units is remarkable because it endures despite events and actions most likely to undermine it. Because it is robust—in view of the countervailing forces—the mere presence of differences favoring COHORT is all the more impressive.

In the rotation experience the Army also found a second way to create higher levels of horizontal cohesion. The USAREUR battalions (and one CONUS battalion) simply had their personnel stabilized with the expectation they would serve together for some period of time after return to CONUS. Even these stabilized units showed levels of horizontal cohesion comparable with OSUT trained and stabilized units.

Why this happened remains a puzzle. If the task of creating cohesive units were as simple as pronouncing them stabilized, the Army would have solved the cohesion problem long ago. One possible explanation is that these units had definite tasks that were important, meaningful, motivating, and which required well organized leadership. They continued training, then readied and turned in all equipment, then rotated between OCONUS and CONUS. The tasks, therefore, allowed these units to overcome the leader and information turbulence experienced by OSUT trained COHORT
units. Without a demanding mission like equipment modernization or rotation, simple stabilization may not have had the observed effect.

This is not the whole story, however. Observations and interviews indicate that work life in these units was qualitatively different following stabilization. Apparently the expectation of continued service with the same people permitted the exchange of equipment and expertise across platoons and companies in more ways and with greater frequency than before stabilization was announced. Whatever the reason, the experience of the stabilized units calls into question whether OSUT training is necessary for improving horizontal cohesion in Army units.

Battalion rotation was successful. Extensive interview and observational data confirm that the Army can rotate battalions with few untoward effects on soldiers, their families, or communities. Two major lessons emerge from the battalion rotation experiment.

The first is the inability of the Army to learn from such experiences. Each unit and community faced the rotation problem alone, as if they were the only unit rotating, and as if the Army had never attempted anything like it before. Consequently, some of the same mistakes made in the earlier company rotations were repeated in the battalion rotations. The Army is not through with battalion sized rotations; a number of Apache helicopter battalions will eventually rotate to Europe. They, too, will no doubt also start from scratch, unmindful that many problems have already been addressed and solved.

The second lesson learned is that a rotation is a peacetime, unit, permanent change-of-station move. It is not a deployment. This distinction is important because the planning and operational tasks involved in moving a large group of soldiers and their families requires an enormous amount of time and energy spread over a prolonged period of time. It is the distinction between "taking a trip" and "moving."

Without the additional staff resources necessary to accomplish the move, the units participating in the rotation were forced to devote staff time and energy to this task, often at cost to their operational and training duties. In most cases the primary burden fell on the battalion executive officers. Their performances were outstanding but the costs were high (i.e., the disruption of their normal duties and the personal stress they experienced in trying to manage two full-time jobs).

In addition, some senior officers and staff planners lost sight of the fact that, unlike a deployed unit, a rotating unit must have sufficient time to settle-in after its arrival and before it undertakes major training activities. For the sake of gaining a few additional days of post-rotation field training, some units placed their unsettled soldiers and families in very
stressful situations. Over the course of the previous company COHORT rotations to USAREUR, we learned that those units which took adequate time to resettle families after the rotation generally outperformed those units that rushed into training activities. We expect to see the same findings replicated here.

The most worrisome policy implication of this report lies in the unit replacement data. Interviews and observations reveal very little appreciation by battalion commanders and their senior staff and no appreciation on the part of first sergeants and company commanders and other small unit cadre regarding the importance of capitalizing on buddy knowledge to enhance unit cohesion. Many of these leaders seem oblivious to the possibilities of cross-leveling within companies to create places for replacement packets. Given their druthers, they prefer to fill spaces in total disregard of faces. Unless this mindset is changed, the whole UMS experience will melt back into the individual replacement system it was designed to eliminate.

Changing personnel practices at battalion and company levels will not be easy. The U.S. Army has operated on an individual replacement model since 1917; few company grade officers or NCOs imagine doing business any other way. It is one thing to raise and deploy COHORT companies and battalions which can be done as a matter of policy. It is something else to teach small unit commanders how to use intact replacement packets. Policy and pronouncements have little effect this low in the Army organization where COHORT policy is presently circumvented with cynical disregard.

In summary, the existing data from the WRAIR evaluation of the human dimensions of the UMS lend strong support to three conclusions:

(1) The Army can create battalions that exhibit enhanced horizontal cohesion either by establishing companies with OSUT trained soldiers or by stabilizing personnel and giving them challenging, real missions.

(2) The Army can rotate battalions without destroying horizontal cohesion, and in the process by stabilizing cadre the Army can enhance performance across companies and staff sections.

(3) The whole UMS experiment is in jeopardy if battalion and company commanders cannot capitalize on the cohesion potential of replacement packets of soldiers who already know one another when they arrive at the company or battery.
Chapter I
Background and Overview

LTC Larry H. Ingraham, Ph.D.
and
LTC James A. Martin, Ph.D.
Background

In 1981 the U.S. Army instituted the New Manning System (NMS) and in 1986 renamed this program The Unit Manning System (UMS). The primary objective of this program was to enhance potential combat effectiveness through the reduction of personnel turbulence. By creating more stable units, the Army hoped to: (1) enhance unit training, (2) reduce the potential for stress-related breakdown in combat by promoting interpersonal bonding among soldiers as well as between soldiers and their leaders, (3) increase the soldier's identification with his unit and his commitment to the unit's mission, and (4) develop a greater sense of esprit de corps among unit members and unit families.

The original NMS program was composed of two independent sub-systems: the U.S. Army Regimental System and the COHORT (Cohesion, Operational Readiness, and Training) Unit Movement System. WRAIR's research activities target on the COHORT Unit Movement System and this report focuses on the human dimensions associated with the implementation of the COHORT system.

The COHORT Unit Movement System

The COHORT unit movement system was designed to keep soldiers and their leaders together in the same units for extended periods of time. First term soldiers, who had their initial Army training experience as a group, called One Station Unit Training (or OSUT), were matched with a cadre of officers and NCOs to form a new company sized unit at a FORSCOM installation. These COHORT units had a three-year life cycle geared to the first-term soldier's enlistment. In the majority of cases, these units were deployed OCONUS for a part of the unit's life cycle (18 months USAREUR or 12 months Korea).

In FY85 HQDA reorganized a number of combat battalions under the COHORT Unit Movement System. This was a planned extension of the original NMS program. Eight battalions were formed under somewhat modified COHORT models and these units rotated to and from USAREUR during the summer of 1986 (four units in CONUS switched with four like-type units in USAREUR). There are also four COHORT battalions which were formed (with traditional COHORT companies/batteries) as part of the 7th Infantry Division (Light). These battalions are not currently scheduled to rotate OCONUS.
The HQDA NMS Refocused Field Evaluation

WRAIR scientists have had various degrees of involvement in the HQDA evaluation of the UMS since the beginning of this effort in 1981. These efforts are highlighted in the November 1985 Unit Manning System WRAIR Technical Report #1. In 1985 HQDA refocused its evaluation effort and WRAIR assumed a major role in the evaluation. This role involves several distinct research activities:

(1) Soldier survey. WRAIR, through TCATA and their BDM on-station data collection agents, is conducting self-administered attitudinal surveys among soldiers of selected COHORT and nonCOHORT battalions and companies/batteries both in CONUS and USAREUR (five iterations over three years). The primary objectives of this effort are: (a) to develop reliable and valid survey measures of cohesion (the various human dimensions thought to be associated with unit combat readiness and individual psychological sustainability in combat); and (b) to compare COHORT and nonCOHORT units on these dimensions of cohesion over time.

(2) Spouse survey. In October 1985, WRAIR began a panel study of a sample of wives of COHORT and nonCOHORT soldiers. This study built on previous WRAIR family unit research and investigated the relationship between family life and soldier unit issues. Data collection involves three iterations of a self-administered mailed survey over an 18-month period.

(3) Battalion rotation, family-unit-community study. This descriptive study, which began in October 1985, involves an in depth look at battalion rotation planning and implementation. The study's purpose is to describe the impact of the rotation process on unit members, their families, other community residents, and the community.

(4) Unit interviews. In October 1985, WRAIR scientists began a series of unit visits designed to provide additional qualitative information in support of the COHORT-nonCOHORT comparisons. Three times over an 18-month period, extensive individual and group interviews were conducted with selected battalion commanders and their staffs, company/battery commanders and their cadre, and selected groups of first-term soldiers. These in depth interviews were designed to enhance the interpretation of the survey data, and to allow WRAIR scientists the opportunity to explore emerging issues in ways not possible with sole reliance on a structured survey instrument.

(5) Battalion reconstitution, morale and cohesion. Under the UMS, rotating battalions have stabilized personnel assignments with augmentations made only at fixed intervals. "Packages" of mostly first-term soldiers will be added to the battalion at selected points; these packages will be squads, Platoons, and possibly companies of OSUT trained soldiers. Many
of these soldiers will have trained together and will arrive at
the unit in cohesive groups with the expectation of remaining
together. These groups may be split up to meet the replacement
needs of the battalion. At the same time, battalion members will
have trained together for at least 18 months, and these units are
expected to be fairly cohesive. The implications for morale and
cohesion of integrating a new soldier package into an already
existing and cohesive group are not known. This project is to
describe the reconstitution and socialization process, and to
learn how they affect morale and cohesion.

(6) A study of the 7th Infantry Division (Light). An
associated OMS research effort is an extensive investigation of
the establishment of the Army's first light infantry division.
The research activities at Fort Ord involve: (a) an interview-
observational study over time of one COHORT battalion, (b) a
study of leadership issues across a number of COHORT units, and
(c) a study of family-unit-community issues related to the
establishment and operation of a light infantry division.

Overview

The following chapters (II through VII) of this fourth OMS
report focus on battalion rotation and unit replacement issues. In
Chapter II LTC Martin and Dr. Marlowe summarize interview and
observation data on the process of rotating battalions to or from
CONUS with particular attention to the perspective of soldiers.

The information makes clear that a peacetime, unit rotation
is very different from a unit deployment and that to adequately
plan and carry out a rotation requires additional staff resources
at the unit level and the adoption of a command mentality which
recognizes the settling-in time required by families after any
permanent change of station move. Failure to recognize these
issues resulted in overburdening key unit staff, primarily the
battalion executive officers, and it resulted in morale problems
when soldiers were forced to begin field training before they had
adequately settled their families in the new area.

Martin and Marlowe also point out the role that activities
like Force Modernization had in building cohesion, especially in
units that were not built on the bases of the common first-term
OSUT training experience.

In Chapter III LTC Schneider summarizes observations on the
rotation experiences of rotating families and affected
communities. He points out the critical role of companies in
both information dissemination and in sponsoring effective family
support groups. He further notes that wives groups were usually
effective only in rotating battalions. As will be apparent in
subsequent reports, wives groups required a real world task to
provide group coherence.
On the whole, LTC Schneider reports the battalion rotation experiment was quite successful. The morale of rotating wives remained high, and many considered it their best Army move. What problems there were focused on timely and accurate information dissemination, perceptions of favored treatment in the gaining communities, failure to share plans among communities, and failure to ground family support activities in the companies rather than in the battalion.

Chapter IV reprints a lengthy executive summary of a comparative historical analysis of soldier replacement policies written by Major Kozumplik, and reprinted here with his permission. Kozumplik compared infantry replacement systems among the British, French, Germans, Japanese, and Americans over the past 150 years. He argues convincingly that individual vs. unit replacement is a false dichotomy, since both are necessary. The crucial point, in his analysis, is the necessity of first linking the soldier with a large unit identity (like the regiment) before worrying overly much about cohesion in the small unit.

In Chapter V LTC Schneider sees plenty to worry about concerning replacements in company sized units. Schneider reports observations from a quasi-experiment of inserting replacements into cohesive units during a major FTX. His observations suggest COHORT units can rapidly assimilate replacements, just like conventionally organized units, but that small unit leaders paid little attention to developing either horizontal or vertical cohesion. He attributes the failure to the interchangeable part mentality of the American Army which Kozumplik dates from 1917, to implicit rules proscribing informal contacts among leaders and led, and to a failure to recognize the importance of small group ties in building and enhancing psychological readiness for combat.

In Chapter VI CPT Vaitkus provides an update of the soldier survey of cohesion which now includes two survey administrations. Vaitkus shows that COHORT companies continue to show significantly greater cohesion, although the differences at Time 2 were not as great as at Time 1. The interactions among combat arms and CONUS/OCONUS preclude simple interpretations.

When company sized units were ranked on the horizontal cohesion measure at both points in time, only the light infantry units greatly lowered their ranking vis-a-vis other unit types. In examining the total sample Vaitkus found that units which declined sharply seemed to be marked by leaders perceived as exploitative, unfair, incompetent, and oblivious to soldier needs and welfare. To what extent this explanation can be applied to the dramatic decline in light infantry scores is the focus of our next report.
Chapter II

Battalion Rotation: From Concept Development to Rotation

15 December 1986

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Abstract

Battalion Rotation was designed as an effort to see if the enhanced cohesion brought about by stabilizing soldiers in small groups (i.e., from squads, crews, and sections to companies and batteries) could be carried out at the level of a combat battalion. Despite a number of operational problems, this effort was very successful. The shared experiences of normal training, Force Modernization (primarily equipment changes), and rotation all contributed to enhanced teamwork and interpersonal bonding among the soldiers in these units. What was most impressive was the teamwork and bonding among leaders in those battalions where cadre stability was achieved.

The battalion rotation exercise demonstrated that the Army can rotate battalions. It also provided information on what to do and what not to do in order to carry out such an action effectively and efficiently. In this regard, we learned very clearly that a peacetime, unit rotation is very different from a unit deployment and that to adequately plan and conduct a rotation requires additional staff resources at the unit level and the adoption of a command mentality which recognizes that families need adequate settling-in time after any permanent change-of-station move. Failure to recognize these two issues resulted in overburdening key unit staff, primarily the battalion executive officer. Morale problems also developed in units that forced soldiers to resume field training before they had adequately settled their families in the new area.

The most critical phase of the Battalion Rotation effort is yet to come. This is the reload phase that is scheduled to occur 15 to 18 months after the rotation. There is no evidence that commanders have considered the importance of using a group replacement model to accomplish this reload. It is clear that the reload process has the potential for building on or undoing the positive COHORT effects of Battalion Rotation. In examining the reload process, it is critical that we come to understand how self-sustaining, cohesive, and high performance unit cultures get transmitted and maintained as a unit goes through the process of incorporating new members. In the long run, this may be the most critical issue in all of the Army's Unit Manning System initiatives.
Introduction

Background

The objective. Battalion Rotation was designed to capture the benefits of building a battalion in CONUS then "relocating" that unit, to include family members, on a permanent change of station move. Official planning for Battalion Rotation began with a 1981 HQDA Concept Paper (New Manning System Task Force, ODCSPER, 12 June 81, SAB). Specifically, Annex B of that Concept Paper described Battalion Rotation as a test effort to see if the enhanced cohesion brought about by stabilizing soldiers in small groups (i.e., from squads, crews, and sections to companies and batteries) could be carried out at the level of a combat battalion.

During the past five years other issues have been added to the Battalion Rotation agenda, most notably Force Modernization and Force Restructuring (e.g., conversion to M1 Tanks and M2IFVs and the reconfiguration of Field Artillery batteries to the two platoon concept). These actions have had an important impact on the rotation process and the desired cohesion outcome sought in the original Battalion Rotation plan.

The rotation process. During 1986 four combat arms battalions were rotated to USAREUR in exchange for four "sister" battalions that were brought back to the United States. These battalions (Airborne Infantry, Armor, Field Artillery and Mechanized Infantry) had approximately fifteen to eighteen months to organize and to prepare for this mission. The USAREUR units were COHORTed by stabilizing those personnel in existing units who were eligible to make a permanent change-of-station move back to the United States. Shortages in these units were filled by individuals who were levied from CONUS. The battalions in the United States were typically organized by mating existing unit cadre with commonly trained groups of first term soldiers from the CONUS training base. Cadre shortfalls in the CONUS units were made up by assigning soldiers from other divisional and installational assets and in some cases from other CONUS locations.

Previous COHORT research. For the past 48 months WRAIR has been examining various aspects of the Army's Unit Manning System (UMS). Our attention has focused on the creation, development, and operation of COHORT companies and batteries. WRAIR scientists have examined the various factors that seem to promote and/or inhibit the development of effective relationships among soldiers and the corresponding relationships between soldiers and their leaders at the level of company or battery and below. Based on this research, there is substantial evidence to suggest that the COHORT model of keeping new soldiers together after an intense, commonly shared, initial training experience provides the basis for horizontal bonding up through the level of a
company or battery. What is not yet clear is how the original training experience and the latter shared unit experiences each contribute to this bonding process. We also do not know whether the contributions are independent of one another or whether there is some interaction effect present.

The original premise that the UMS would insure cadre stability and lead to enhanced vertical cohesion was not supported in our earlier research. While some outstanding case examples were found, cadre stabilization was often quite elusive in company and battery sized COHORT units. Our data demonstrated that the UMS rules, both internal (within battalions) and external, were often violated. Cadre turbulence was as great in COHORT units as it was in the units governed by the traditional individual replacement system. Among the most salient reasons for cadre instability were the following:

1. The movement of NCO's and officers out of the unit pursuant to promotion or selection for promotion.

2. The movement of individuals, supported by local authority, on the basis of a belief that "stabilization" would adversely affect the careers of junior officers and senior NCO's.

3. The relief for cause or transfer based on performance levels thought to be unacceptable by senior commanders who considered their COHORT units as highly visible and "politically sensitive" organizations.

4. The resentment of some NCO's at being "locked in" to a rotating unit and the ability of these individuals to effect their own transfer despite the rules.

5. The "normal" local needs for shifting officers and NCO's which led commanders to the disregard UMS rules.

WRAIR's previous research suggested that, when achieved, cadre stabilization could provide opportunities for enhanced vertical cohesion. Based on the interview data, the critical factor for achieving vertical cohesion was the good use of leadership principles at the platoon and company level. Such leadership was most often described by first term soldiers in terms of technically and tactically competent leaders whose efforts were focused on realistic and productive training. Good leaders were described as concerned and fair. Soldiers said that these leaders treated them with respect and that they were usually mindful of their needs as people and concerned about their families. Based on soldiers' descriptions, it is clear that the leaders they were describing had demonstrated a willingness to lead interactively rather than from a distance. When we experienced negative soldier comments about their leaders, we typically encountered well meaning officers and NCO's who were frequently undermined by their own lack of training and
knowledge of the principles of effective small group leadership.

Despite finding a number of COHORT units that were characterized by poor leadership behaviors, soldiers in these units still achieved higher levels of group proficiency than the soldiers in the non-COHORT units in our sample. Where there was effective stabilized leadership, COHORT units were typically described by senior commanders (battalion and brigade) as among the most combat ready units in their respective divisions. COHORT soldiers and units in our original sample also demonstrated higher levels of cohesiveness and greater psychological readiness for combat than their conventional counterparts.

Current research

As part of the assessment of Battalion Rotation, WRAIR scientists participated in the HQDA post-rotation visit to each battalion. Individual interviews were conducted with senior battalion staff members and with the commanders and the first sergeants of two randomly chosen line companies or batteries in each battalion. Finally, small group interviews were conducted with cadre and first term soldiers in these same units.

Based on our previous research and prior contact with these same units, an effort was made to examine the impact of the rotation "lifecycle" on the various human dimensions that are thought to contribute to the overall psychological readiness of these units and to the military and general life satisfaction of the soldiers and their family members. What WRAIR has been able to observe has been the process leading up to the move, the move itself, and the initial settling in period. It must be recognized that the original desired objective, cohesion based on prolonged stability, will only be understood by continuing to follow these same units (and families) in their new location. The original Battalion Rotation plan is only at the half way point. These units have been organized, stabilized, and rotated. The most important outcomes await our continued observation.

Findings to Date

An overview

It is important to view the Battalion Rotation effort as more than the simple event of eight battalions (soldiers, family members, and assorted pets) moving from one side of the Atlantic Ocean to the other side. Each unit went through a unique lifecycle. They experienced a whole series of events that has had an important impact on individual unit members. On the companies and batteries that make up each battalion, on the sister battalions of the losing and gaining divisions, and
finally on the military communities that have both given up and
gained these soldiers and their families as part of the rotation
process.

The rotation lifecycle

The unit formation process. Battalion Rotation really began
in late 1984 when the soldiers in four CONUS and four USAREUR
battalions learned that their units had been designated to
participate in a major Army exercise, the movement of eight
total battalions as part of a CONUS-USAREUR switch. While there
were HQDA ground rules for the personnel actions necessary to
form each of these units (primarily the distinction between a
COHORT fill in CONUS and the assignment of an individual fill in
USAREUR), there were two situations that became especially
problematic. Both involved the NCO cadre for these units.

One of the COHORT personnel guidelines developed by HQDA
required career soldiers to spend a MINIMUM of 48 months with a
battalion before becoming eligible for a transfer to another
battalion. There are very few administrative exceptions to this
48 month requirement. During the period (typically 2 to 3
months) just prior to the official establishment date for these
COHORT Battalions, a lot of NCOs attempted to leave the battalion
before they were "locked-in."

In addition, a number of units did not follow official Army
policy in reassigning NCOs and in a number of cases there were
dramatic differences even within the companies/batteries of the
same battalion. How much inequity actually occurred is impossible
to assess from the data available to WRAIR. However, the
perception of wide-spread inequity was a common theme in NCO
interviews. During unit interviews it was not unusual to hear
stories of how a sergeant in one company was forced to sign a
Declaration Statement (which would bar him from reenlistment)
while another NCO from the same battalion, if not the same
company, was able to transfer out of the battalion "because he
knew someone." It is important to note that many NCO's who were
bitter about being coerced into the rotation were not objecting
to an overseas move, but rather were angry at "the system" they
felt was treating them like a draftee and not a career soldier.

According to the admission of some senior leaders, the
period prior to unit establishment also was an opportunity to
dump their poor NCOs. When this occurred, it was often without
regard to the 48 month assignment criteria. If the individuals
in question were seen by their peers and subordinates as poor
performers, there was very little concern expressed by other unit
members about these actions. There were cases, however, where
the commander's view that an NCO could be dumped was not shared
and where NCOs and soldiers saw this as a sign of inequity and as
a confirmation of their own helplessness in a system out to
"screw" soldiers.
On the positive side, there were unit leaders at both battalion and company levels who used the COHORTing of their units and the planned rotation as a "recruitment" tool. These leaders became personally involved in talking to individual soldiers, and in some cases to their family members, about the advantages of remaining a unit member. Not only were many of these efforts successful, but the commander's public commitment to the unit often had second order impact on other soldiers who witnessed this expression of unit esprit by the commander and the positive response by a fellow soldier.

The second negative impact of unit formation was the assignment of some CONUS based NCOs to the overseas battalions scheduled to rotate back to CONUS. Apparently, a USAREUR decision not to cause a "dufflebag drag" (moving a soldier from one local unit to another) for USAREUR soldiers resulted in some NCOs being assigned to USAREUR for periods of less than 18 months (and in some cases for periods less than 12 months). There appeared to be no other reason for some of these abbreviated assignments. There were some married NCOs who were allowed to come to USAREUR on an accompanied status even though they would not be able to complete a 36 month tour. There were other NCOs who arrived in USAREUR thinking that they were there for a 36 month accompanied tour only to find out that their families (waiting in CONUS in temporary housing arrangements) would have to be called and told that they could not come to Europe at government expense. At the extreme, there was at least one NCO who had sold his house at a particular CONUS installation as part of his relocation to a USAREUR assignment, only to arrive in USAREUR and be told that he would be returning to the same CONUS installation in less than 12 months.

While the actual number of career soldiers who experienced these rotation nightmares was small, the distribution was such that everyone heard about them and the message was clear. "The Army really does not care about the career soldier or his family." As in the initial phases of company rotation, one of the major effects of these negative personnel activities was to make the term "COHORT" the symbolic focus of everything construed to be bad with the unit.

Rather than being perceived as a pattern of loading, sustaining, and maintaining an Army unit, the term COHORT was equated by some soldiers with "forceable" reenlistment and bonus losses, deprivation of schooling, and slowed promotion for career soldiers. NCOs who experienced these concerns often communicated this set of negative perceptions to the more junior soldiers in their units.

Movement en masse (as we described for company rotation) amplifies the normal disabilities of individual rotation. In units where soldiers were not initially well informed (and kept informed), unit members often perceived themselves as having the public status of "guinea pigs," subjects of an unchosen
experiment, and victims of a test designed to "demonstrate that the Army can save a lot of money through unit movement." This led many soldiers (of all ranks) to feel that they were entitled to special considerations in the course of their move. These feelings were often heightened by the fact that the rotation was commonly seen and handled as a special set of events with high visibility. Thus it often generated great concern from the upper echelons of major commands and the Army staff and became the focus of numerous VIP unit visits.

**Sustainment.** The central theme of the period from the unit formation date until three to six months before rotation was training. For the CONUS units this was the period of preparing for and completing the various phases of the unit certification process. In some cases it meant participating in various large scale exercises such as Reforger or making a trip to the National Training Center. In other cases various constraints in training resources made it necessary for commanders to attempt to develop unit level performance in the absence of these kinds of training opportunities.

In two of the four CONUS battalions this was also a period of relative personnel stability which provided the opportunity for the development of both horizontal and vertical relationships within the companies and batteries and a "battalion" identification among unit members. The other two CONUS battalions continued to experience significant amounts of both external and internal personnel turbulence during the sustainment period, particularly cadre turbulence.

For the four USAREUR battalions the sustainment period was heavily oriented toward company/battery and battalion field training. Thus these soldiers experienced a large amount of field time. For two of the battalions, the latter part of this period focused on modernization during which they spent considerable hours, days, and weeks getting their old equipment ready for turn-in. The reward (although for some soldiers it scarcely occurred) was the opportunity to field test the new equipment. The double-edged sword was the fact that these soldiers knew that when they rotated back to the United States they would give up their new (state of the art) equipment for equipment that had been in the Army's inventory for a long time. As one soldier described it, "I will go from a new Trans-Am to a beat-up 57 Chevy."

**The actual rotation.** About three months before the rotation period, the move became a reality to most soldiers. Before that time the battalion staffs, and to a lesser degree the senior company/battery cadre, were already caught up (or better described as tied down) in all the nitty-gritty planning that went into the clearing and movement arrangements for this operation. Except for attending some meetings and filling out lots of paperwork, the reality of moving occurred to the soldier when training stopped and life began to center around cleaning,
inventory, and more cleaning. While most soldiers reported that it was nice to get a break from field training, the actual period of standing down and the duties involved were extremely boring.

Considering the size of the operation and the number of things that could have gone wrong, most of the soldiers and family members who traveled to or from USAREUR reported that they had the best move of their careers (although we must recognize that for many of the first-term soldiers this was their only real move). Individuals who had experienced a prior military move as an individual or as an individual family, were generally very pleased by the move itself. There were numerous stories told of unit members of various ranks (and their families) helping one another during the movement process and during the periods immediately before and after the trip. In many cases the trip itself became another shared experience that helped to build bonds among individuals (and family members), especially individuals (and families) representing different ranks.

If there were any "favored" approach for the actual move (as it pertained to those coming back to CONUS), families seemed to prefer the plan that brought everyone back to the new location as a group, helped people get settled and then allowed individuals to take leave. This was in contrast to the method where everyone went on leave as soon as they arrived at the East Coast (Port of Entry), then traveled to the new location on their own. Their preference was generally expressed in terms of having sufficient time to get settled in at the new location before duty requirements began.

At this point, it is important to stress the distinction between deployment and rotation. It is reasonable to expect a deployed unit to be ready to move into an operational mode immediately upon arrival at its deployment site. These battalions were not deployed. Their rotation was a peacetime, group, permanent change of station move. The only operational expectation reasonable for those rotating units was the assumption that it would take less time to settle a group than it would to settle this same number of individuals if they had arrived on their own from a host of separate locations. It is clear, especially in at least one of the USAREUR locations, that unrealistic operational expectations were present and that these expectations created an unnecessary hardship on families and had a negative effect on unit morale.

The settling-in process. WRAIR's follow-up contact with these soldiers and families occurred just after the actual rotation. For this reason, it is only possible to speculate about the settling-in process and the future. Based on the generally positive moves and our initial observations of individual and group behavior, we expect that most of these units and their individual soldiers and family members will do very well in their new communities.
Two observations support our optimism. First, every unit (at both battalion and company levels) began life at their new site by moving things around, painting, putting up partitions etc., all in the name of making the new location "their own." While soldiers (and some leaders) typically complained that the buildings they received were "trash" and needed lots of repair and cleaning up, in most cases the facilities were generally similar to what they had given up. The fuss they made and all their "fixing up" activity seemed to be related to the psychological process of protesting their perceived loss and recreating their old existence at the new location. These are normal, expected, and quite appropriate behaviors.

The second positive observation was the common command recognition of the importance of initiating field training activities once the resettling had taken place. The time required to resettle families was typically governed by the availability of housing at the individual locations. Most soldiers were actively looking forward to the opportunity to return to field training. This was true even in units that had returned from USAREUR having given up new vehicles for equipment that was either of an older vintage and/or had seen considerable use and required substantial maintenance.

A source of hostility. Like previous company and battalion rotations WRAIR has studied, the rotation to USAREUR was the most likely site for units to experience problems in their relationships with the wider communities in which they had settled. This seems to be the result of the physically smaller communities in USAREUR, and the greater social and psychological impact that result from the arrival of an entire unit. Thus, any and all problems and any negative incidents that occurred were used by the receiving community to characterize the entire battalion rather than being attributed solely to the subsection or individuals involved.

In USAREUR the core of community hostility also often centered (as in the past) on the issue of perceived "special treatment," primarily the allocation of military housing. For example, the allocation of blocks of housing (of a one-to-one housing unit exchange between the CONUS and OCONUS rotating units) was seen as unfair and as a violation of the "normal queuing rules" (e.g., time in country on the local list). In this situation rotation was not seen by members of the community as an exchange of units with all of their appended equipment, entitlements, and facilities but rather it was viewed as an influx of "new" soldiers and families who unfairly displaced those waiting for housing. As noted in WRAIR'S earlier observations of company rotation to USAREUR, most soldiers and their family members perceive all entitlements and benefits as individually based and not relevant to the unit. For this view to change, considerable public education has to take place.
A communications problem. A problem observed in one unit was the difficulty in reconstructing the normal battalion communication system after the rotation. What the battalion XO had viewed as a well organized and highly effective and stable informational system (keyed to the communication pathways established between himself and the company XOs) was seen as ruptured when he (the XO) led the advanced party overseas. For the XO the result was the development of a series of alternative pathways keyed to the S3 and the other battalion staff members who remained behind in the main body.

Following the rotation, the XO felt that it took much longer than he expected to reestablish stable patterns of communication between himself and the other members of the battalion staff. Alternate channels of communication continued to operate and bypass the reestablished normal channels. Information ceased to be passed at its prior level and there was more informational confusion than the battalion had ever experienced with corresponding effects on organizational morale. It required a major effort by the battalion XO and others to begin to restore effective communication and information nets - an effort that was still not completed 3 months after rotation. Unfortunately, the timing of our unit visits did not allow the opportunity to assess whether this was a problem limited to this battalion or whether it was a more systemic difficulty.

Force modernization issues. As mentioned earlier, force modernization also had a powerful impact on some of the rotating units. While the initial transition to the M2-IFV (Bradley) was greeted with enthusiasm, the M2-IFV has, for many soldiers, become a symbol of their loss of status as infantrymen. Many NCOs and soldiers in these Bradley units see a shift in training with a new focus on the skills of the vehicle commander, driver, and gunner and little concern for the development of their skills as leg infantrymen. A significant number of soldiers in the dismount squads have developed concerns about their own soldier skills and tactical abilities. This experience has lowered morale in these units and, in some cases, it has lessened soldiers' trust in leadership that is sometimes seen as "thinking that the Bradley is a tank and using it like one rather than as an infantry track..."

M2-IFV training is compared unfavorably by soldiers (from a leg point of view) with M-113 Armored Personnel Carrier based mechanized training. There is also a lack of comfort with unfamiliar and evolving Bradley doctrine. Whether or not time and more training will alter these perceptions is unknown. At this point in time, a significant number of soldiers talk about requesting leg (113) divisions for their next tours of duty. As many put it: "There is no skill, challenge, or adventure in sleeping (or just riding around) in the back of a Bradley."

Some future issues. There were two concerns which surfaced
in the units that returned to CONUS, both involving the future of these units. The first was a general misunderstanding of Unit Manning System personnel policies. Many individuals, including some commanders and a number of NCOs, did not realize that the current assignment policy still required a 48 month battalion assignment. The common misconception was that the COHORT rules only required them to stay in the battalion for six months after the rotation, then they would be eligible to request some type of transfer. Although most of the NCOs interviewed would probably not want to move after this six month period, the notion that they are again "locked-in" was already provoking the same kind of negative feelings that prevailed when NCOs learned that they could not escape the rotation without signing a declaration statement barring them from reenlistment.

The other concern relates to a period yet to come, the point of twelve to fifteen months after the rotation when it will be necessary to reload first term soldiers into these units to replace soldiers ending their initial enlistments. When interviewed, unit leaders did not know and/or understand the Army's plan for unit reload and more importantly, most of these commanders were not looking toward the concept of group replacement. For them, a reload simply involves getting new soldiers and placing them where they are needed (the concept of a soldier as an interchangeable cog in a machine). The principles of group replacement and developing new cadre from below were less prevalent and sometimes missing altogether as one moved from the battalion commander down through the chain of command.

An important "non-event"

By the time the individual battalion rotations were accomplished, there was a common perception from the highest to the lowest levels of command that what had occurred was a non-event. This attitude was based on the perceived belief that the Army's leadership had already concluded that a battalion rotation program was unsustainable and that any notion of future battalion rotations had been abandoned. While it may not be possible (or desirable) to develop a battalion rotation program to support wartime requirements, it is not true that such rotations are over. In fact the opposite is true. The Army has and probably will always have a need to move large organizations to other parts of the world. For example, in order to meet strategic plans for the defense of northern Europe, two battalions will exchange places next year (an Armor unit will relocate to USAREUR and a Mechanized Infantry battalion will return to the United States). These moves will be followed by the rotation of Apache battalions to USAREUR.

Based upon these realities, what occurred this summer was an important opportunity to learn how to efficiently and effectively move large units (and associated family members). With this in mind, it is critical that HQDA insure that all relevant information pertaining to this summer's rotations be gathered in
one place and that a small group of knowledgeable staff officers prepare an historical document that can be used as a planning guide for any future large unit move. With such a document in mind, two observations are noted.

Who takes the lead

An interesting organizational observation from the Battalion Rotation exercise was the lack of consistency from HQDA through the MACOMs, Corps, and Divisions involved, as to the staff activity that had the lead in carrying out this mission. During the planning and implementation period, there was also a continual coming and going of key planners and program operators at every level from HQDA down.

Based on our observations, it is apparent that those commands that viewed this action as an "operational mission," and thus assigned primary-staff responsibility to the G-3 staff community, were the most successful in effectively carrying out the rotation. This is not to deny that many of the most complicated and difficult issues were in the personnel arena. It simply suggests that this was an operational mission and that the core issues for all of these units were always of a training/mission nature. The higher the command involved, the more likely that the critical decision issues were in the operational arena. Like any other mission, having a stable leader and staff handling the operation contributed significantly to the quality of the outcome.

Paying the price

Rotating a battalion in or out of a military community is an expensive action. To do it and to do it well takes time and energy and a substantial expenditure of funds. It is not done well if it comes "out of the hide" of a unit or a military community. Without supplemental staff and dollars, the move suffers and more importantly, the normal operation of a unit and a community suffer. These "unfunded" costs and associated decrements in individual performance and attitude were common experiences in almost all the battalions and the communities involved in losing and gaining these units.

In planning a future rotation, it is important that the operation include sufficient resourcing to insure success without jeopardizing the normal operation of the organizations involved. In most cases the personnel resourcing needed to affect the planning actions is simple and relatively inexpensive. For example, if each of the rotating battalions had been given a senior NCO and a civilian clerk (temporary hire) with a personal computer (and the necessary software) to handle the administrative aspects of the movement plan, we would have significantly enhanced the rotation planning process and we would have allowed these battalions the benefit of a full time battalion executive officer.
In most cases, the battalion executive (and often the commander) became so tied down with personnel issues associated with the rotation that other battalion operations suffered (and so did the XO’s). The lack of stability at the S-1 position in most of these battalions only worsened this problem. The typical tenure for the S-1 in these units was less than six months, hardly the kind of stability that would allow them to become and remain the focal point for rotation planning. The PAC was by far and away the most stressed and disrupted organization in most battalions with several psychological stress casualties reported.

At division and corps levels, specific staff officers were designated to coordinate rotation actions. The major difficulty at these levels was the continual reassignment of individuals. The lack of continuity in key positions at senior commands was a continual problem that plagued rotation planning.

The requirement for outprocessing, clearing, and moving departing units and (often at the same time) inprocessing and settling new units represented another situation where necessary assets were not always present. These actions did take extraordinary efforts and expenses. Typically they were carried out without any increase in people or money. The human and dollar costs were "eaten" by these communities at the expense of other community residents. These were critically important issues in USAREUR.

Developing stable units and enhancing cohesion

It is important to recognize that some COHORT units experienced considerable internal and external turbulence before, during, and immediately following the rotation period. The stability we normally associate with the COHORT concept was compromised by the personnel movements required by the OCONUS rotation and the changes necessitated by the Force modernization actions that took place before and immediately following the rotation. Unexpected was the degree of internal turbulence in CONUS and USAREUR caused by the significant leadership changes that took place prior to the rotation. Most of these changes seemed to be in violation of stated HQDA policies and were in direct conflict with the intended spirit of the HQDA guidelines. For example one battalion commander changed his company commanders and first sergeants at the time of rotation in order "to keep the brigade and division from ripping us off as soon as we arrived." A number of battalion commanders did not believe that their senior commanders (and the brigade and division senior staffs) would honor the HQDA stabilization policy for the "lock-in" period after rotation. For the soldiers in battalions that experienced leadership turbulence just before or after rotation, the unexpected change-in-command was "just another example of why they shouldn't trust their (the Army's) promises." They had been led to believe that they were in "stabilized" units. As soon as they moved, leadership changes
took place that they did not expect and did not understand.

While it is impossible to create absolute stability (especially when you are trying to do two or three actions at the same time), it is possible to develop relatively stable units. Over the twelve to eighteen months leading to the rotation, a number of companies, and at least one entire battalion, was able to develop considerable stability at the level of platoon and below. These soldiers and their leaders went through a number of shared experiences: field training exercises, preparing equipment for turn-in (as part of both Force Modernization and rotation), and drawing and fielding new equipment (again, as part of both Force Modernization and rotation).

These soldiers shared, with each other and with their immediate leaders, the actual experience of a group move. Taken together, these events served to enhance the psychological identification of these soldiers with each other and with their immediate leaders. These same soldiers expressed a strong preference for remaining together should there ever be a combat event and a belief that together their unit would be "all in combat." Even in the few cases (and they were very few) where soldiers expressed animosity towards other members or their immediate leaders, these same soldiers expressed a preference for remaining in "their" unit versus going to another unit should combat occur.

As a general observation, the more stable the group (to include their immediate leaders) the more confidence group members expressed in their own soldier skills, the greater their trust in their peers, and the more they expressed confidence in their leaders. In at least one battalion, this stability and corresponding trust extended to the level of overt bonding among platoons in the same companies (e.g., talk of help extended between platoons as part of the Force Modernization efforts to include sharing of tools, parts, and specialized knowledge. This was done in a way that conveyed genuine interest and concern among the various members of these platoons).

However, it must be continually emphasized that the major forces involved in the creation and maintenance of that vertical cohesion, which is so important to the sustainment of the group in combat, are those forces involved in the long term pattern of relationships between leaders and soldiers. As previous and current WRAIR research has demonstrated, neither stabilization nor any set of discrete events or manipulations of events will create vertical cohesion in an organizational climate where leaders behave unpredictably and arbitrarily or where leaders evidence neither concern nor respect for their soldiers. In units where soldiers distrust their leaders, charges of careerism and favoritism are made, and the soldier considers his familial and personal needs disvalued by his leaders. A fair proportion of the best effects of the COHORT system can be undone by the leader who constantly addresses his unit in terms of "you people" and
"your actions" instead of "we and "our" actions.

Summary

Battalion Rotation, despite all the problems noted, was a success. With some exceptions stable units (company level and below) were formed. The shared experiences of normal training, Force Modernization (primarily equipment changes), and rotation all contributed to enhanced teamwork and interpersonal bonding among the soldiers in these units. Most impressive was the teamwork and bonding among leaders where stability was achieved from the level of battalion commander (through the staff positions) to company/battery/platoon sergeant levels. A large part of the success achieved in the Force Modernization and the rotation mission was a result of the cohesion developed among the unit leadership in these COHORT battalions.

The battalion rotation exercise demonstrated that the Army can rotate battalions. To be successful a unit rotation needs to be viewed as a mission. It requires an operations order and someone to be in charge to insure that at least the spirit of the order is followed. Resources (people, equipment, and funds) necessary for completing the various parts of the mission have to be provided to those who need them. Finally, the participants need to understand the nature and purpose of the mission, including the concept of the order, so that they can adequately carry it out. In a number of these aspects we can do better the next time we move a large group.

Does the COHORTing of a battalion (and its rotation) enhance cohesion beyond what is gained in a company/battery level effort? At the level of the soldier, probably not. What it does provide is an enhanced level of knowledge and common identification among the cadre that crosses the boundaries of the companies that compose the battalion.

There were some very important gains, as noted by several battalion commanders, in terms of the stabilization of company level leaders and the battalion staff. These included greater cohesiveness of the battalion staff and a greater cohesiveness and knowledge of, and therefore predictability of, the behavior and performance capacities of company/battery level leaders. As one battalion commander put it, "I have a knowledge of my commanders' personalities and of the personalities they have created for their units that I have never had before in my career. I know at this point, if I am attacking into the unknown to send unit Y. They will exploit the terrain, move methodically, and never stumble or dash into a fire sack. I would keep unit Y as my reserve knowing that their unit personality is such that they would move out like a bullet and bowl over anything in their way and get to where they have to get as quickly as possible...." Again, it was observed in this
context that, "We know each other so well that we can keep our radio traffic down to the bare bones. They didn't know how to deal with us at NTC because we barely needed to talk--just give map coordinates..."

Does Battalion rotation cost too much? This is really a function of the plan. The current battalion rotation exercise was very expensive. Much of the costs were associated with the types of plans developed. The most critical costs, however, were not the dollars expended but the costs incurred in lost training time and the corresponding impact on individual and organizational combat readiness. Based on our interview data, the costs in these areas were substantial. Could some of these issues have been handled differently? Based on our interviews with both soldiers and leaders, the answer is yes. The tasks of evaluating these costs and specifying alternative methods are beyond WRAIR's abilities but are clearly issues which warrant HQDA concern and attention.

Now that the rotations have been completed each of these units have entered into a new phase of the original plan. They are in the sustained training and operations phase that will eventually be followed by a reloading period. It is important that HQDA continue to follow these units and their progress at least through the reload process. Without a look at the complete picture, we will never appreciate the full value and/or costs of the Battalion Rotation effort. The way in which the reload process is handled and the patterns for incorporating the reload groups into the unit can either undo the positive COHORT effects or build upon them. In the process of examining this phase, it is critical that we come to understand how a self sustaining, cohesive, and high performance unit culture can be transmitted and maintained as a unit goes through the process of incorporating new members.
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Chapter III

Battalion Rotation: Military Family And Community Issues

FINAL REPORT

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25 November 1986
This study examined the effects on the military family and community of rotating entire battalions between CONUS and OCONUS sites. All eight rotating battalions were included, along with six designated "comparison" battalions. Data were collected through interviews conducted approximately six months prior, two months prior, and four months after the rotations took place. Included in the interviews were commanders, cadre, representatives of community support agencies, and family members. Interviews were semi-structured and open ended in order to provide respondents the opportunity to discuss issues which were important to them. Responses were organized into four areas for presentation. These were information dissemination, wives groups, morale, and community effects.

Information dissemination: Many wives (and soldiers) lacked knowledge and understanding of the purpose of the battalion rotation program. This was due to the lack of adequate publicity at the community and major unit level. Most battalions instituted techniques to disseminate information to unit wives. The most successful of these relied on company level organization for managing the process. A major shortfall was the lack of sharing of plans, problems and solutions across divisions.

Wives groups: Each battalion recognized the value of having organized wives groups to help wives support one another. With one exception, they were only effective in those battalions which were rotating, probably because they had a clear "mission" (helping with the unit rotation). Across all units, wives groups were most effective when they were organized at the company level, included wives of all soldier ranks, and had active support from small unit leaders.

Morale: Morale of wives in the rotating battalions was generally high, and most greatly appreciated being part of the battalion move. In two communities, a widespread belief that the arriving battalions received preferential treatment led to resentment and anger in the comparison battalion and the larger community. Preferential treatment for any group should be avoided.

Community issues: Each community evolved a comprehensive and reasonable plan to support the battalion rotation program. There was no effective sharing of these plans among the affected communities. Community and installation communication media should have been more widely used to disseminate information about the battalion rotation, and limit the perception of special treatment as discussed above.

The report concludes with a series of recommendations for procedures to enhance future unit rotations.
Introduction

Associated with the implementation of the Unit Manning System (UMS) is a program of rotating entire battalions, including family members, between CONUS and OCONUS locations. This study was designed to describe the effects of the battalion rotation program on the military family and community.

The movement of intact families with units has the potential of considerably enhancing the support and well being of spouses and soldiers during a period normally associated with high stress. This potential was formally recognized in a White Paper (1983) titled "The Army Family:"

Our policies must recognize that soldiers cannot perform efficiently while distracted by overwhelming family concerns. In short, we do not detract from organizational productivity supporting Army families; rather, taking care of our families enhances both readiness and retention (Army Chief of Staff, 1983).

A "sense of community" can contribute importantly to psychological readiness. Soldiers who are confident that their wives could get help from within the community eliminate one important worry during field exercises. Wives who feel confident of such help also give greater support to their husband's absence.

At the same time, the rotation of an entire battalion into or out of a community has the potential to disrupt the support the soldier and his family receive from the unit and the community. Furthermore, the ability of the community support agencies to respond to both ordinary and extraordinary needs of families may be overburdened by the large number of people leaving and entering the military community during a battalion rotation. Community support for the family can be mitigated if the rotating battalion is not integrated into the community. For example, previous work with company rotation (WAIR TECH REPORT #1) demonstrated that a "we-they" attitude developed due to the perception of favoritism for COHORT families. As a result, COHORT families were treated as "outsiders" following rotation into the community. Feelings of isolation and resentment experienced by these COHORT families can be detrimental to the development of social supports and a sense of community, both of which are important attributes of psychological readiness.

Methodology

A total of 14 battalions were studied, eight of which rotated (four battalions assigned to CONUS posts and four similar battalions OCONUS) by exchanging places of assignment. In addition, six of these eight rotating battalions had a designated co-located "comparison" battalion which did not move. Under the
battalion rotation concept, soldiers were stabilized in their units for about 36 months (the 12-18 months period prior to the rotation, and an 18 months period after rotation). Generally, soldiers in the stabilized battalions (popularity referred to as "COHORT" battalions) with enough time remaining in service to complete an overseas tour were required to remain in the battalion. Soldiers who desired to bring their wives overseas had to extend their enlistment to meet the 36 month requirement for accompanied tours. Additional soldiers were assigned to the battalions to ensure that they would rotate with stabilized soldiers at close to 100 percent strength.

Data concerning the impact of battalion rotation were collected from three sources. 1) interviews of representatives from garrison agencies (DPCA, ACS, Housing, Transportation, etc.) which are set up to serve the needs of soldiers and their families, 2) discussions with unit cadre (company through corps) who were involved with the movement, and 3) individual and group interviews conducted with wives of soldiers in the 14 battalions.

Interviews were conducted using a semi-structured format. They were conducted individually or in groups ranging up to eight in size. Participants were chosen by the companies in each battalion. The total number of interviewees was about 425. In order to encourage freedom of expression, interviews were conducted separately for officers' wives, NCOs' wives, and wives of lower enlisted (S-4 and below).

Interviews were completed during three study phases. Phase One was conducted six to eight months prior to deployment, Phase Two was conducted one to two months prior to deployment, and Phase Three was conducted about three months after deployment.

Results and Discussion:

Results are organized into four content areas: 1) information dissemination, 2) structure of wives groups, 3) morale, and 4) community effects. These content areas captured the critical issues as raised by spouses, military leaders, and other community members. Each topic will be discussed as it appeared during each of the three phases. Unless otherwise indicated, the information presented applies to both rotating and non-rotating battalions. To help ensure unit anonymity, we generally avoid referring to locations of the battalions.

Information Dissemination:

This area is discussed first because it is closely tied to all aspects of the move. As such, it represents both the solution to a number of problems and the cause of others. Under the typical individual replacement system, soldiers and families receive no more than four months advance notice for an overseas
move. However, spouses were included in the information dissemination process early in the planning for battalion rotation. Most knew as long as 12 months prior to the rotation that the unit would rotate overseas, and they would accompany their husbands. Wives and soldiers were pleased that they could and would travel together. While this advanced information could be regarded as a benefit, at the time of the Phase One interviews there was considerable uncertainty and anxiety among the wives about what would happen. Each of the rotating battalions had an active program for informing wives about these events. This included use of fliers and newsletters, mostly delivered via their husbands. Unfortunately, frequent changes in plans undermined these efforts. These changes often reflected the fact that the Army was still in the process of making major decisions related to the move (e.g., could pets be shipped on MAC flights, could military busses be used to assist soldiers shipping cars, etc.). Information dissemination at the time of Phase One proved to be a mixed blessing.

The uncertainty was not limited to wives. Among enlisted cadre, there were complaints that the "COHORT" system would irrevocably lock them into their units, and prevent military school attendance, opportunities for assignment elsewhere, and even promotion. This was a COHORT rather than unit rotation issue. It illustrates the point that we found very little knowledge among cadre or families of any unit concerning the purposes of COHORT or battalion rotation.

At Phase Two, in spite of the considerable effort expended to establish communication with wives, a number still complained about lack of information from and contact with the Army. Even though battalion wide meetings had been conducted, and newsletters were sent to each wife (usually via their husbands) many women complained that they did not know exactly when they were going (information which was in the newsletters). We do not believe that communities, units or wives groups can be faulted for this. We attended a number of information meetings conducted for company sized units, and have studied the documents which were prepared by each battalion for the wives. The information was usually timely and accurate. We did, however, find that battalion wide meetings make an especially poor forum for information dissemination due to poor acoustics, ambient noise, and the lack of opportunity for personal involvement.

The information dissemination problem is chiefly due to other causes. The Army is not organized to support efforts on the part of the unit to keep in touch with and provide information to families. We have spent a considerable amount of time working with the commanders and wives who organized such efforts along with the NCOs who were responsible for actually compiling and recording names and addresses. The living arrangements of the married lower enlisted population (the one which is frequently the most difficult and yet most important to reach) are far more fluid than those of older persons. A wife
will frequently leave the area for weeks or even months during periods of heavy field duty. Entire households are moved to be nearer friends or to save a few dollars per month in rent. Maintaining accurate rosters of names and numbers is a difficult and time-consuming task. Monitoring and updating mail lists takes hours each time it is attempted. Computer support and programs to support mail list management do not usually exist making updates difficult. It is likely that members of a wives group could keep the lists up-to-date on their own; this would require some quality time (and considerable cooperation) with the personnel NCO and probably the first sergeant. This can best be accomplished at company (rather than battalion) level. Access to duplicating machines is, and franking privileges are, uneven across divisions. Finally, externally forced changes in plans make information dissemination especially difficult. Unit commanders are almost always sincere in their desire and efforts to get timely and accurate information to wives. But as one NCO wife said, "I got a call from the commander — he said, 'you didn't put that out already, did you?' The plans had already been changed."

No battalion (or military community) has established provisions to assist or maintain contact with spouses who choose not to rotate with the battalion, or spouses who have temporarily moved away. Such wives remain a concern for the soldiers and in many cases will be a part of the "military community" in the future. Maintaining contact with these wives would be a cost effective way of helping to ensure the future success of organizing efforts.

The non-rotating (comparison) battalions suffered from the same difficulties with information dissemination, with some additional effects. The most important of these is the higher turnover which affects most military units. This greatly increases the difficulty of maintaining adequate mailing lists.

Wives Groups

At Phase One each battalion had a formally constituted officers' wives group. These remained fairly constant for all battalions throughout the study, with groups in the rotating battalions maintaining a continued high level of activity. Among rotating battalions several companies had wives groups, comprising officer and NCO wives. Attendance by wives of enlisted soldiers was atypical at that time. Most of the wives groups had been recently formed and depended on wives of company level leadership for their organization. During Phase One, one battalion had a monthly meeting for enlisted and NCO wives, which was sponsored by a First Sergeant's wife. The primary function of these groups was apparently to provide information to other wives. The anticipated battalion movement provided a good organizing theme which served to get the attention of many residents. Their effectiveness seemed to depend on the vigor with which the battalion commander, his executive officer, and
their wives pursued the goal of information dissemination. In all but one case considerable effort was made. In the absence of an organizing theme such as rotation overseas, interest in wives groups or information chains was much lower in non-rotating battalions.

Organizing these groups always involved a number of officer wives, and generally did not include enlisted wives except for first sergeant's wives. The exclusion was not necessarily purposeful--officer wives claimed "the meetings are open to everyone," although the enlisted wives claimed meetings were only for officer wives, or that they did not know about the meetings. The rank differences of their husbands appeared to serve as powerful barriers to cooperation and communication. These differences were often reinforced in the everyday conversation of the soldiers, as well as in negative beliefs about "fraternization" on the part of the spouses. "Fraternization", the idea that wives of junior soldiers should not associate with wives of higher ranking individuals, was often given as a reason for not associating with other wives or the wives groups. We frequently found frustration expressed by these leaders and their wives because of the lack of interest in attendance by enlisted wives in these organizations. At the same time, few wives (or military leaders) had formal training in managing voluntary groups (e.g., identifying and organizing volunteers, leading volunteers, conflict management, etc.). We did identify a number of women with experience working with and leading such groups (PTA, Girl Scouts, etc.). However, the large majority with whom we spoke had neither training nor experience, and reported that such training would be useful to them.

The major shortcoming of these groups was their general failure to adequately identify, motivate and utilize wives with special skills or knowledge; e.g., those who had been assigned to the new community on a previous tour. Our interviews discovered, for example, German-born wives who reported that they would enjoy helping with language training, and others who had been assigned to the community to which the battalion was rotating. Others reported experience with wives groups. In some cases wives had to be aggressive in their pursuit of volunteering.

Among non-rotating battalions, command interest in wives groups was frequently low (excepting officers' wives groups), although one battalion had an exceptionally strong wives organization. That was the only non-rotating battalion which was actively involved in organizing all enlisted wives and which possessed accurate mailing lists for the wives. At the time of Phase One data collection, there was little knowledge and no concern expressed on the part of these wives about possible effects on them due to battalion rotation.

At Phase Two, in the rotating battalions, wives groups had been in operation for at least eight months and all had expended great effort in getting information to the families in the
battalions. They were, in fact, doing everything they could think of to get information to the wives. This included meetings conducted by company groups, sending out flyers and information letters (one battalion sent out one per month), and personal telephone calls. The structure of the groups usually followed that of the battalion, with responsibility for organization resting with the commander and his wife, with and contributions from the remaining officer staff. Except for groups organized at the company level, few of the formally constituted wives groups included wives of enlisted soldiers. By this time, the "family support group" (PSG) concept had been generally popularized and actually institutionalized at several posts. When present, they were organized around the battalion, usually with additional company groups each of which had representatives at the battalion meetings. A major obstacle to getting many wives to the meetings was their difficulty finding or affording adequate child care services and facilities.

By Phase Three, the numbers of individuals (wives of enlisted and NCOs) who reported that they were not members of any formal wives group and who did not know about any such groups, (about 40% of our interviewees) continued to be surprising. Most enlisted wives expressed the idea that it was an NCO or officer wives' prerogative or responsibility to organize and set up such groups and functions. On the other hand, about half of these reported being part of informal groups of wives which were often but not always organized around the company. These groups were usually organized by one or more women who were simply interested in doing things with other unit wives. They involved wives of all soldier ranks (companies frequently have only one or two married officers).

When wives groups were supported by the company leadership, they were especially effective in enhancing mutual support networks among the wives and engendering positive feelings about the unit. Support from company leadership included assisting with duplication, ensuring representatives had time with the first sergeant to obtain training schedules and names of new soldiers and wives, providing meeting rooms, advertising wives meetings and activities. Members of such groups always reported numbers of examples of how they helped each other and how important such help and their friends were. On the enlisted side, the perception that the unit cares about them (expressed through newsletters and at least one personal phone call) was as important for ensuring that the wife had a positive attitude about the unit and the Army as joining a formal wives group. Some described other informal groups which were not related to the Army (e.g., wives around where they lived, church groups, etc.) which were also especially effective in providing friendship and support. Following return to CONUS, many women expected that it would be more difficult to get together because they were more spread out. However, some of the company level wives groups which had functioned closely in OCONUS had already held meetings in the States.
In 11 of the 14 battalions, senior leaders reported that either they or their wives were responsible to ensure that enlisted wives were organized. In spite of this formal emphasis on organizing wives, few of the officers' wives in about half the battalions were aware of how enlisted wives were organized. Most presumed that the senior NCO's wives arranged or guided such organization. We found generally little coordination among officer, NCO and enlisted wives, the exception to this occurring among those wives involved at the company level.

Fraternization continued to be reported in some units as a reason for not associating with other wives. It is not clear to us whether this was used as an excuse for failing to get together, whether husbands feared negative consequences (as some wives reported), whether it represents a statement of discomfort with perceived class differences, or whether these wives actually believed such socialization to be illegal. At any rate, there often seemed to be strong sanctions against mixing of wives across ranks of their husbands. These barriers were noticeably absent when groups of wives organized within the platoon or company or outside of the formal wives group structure.

Morale Issues

At the time of the Phase One interviews, most wives we spoke with had heard that they would be moving as part of the battalion. Still, a number did not know that they were going, and a few indicated that their husbands had not made a final decision to transfer overseas (even though they probably had no choice). One concern of these wives at the time was the impact of battalion rotation on their husband's career. Many believed that they would be "locked in" to a unit with limited chances for promotion (again, this is a COHORT issue). Also, in some battalions soldiers who declined to remain with the battalion had to sign a bar to re-enlistment.

Two major morale issues raised by wives were not specifically related to battalion rotation. These were "perceived meaningfulness of husband's duty" and 'predictability of his work hours." Wives will support long hours, but only when they believe that soldiers' time is well spent. Many complained that their husbands were attending to "busy work" during parts of the duty day, and then must wait around at the end of the duty day for a formation which only tells them what time to report the next day. In many units soldiers were held late for arbitrary reasons; this was often coupled with resistance to allowing soldiers to call home to explain that they would be late.

Most wives genuinely looked forward to the battalion moves. They reported that they expected to be well cared for by the Army, the unit, and especially by other wives. Moving with intact families was "great," and traveling with friends would provide them help in case of problems. In cases where a particular wife expressed doubt about the move other wives
frequently tried to convince her of the merits of going overseas as a group. The idea that "We will do this together, by helping each other" was expressed often before and after the move.

In this battalion rotation process a number of wives of lower ranking soldiers were now eligible to move with the battalions. These women are naturally somewhat younger than the average, and as such represented a high risk group for problems of all kinds. The fine support provided one another by unit wives seems to have prevented untoward problems in this younger group.

Sponsorship of incoming families was problematic during Phases One and Two for all battalions. (This continues to be an area in which the Army can improve). Officers' wives were generally well taken care of, and NCO wives frequently (but less than half) had a "sponsor" to show them around and help them in the first few days at a new post. It was rare for any enlisted wife to report that anyone from the military contacted her during this critical time. Exceptions to this occurred only when small groups of wives organized themselves at the platoon level, or when a particularly active wife of a small unit leader (usually at platoon level, often from a company) made it a point to ensure that such contact was made. Contacts at the platoon level usually resulted in long-term relationships between wives.

Among rotating battalions at Phase Three the large majority (about 80 percent) of wives reported having had a sponsor. Generally, these were reported to have provided outstanding assistance, although a number reported sponsor's performance was perfunctory or non-existent. By that time, many of the wives who had remained active in recruiting and organizing formal support groups began to experience frustration due to the difficulty of dealing with "uninterested" wives, the difficulty in getting information disseminated, and their own anger at the changes in policy/information which they themselves had to explain and deal with. In spite of this, their commitment was remarkable and the majority of wives (we estimate over 90%) were informed well about the mechanics of the rotation. Nevertheless, few wives had any idea of what COHORT was or what the rationale was for stabilizing battalions and moving them as a unit.

The Phase Three interviews indicated that from an organizational perspective, the battalion moves were conducted very well. The moving and inprocessing support provided the arriving battalions was superior to that given to soldiers arriving as individual replacements. The major problems which were experienced involved assignment of housing (and certain associated pay problems) and beliefs about unfair (unequal) treatment. The housing issue seems to have had its genesis in promises or inferences made about what would be available, or what would be done to support the arriving families. Many believed that they would have immediate access to government housing, or at least an abundance of affordable housing on the
economy near post. Each post handled the housing issue somewhat differently, usually providing the same number of housing units to the incoming battalion as was vacated by the outgoing battalion. Many families were thus able to move into quarters immediately. This seemed "fair" to the arriving battalions, but terribly unfair to other community members who had been waiting as long as 18 months for that housing.

At least one community held vacant housing open for up to four months to accommodate the arriving battalion. It also assigned a sister battalion to sponsor the new battalion, and detailed the sister battalion to perform a variety of tasks not normally expected of sponsors to support the newcomers. Sponsors resented this extraordinary treatment they were forced to render, and considerable anger was generated. The arriving battalion subsequently was unjustly blamed for a variety of ills in the community. At the same time, the arriving battalion believed it had not received a "fair share," since members believed they had been promised more than they had received. Although a severely disruptive problem was found in only one community, it is representative of the more general situation in which morale was affected by expectations and information dissemination which went awry. The problem stemmed from expectations that were set too high due to misinformation or changed information, and the different circumstances of each community. One overseas community was believed to have had newly constructed housing available for the arriving battalion. This became the "standard" against which all others assessed their own treatment. Naturally, none could match this, and having to find housing on the local economy contributed to others' feelings of deprivation.

In spite of the fact that all members of the rotating battalions received a considerable amount of special treatment (extra time on the housing list, weekend inprocessing, room reservations, buses to meet them at the airport, ground transportation after arrival, etc.), the general perception was that they did not receive any special treatment. In fact, one reported that they should have received preferential treatment, because "...we are COHORT and COACRT is supposed to be special."

A few spouses expressed concern about possible negative reactions from other community residents directed at members of the battalions rotating OCONUS. This concern arose from those women who had had negative experiences as part of COHORT company rotation (e.g., they described how family members of some COHORT units were ostracized by other residents due to the special privileges they received). Several such problems did occur, but in only one community were they serious.

The rotation did confer hardships on a limited number of soldiers and families. These were people who were assigned to a rotating battalion overseas, and who then had to return to CONUS (sometimes to the same location they had left) with the battalion in as little as 10 months. Some of these soldiers had sold their
homes, and their wives had given up good jobs. Although the number of affected individuals was not large, this represents military personnel decisions at their worst. Overall, however, wives' high expectations were met and they were extremely pleased with the move and the care they received.

Sponsorship continued to be a problem for some families, especially those returning to CONUS, with wives of enlisted and NCOs alike complaining that no one met them, and although most had a sponsor, a large minority said "we were on our own." The advanced parties (whether or not formally assigned as sponsors) apparently did provide considerable help to most new arrivals. Another aspect of sponsorship which was not managed well was standardization of expectations and responsibilities of the sponsors. These varied considerably among the communities. In some cases sponsors were expected to provide so much extraordinary support that resentment and anger was bound to develop. In other cases, sponsors did very little, and had no guidance on what was expected of them.

Selection of NCOs to remain in or join the battalion (and rotate OCONUS) was also handled differently among the battalions. Most required all eligible NCOs to accompany the battalion or sign a bar to reenlistment. One battalion sought volunteers from throughout the division. This battalion reported having no difficulty filling its slots, and also had none of the anger seen among the NCOs in other units who felt coerced into remaining with or joining the battalion. NCOs who felt coerced were angry even if they stated that they otherwise wanted to move OCONUS in the first place. Wives shared this anger.

Language training, a tool which could help wives feel better adapted to their overseas environment, was generally not available. Most wives had been offered the opportunity to attend such classes in CONUS prior to the move.

Community Effects

"Lessons learned" from previous company rotations were available in the form of WRAIR Technical Reports, but these were apparently not used above battalion level. For example, company rotation clearly demonstrated the development of negative community attitudes toward arriving units which received special treatment, or were perceived as receiving special treatment. There was little effort to incorporate this information in rotation plans in a manner which would mitigate the development of such community attitudes.

A problem frequently reported by wives from all units concerning the large influx of people associated with battalion rotation was the impact on health care facilities. Reports of three month waiting periods for an appointment at the OBGYN clinics were common. One wife stated, "By the time we get an appointment we're pregnant again."
At Phase One there was no consolidation of plans or information among the division staffs associated with the rotating battalions, or among the communities which were supporting them. (Each rotating battalion did work closely with the unit with which it was trading places, including exchange visits by soldiers and some wives.) Each division and rotating battalion developed its own plans and information pamphlets, in spite of the fact that most of the efforts and information were the same regardless of the unit involved. Each community did have a person (typically within the DPCA) who had primary staff responsibility for coordinating battalion rotation. These individuals should have established and maintained communication across communities. Since the coordinating staff, of the DPCA from at least two major posts had not received FSG guidelines, it appears that HQDA policy guidance was not effectively distributed. The source of this "shortfall" was due to the lack of effective relationships between division and community staffs.

There was also no coordination between community support agencies, and the various wives groups in CONUS communities. Again, this should have been coordinated by the person with staff responsibility mentioned above. This continued until Phase Two, by which time most such coordination would have been too late. At that time, the community agencies believed that they could handle the move with little interruption in basic services. Some (such as the Army Community Service Lending Closet) were beginning to expand their capabilities and supplies.

At the Phase Two interviews, most plans for the rotation had been implemented. PCS orders had been processed, and decisions concerning leaves, etc. had been made. Disruption of community services did not occur. By Phase Three there were a number of misperceptions concerning the availability of such services. For example, in one community ACS received new supplies especially for the arriving battalion, but was incorrectly believed to have reserved those items only for that battalion. Housing offices were believed to have actually moved families out of housing to make room for the arriving battalions. There was no basis in fact for these beliefs, but they were a source of considerable anger and resentment in the communities.

Summary and Recommendations

Information Dissemination

Considerable efforts were expended by each rotating battalion to provide family members information about the move and its implications for the family. Yet many wives lacked knowledge and understanding of the battalion rotation program. This was a persistent problem that continued to occur in spite of comprehensive efforts on the part of each battalion to provide information to these spouses. Information dissemination, when associated with the active support and involvement of company level leadership, was very effective.
We recommend:

- Realistic expectations regarding unit rotation should be set in line with what can reasonably be delivered. While this goal can never be met in toto, military and community commanders should make better use of various installation information media to increase awareness, foster commitment, and dispel deleterious rumors.

- Information sharing across unit boundaries, and dissemination of after action reports must be improved.

- Contact should be maintained with spouses who are connected with the unit, even when those spouses are not living in proximity to the unit in order to ensure that they continue to believe that they are part of the military community.

- A clear definition of fraternization should be promulgated, perhaps through an Army White Paper.

- Local news media (e.g., PAO) should be used to provide greater coverage and information concerning the facts and process of unit rotation. Such coverage should not characterize the rotating unit as "special," nor should it characterize the treatment they receive as special.

**Wives Groups**

Organization of spouses in a battalion was generally from the top down, i.e., a small group of dedicated officers' wives serves as a catalyst for meetings, letters, etc. A relatively small proportion of enlisted wives participated in these activities, and this limited participation was in part due to reticence or discomfort on the part of enlisted wives.

Each of the wives groups had developed a newsletter of some sort for all battalion wives. But there were no attempts to bring wives of the various rotating battalions together to incorporate wives into the battalion rotation planning process or to establish communication among them in order to allow sharing of information or ideas. Most programs to organize wives were at the battalion level. Attempts to organize wives within company sized units were consistently successful as well as the most supportive of the wives.

We recommend:

- Wives groups should continue to be encouraged, but through organization at the company level. They should be organized in a way that allows any wife of any rank soldier to "run" them. Their voluntary nature should be emphasized.
Battalion level wives groups should serve to empower and support the company level groups. Company level groups can be most effective in supporting wives during deployments, etc.

Informal groups of wives, even those with membership outside the company or larger unit, should be encouraged in the same way as formal groups tied to the unit.

Military units (company sized) should be resourced to allow them adequate mail list management. As a minimum, this should include micro computer support.

Each (company sized) unit commander should ensure that representatives of wives groups have quality time scheduled with the unit first sergeant each month. This is to monitor new arrivals and ensure adequate early sponsorship.

Morale

Most of the complaints which wives did express were not directed at their battalion, and did not relate to COHORT or battalion rotation specific issues. The majority of wives appreciated the move, were enthusiastic about it and reported that traveling with friends, as a group, was superior to moving on their own.

There was much concern among wives of the rotating battalions about issues such as housing, finding facts about the rotation, and any negative impact of battalion rotation on their husband's careers (the latter is actually a COHORT issue). Installation communication media were not well used to publicize accurate information at each military base, or to help dispel negative rumors and misperceptions affecting morale.

We recommend:

Travel of wives with the unit and their husbands was a very positive experience which should be used whenever possible.

Providing preferential treatment of any kind for any group is likely to cause greater morale problems than any other solution to the problem. Such treatment must be eliminated in every case.

Military leaders at every level should seek ways to reduce unpredictable and unnecessarily long ("make work") hours for soldiers.

Child care facilities (availability and hours) must be expanded if organization and integration of wives is a priority goal.
Community Issues

Each of the military communities developed a reasonable plan to handle the rotation of battalions in and out of the community. Sharing of community support plans across military communities was non-existent. Each community faced essentially the same problems to help the departing battalions and to integrate the rotating battalions which arrived, and each community developed comprehensive plans which allowed it to handle the large influx and departure of soldiers and families.

Each division independently developed a plan to rotate its arriving and departing battalions. There were many commonalities in these plans, although each handled military leave, shipment of vehicles, port call, etc., according to its own design. There was relatively little early coordination across divisions, and no attempt to develop a workable plan that all could contribute to and follow. This resulted in a considerable duplication of effort by staff in each division.

We recommend:

- Training in organizing and leading voluntary groups should be provided to interested wives.
- Responsibilities of sponsors should be specified for the Army as a whole. Unit and individual movements would thereby be enhanced. Nominal remuneration of sponsors for certain specified tasks should be considered.
- Spouses assigned overseas must be accorded the opportunity to attend language training courses in the overseas location.
- Standardization or sharing of community support plans to handle rotating units of any size should be implemented.
Chapter IV

Executive Summary only
Full report not enclosed

Comparative Wartime
Replacement Systems

11 November 1986

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Major, U.S. Army

Defense Intelligence Agency
Washington, D.C. 20330
MEMORANDUM FOR COLONEL HENDERSON, ARI

DOCTOR MARLOW, WRAIR

LIEUTENANT COLONEL ADAMS, ODSPER

SUBJECT: Comparative Wartime Replacement Systems

1. Purpose: To summarize the attached manuscript, "Comparative Wartime Replacement Systems."

2. Introduction:
   
   a. The US Army has won each conflict it fought. But, each time, the things that were not done well became the focus of later studies. Despite its victories, one key area in which the US Army has never done well has been the provision of replacement personnel to combat units.

   b. After each American conflict, the question of personnel replacement received serious study. For example, years of Congressional hearings followed the Civil War and extensive studies such as the report of the Replacement Board were conducted after the Second World War. Further efforts were done after the Korean and Vietnam Wars.

   c. In each case, post-war studies were critical and found serious shortcomings in replacement procedures. However, victory each time obscured the urgency of the lessons to be learned. For this and other reasons, substantive improvement has never been made. The attached manuscript represents one more attempt to focus on a serious problem that has wide-reaching implications.

3. Methodology and Scope:

   a. Using a case study approach, the paper examines personnel replacement during high-intensity combat because an effective replacement system is one that can transition from peacetime operations to support large-scale mobilization and then sustain heavy casualties over a prolonged period. If a system can meet these demands, it can support low-intensity conflicts.

   b. Replacement systems exist to sustain unit combat power. As defined by the new version of FM 100-5, combat power depends on key ingredients of...
maneuver, firepower, protection, and leadership. However, the current
definition of combat power omits the key ingredient of unit cohesion and it is
through this factor that replacement systems support combat power.

c. Cohesion is best examined through primary and secondary groups.
Primary groups range from crew through platoon; they fight the battle and do so
best when their members are closely bonded to each other. Attention is
paid today to the importance of primary-group bonding. However, the Army sees
the problem largely as one of leadership and is just beginning to examine the
secondary groups’ role.

d. Secondary groups support leadership efforts by linking primary groups
structurally to institutional goals and there are key differences in how the
secondary group is defined. Whereas Americans noted the Army itself or the
nation-at-large as being the secondary group, British and Canadian analysts
focused on the secondary group roles of companies, battalions, and regiments.
This emphasis provides direct, institutional linkage between the nation/army
and the primary group and it greatly eases the role of leadership.

e. The study covers 150 years from 1795 through 1945 — the French
Revolutionary/Napoleonic Wars to the Second World War. This is when major
conflicts occurred and it is long enough to provide historical perspective.
The study is limited to infantry replacement because this is common and the
ability to provide large quantities of infantrymen has always been the most
difficult problem.

f. The study examined the American experience in the Civil War, the First
World War, and the Second World War. This had already been done but, limited
to American efforts, earlier studies focused on details rather than on
fundamental principles. To examine such principles, this study included
selected foreign experiences such as:

1) French efforts in the Napoleonic Wars and the First World War.

2) British experiences during the Napoleonic Wars, the First World
War, and the Second World War.

3) German efforts during the First and Second World Wars.

4) The Japanese experience during the Second World War.

g. Significant differences in philosophy, structure, and articulation
emerged between the American replacement system and its foreign counterparts by
the beginning of the Second World War.
4. The Nineteenth Century:

a. Nineteenth century replacement systems were designed to support maneuver or mobile warfare. Tactical organization was flexible; as units declined in strength, they were combined with like units to form maneuver formations of the "right" size. For example, Napoleonic regiments fought with 3 - 4 battalions. But if the regiment contained only enough men to fill 2 battalions, it was combined with another to form a 4-battalion "demi-brigade" that maneuvered as if it were one regiment. However, each rump regiment retained its own leadership, identity, and cohesion. Similarly, Union brigades during the Civil War contained between 3 and 13 regiments based on the sizes of the individual units.

b. Tactical units developed combat power by emphasizing primary group bonding based on secondary group cohesion. Unit size was not deemed critical to combat power — what mattered was unit cohesion. The philosophic emphasis was on man as a member of a community rather than on man as an individual.

c. Men were provided to combat units only at the entry level and regiments found specialists and NCOs from their ranks. Rarely were men brought from outside the unit family to lead primary groups. Also, as trained infantrymen, specialists could be used as such when required.

d. Replacement was decentralized. Except in the American case, each regiment was supported by an organic depot at home. Here recruits were enlisted or conscripted — usually from the depot's region — and here they were given basic training by members of the regiment. This focused as much on regimental socialization as it did on military skills. Replacements then were shipped forward in drafts of varying size under regimental leadership — Men never moved as individuals. Once in the field, the replacement's prior membership in the regimental family gave him familiarity and enabled his acceptance by veterans as a "younger brother."

e. In the field, unit strength was the colonel's responsibility — just as was unit training. Colonels dealt directly with their depots and left generals and their staffs to concentrate on operational matters.

5. The Twentieth Century:

a. The First World War was pivotal in American replacement development. The objective then was not to create combat-effective units but quickly to mobilize and field a huge force to give President Wilson the clout to dictate the peace. Supporting a small, readiness-based Regular Army, peacetime replacement machinery was clearly inadequate so new procedures had to be devised. Several factors dictated the course of development:
11 November 1986

SUBJECT: Comparative Wartime Replacement Systems

1) The First World War was an anomaly in that it was a positional war -- the only time where specific unit strength seemed to matter. It was a simple mathematical formula, a unit not large enough when it crossed the line of departure had insufficient strength to gain the enemy's trench systems and consolidate its position.

2) Huge casualties caused the British and the French (but not the Germans) to abandon their nineteenth-century regimental depot systems by 1917. The new, centralized systems were those closely noted by American observers who could not see that the Germans made the regimental depot system sufficiently flexible to sustain their war effort.

3) The First World War occurred just as the American managerial revolution was in its infancy. As with new movements, its promise was greater than the results it could achieve. The factory model assembly line and new principles of rational, objective management seemed to provide the tools necessary to create the new forces.

   b. The new American replacement system focused only on mobilization and placed heavy emphasis on the proper classification and use of each individual rather than on the unit. It accomplished mobilization but was not tested in sustainment -- the war was over before American units received prolonged combat exposure.

   c. After the First World War, the British rejected their centralized system and returned to the regimental depot model that the Germans never abandoned. As a result, the British, Germans, and Japanese all fought the Second World War with individual replacement systems firmly based on the nineteenth century regimental depot model. In these systems:

      1) Wartime procedures were identical to peacetime -- with just an expansion in scale. Each foreign system transitioned smoothly from peace through mobilization to sustainment.

      2) Tactical organization was flexible, often deviating from that officially specified. Although authorized four rifle companies, British battalions reorganized into fewer companies as their strengths declined -- often being only company-sized when pulled for reconstitutions. Their secondary group cohesion enabled them to continue effective combat service despite 70 percent losses.

      3) Unit strength was deemphasized and the focus returned to unit cohesion. Authorized 180 men, the typical German infantry company had only 80 by the winter of 1941 and German units couldn't requisition replacements until at least 15 percent below authorization.
SUBJECT: Comparative Wartime Replacement Systems

4) Men were recruited, trained, and socialized by a rear echelon of their combat unit. Training was done by men drawn from the unit family.

5) Men were shipped forward in packets of variable size under leaders belonging to their unit. Further training occurred at each pause.

6) Prior socialization into the regiment -- the secondary group -- eased integration into primary groups. The leadership burden was reduced and reconstitution could be done from a smaller unit core.

7) Men were provided only at the entry level. Battalions promoted NCOs and selected veterans for specialist training. A battalion of the Irish Guards missing a mortar sergeant merely requisitioned "Irish Guardsman, one each" -- thus easing replacement complexity. The return of veteran riflemen for specialist training combined combat relief with constructive employment and specialists could be committed with confidence as riflemen.

8) Rotation within the unit family was possible as men moved between the combat elements and the training elements of a unit. This rested veterans and it brought the latest combat information back to the training base. Enroute forward again, veterans led the replacement packets.

9) Administration was decentralized. Tactical units communicated directly with their depots and this reduced staff/administrative positions.

d. The Americans placed increased emphasis on the individual and on managerial efficiency rather than on unit cohesion. The emphasis on the individual actively impeded cohesion because it encouraged the soldier to focus on himself instead of on the unit community. The emphasis on "management" led to a rigid, overstructured, and overcentralized system that:

1) Focused on mobilization rather than on sustainment.

2) Aimed to maintain unit strength even though it was recognized that the Second World War would be a maneuver war. Easily measurable, strength could be affected by sound management while, as an intangible, unit cohesion was forgotten. Without structural support, leadership was expected to bond the primary groups and translate strength into combat power.

3) Produced specialized soldiers as individual spare parts in an assembly-line process. American riflemen theoretically were not interchangeable with machine-gunners whereas the Germans just had infantrymen. While possibly appropriate for mobilization, elaborate classification made the system unresponsive during sustainment. The US Army had some 802 distinct specialties -- as opposed to the 20 found in a German armored division.

4) Unsuccessfully tried to provide individuals by grade and narrowly-defined specialty through an intricate requisitioning process.
5) Produced too many specialists and a critical shortage of riflemen by November 1944. Through late 1944, infantrymen were dregs of the Army rather than its elite.

6) Shipment of individuals as spare parts to be plugged into unit vacancies. Men were committed to combat within hours of joining strange units, before they had time to know or care about their comrades.

7) No rotation policies. Once assigned to a combat unit, an enlisted man gained relief only through death or hospitalization.

   e. The emphasis on the individual was carried to the point that whole regiments were dissolved to provide individuals to fill shortages in committed units. More than anything else, it probably caused the low volume of fire noted by S.L.A. Marshall and William DuPuy.

   f. Judged in terms of unit cohesion, the American system was a failure. Ironically, it was equally a failure when judged by its own objectives because its very complexity made it impossible to maintain units at strength. American infantry companies routinely operated with strengths no greater than their foreign counterparts. A huge price was paid for a goal that was irrelevant to combat power and couldn't be achieved anyway.

6. Key Findings:

   a. All replacement systems (except those used by the US during the twentieth century) based combat power on secondary group cohesion instead of on strength. Combat power seems only tangentially-related to unit strength but directly related to primary and secondary group cohesion.

   b. With the exception of the Union system during the Civil War, all were individual replacement systems. However, each foreign system was able to provide all echelons of unit replacement as well. There need not be a trade-off between individual and unit replacement systems.

   c. All foreign replacement systems featured structural simplicity. They focused on basic specialties and these only at the entry level. They required minimal administration to accomplish their mission.

   d. All foreign replacement systems were decentralized. The combat elements and the training elements formed a single unit family. This enabled:

     1) Socialization of the replacement into the unit family — the secondary group — before he saw its tactical elements. This institutional structure facilitated leadership efforts to bond primary groups and lowered the size of the unit core required to continue in combat.
SUBJECT: Comparative Wartime Replacement Systems

2) Training by men directly accountable who had a direct interest in training quality.

3) Replacement shipment supervised by leaders from the unit family.

4) Shipment flexibility. Drafts of any size from crew to company could be shipped.

5) Individual rotation between combat elements and training elements. This relieved men from combat while constructively using their rest.

e. The close similarity in foreign replacement systems indicates that there is more commonality than difference between soldiers in different times, conditions, or societies. This shouldn't be surprising -- different social structures, conditions, or levels of technology have changed neither human nature nor the principles of war.

7. Implications:

a. Ever since the First World War, the US Army has emphasized management and has modelled its replacement structure and procedures on the factory system to provide individuals as spare parts. This required a large administrative overhead to supervise increasingly intricate procedures and the American way has been fundamentally out of step with its contemporaries. The Army achieved success but that success was due to overwhelming materiel superiority rather than to combat unit quality. Such materiel superiority cannot be assumed in the future.

b. Evidence gathered in this study indicates that:

1) Personnel management philosophy should be reoriented to:

   a) Emphasize cohesion instead of strength. The institutional focus should be on the secondary group to provide a firm structural foundation for efforts by unit leaders to build bonded primary groups.

   b) Focus on unit communities rather than individuals. The soldier should find fulfillment not as an individual but as a member of the community.

2) The personnel management system should be restructured in accordance with the following principles:

   a) Peacetime, mobilization, and sustainment procedures must be the same to enable smooth and effective operation. The focus must be on combat power, on what is essential, and on what can realistically be achieved.
SUBJECT: Comparative Wartime Replacement Systems

b) Decentralization of replacement procedures, responsibilities, and authority.

c) Simplicity. Specialties must be combined to the maximum extent possible.

3) The combat army should be completely integrated with the training base at the unit level in order to:

a) Facilitate integration of replacements through prior socialization.

b) Provide flexibility to ship drafts of all sizes.

c) Enable reconstitution from a smaller unit core. Army doctrine currently requires a unit core of 60 to 70 percent of initial strength for reconstitution. Yet units supported by regimental replacement systems only required a unit core of 25 to 30 percent of initial strength.

d) Enable rotation of individuals to and from combat without losing unit cohesion.

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Chapter V

Unit Reconstitution In A Wartime Scenrio

Final Report
Washington, D.C. 20307-5100

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25 November 1986
Abstract

This study examined the socialization and integration of replacement soldiers into COHORT units. Three COHORT companies from one battalion involved in a major field exercise received replacements. We interviewed the replacements and the squads (including company cadre) to which they would be assigned prior to the exercise and observed the replacement process during the exercise. We also interviewed each squad with its new members two weeks after the exercise was over. The interviews covered a number of issues, including soldier expectations and experiences concerning the replacement process, welcoming and integration, leadership, enlisted-officer relations, and morale and cohesion. Replacements were assigned to squads with the (brigade directed) proviso that they remain in at least two-man buddy teams.

Fears that replacements would not be accepted into highly cohesive COHORT units were unfounded. The squads and sections did a surprisingly good job of accepting the newcomers. Horizontal cohesion was established quickly. At the same time, the buddy team concept assured good mutual support to the replacement. On the other hand, small unit leaders did little to encourage the development of vertical cohesion. Most stated that given the choice, they would assign replacements individually, even if that meant breaking up pre-formed groups (such as these buddy teams). Further, officers viewed the integration of new soldiers with platoons and squads as an NCO area of responsibility. We attributed leaders' lack of attention to vertical cohesion to 1) implicit rules proscribing informal contacts among leaders and led, and 2) failure to recognize the importance of small group ties or to capitalize on such bonds to enhance psychosocial readiness for combat.

The report concludes with a series of recommendations concerning unit reconstitution. These include: 1) wider use of the buddy team concept for replacements, with crossleveling as necessary to maintain groups of new soldiers together, 2) training leaders and soldiers to recognize the importance of, and to think in terms of, the cohesive military group, and 3) a requirement for leaders at all levels to be actively involved in the integration of the new soldiers as a company Leader's (rather than NCO) responsibility.
Recruitment and training replacements are major problems facing any army. A critical but ignored consideration in the US Army replacement process, however, is that assignment to a unit does not ensure integration into a team. New unit members, before they are accepted and before they feel confident that they have been accepted, simply do not make good soldiers. They are at higher risk for stress breakdown in combat (Gal, 1983) and are less effective as soldiers. Communication and commitment are factors which will decide the difference between winning and losing on the future battlefield. Both factors are likely to be lacking until the replacement is trusted and accepted by the group. The problems associated with reconstituting units—either from survivors of veteran combat units or adding "green" replacements to a unit—are not new. In the United States as far back as the Civil War substitutes were scorned by combat veterans, and new enrollees dreaded the prospect of being put in with men who would taunt and despise them (Kellett, 1982). Stouffer et. al. (1949) discussed the difficulties green troops sometimes had in World War II units, mostly because they were viewed with mistrust and not easily accepted into their new units.

There is a clear relation between quality of socialization and integration of new members into a group and later behavior and adjustment. Replacements often experience a period of considerable stress prior to acceptance as "one of the group." Future war will be characterized by high intensity and continuous operations. In such a war, we would not have the luxury of even a week to successfully integrate replacements into dedicated units. Ingham (1984) has shown that it usually takes two or three days to see whether a new man will fit in, and ten days to determine where and how. Early feelings of stress associated with this period of anxiety often lead to dysfunctional or undesirable behavior. For example, Ingham found that one outcome can be the use of illicit drugs. Some new soldiers can gain quick acceptance through sharing this illegal activity. Another outcome of this stress is dissatisfaction with the military. Rock and Schneider (1983) found that failure to properly orient and integrate new officers led to general feelings of stress and decreased commitment to the Army over the first six months of assignment to the unit.

A study of how soldiers' spouses are integrated into the community offers additional data on outcomes associated with the socialization of newcomers. Schneider and Gilley (1984) found that spouses who were not well integrated into the military community soon after arriving overseas were five times as likely to return to the US within one year, compared with spouses who were well integrated. These spouses were also less likely to report that they wanted their active duty sponsors to remain in
the Army. The implications of spouse integration for soldier adjustment and performance are considerable.

Kozumplik (1986) has argued that all soldiers should be assigned to a new unit at the basic entry level, with training the responsibility of regimental cadre. The purpose of this is to establish strong secondary group ties (around the battalion and regimental affiliations) which enhance cohesion and resistance to stress breakdown on the battlefield. In spite of numerous studies, there has been surprisingly little policy and doctrine to direct or guide the military replacement process at its most critical point— the first days in the small unit.

Our modern individual replacement policy is rooted in World War I. During that time, the managerial revolution in the United States led to a shift in emphasis from the individual as part of a group to classification of men based on their skills and interests. Individuals with similar interests and skills were treated as identical. The managerial revolution promised greater efficiency in selection of people for a particular job, and thus responded to the military need for rapid, efficient expansion. Managerial efficiency was translated into the goal of making "assembly line soldiers," each of whom could fit in where a lost or dysfunctional part existed (Kozumplik, 1986). The individual replacement system begun in World War I is still in use today.

A modification of the individual replacement system was implemented late in the Korean war. "Packets" of four "buddies" were allowed to train together and be assigned together as replacements to a unit. The idea was that they would remain together, presumably in the same section. The purpose of this modification was to decrease stress for the newcomer, by ensuring that he was already integrated into a group. This led to greater cohesion and morale in that four-man team. Janowitz and Little (1974), however, indicated that such teams often had difficulty integrating into the larger combat unit. It is not disputed that the US Army has continued to win while using the individual replacement system; but the evidence is clear that we have won despite its obvious weakness. We have been relying heavily on our overall manpower and industrial superiority, advantages which are hardly guaranteed in future war. Kellet (1982) demonstrates that the weakness of the individual replacement system has been recognized, discusses how lives and battles have been lost due to this system, and examines personnel policies used by other armies to prevent such problems.

The US Army is currently using a new manning system (called the Unit Manning System) which is specifically designed to enhance unit cohesion. This system establishes company cohorts that remain together for about three years. The goal of increasing horizontal cohesion among lower ranking enlisted soldiers has been realized (WRAIR TECHNICAL Report, 1986). But the issue of providing replacements to these units, while maintaining high unit cohesion, has not yet been investigated
systematically. If committed to combat, such unit cohorts will comprise both soldiers who are intimately familiar with one another and replacements who have trained together. Informal lines of communication, and previous long term friendships among the "old" soldiers could contribute to feelings of isolation, lack of power, anxiety and stress on the part of the new soldiers. In addition, extremely "tight" units, such as COHORT units, might not be able to absorb losses. Some analysts have argued that very close relations among soldiers could make their groups too fragile to tolerate casualties.

On the other hand, highly cohesive groups might be more receptive to accepting newcomers, and do a relatively better job of orienting and integrating them. Recent military experience with an airliner carrying troops which crashed at Gander, Newfoundland provides some information on this (Ingraham, 1986). One company was devastated, but was successfully reconstituted by cross-leveling squads from within the battalion and filling most remaining vacancies through individual replacements from the brigade and division. Although it was not a COHORT unit, the affected battalion was characterized by high levels of cohesion and stability consequent to six months' service in the Sinai.

The implications for COHORT units of reconstitution for leadership, cohesion, and fighting power are not known. During peacetime, personnel in COHORT units are stabilized for 36 months since most members join the Army with a three year obligation. This means that replacements due to simultaneous ETS will likely require at least 50 percent of strength after 36 months. In addition, some attrition (due to a variety of causes) does occur during the three years. The Army has no experience reconstituting stabilized units during peacetime, and no policy for reconstituting units badly mauled in combat. In addition, the effects of wartime replacements on COHORT companies is unknown.

The purpose of this study was to examine and describe the socialization and integration of groups of new soldiers into existing COHORT companies of one battalion. We focused on how the process worked as a function of the levels of cohesion, beliefs, and behaviors of newcomers and soldiers in existing COHORT companies.

Method

The study was conducted at several sites. Several groups of soldiers were included: trainees who were to be assigned as replacements to a COHORT battalion, soldiers in units which were to receive replacements, and squads that actually received replacements. Soldiers were interviewed at their unit and during a major field exercise (Celtic Cross IV). To avoid sensitizing respondents to the replacement issue, all questions concerning this aspect of the study were imbedded in other questions.
Interviews were supplemented by participant-observation during the field exercise.

The study was carried out in four phases. In the first phase, squad-sized units were interviewed at the end of their basic training (OSUT) cycle. A total of 11 squads were interviewed over two days. The soldiers (regular active duty army) were later assigned to a number of different posts and units, including the battalion of interest. The soldiers studied in this phase were privates (E-1) through privates first class (E-3). Questions focused on soldier expectations of their new unit, but included others concerning their views of leadership quality and their training about leadership and social relations.

In the second phase, three squads from each of the gaining companies in the COHORT battalion were interviewed. At the time of the interviews, no one knew which squads would receive replacements. Therefore, one squad from each platoon of the three rifle companies involved, for a total of nine squads. Interviews were conducted with the intact squad minus cadre responsible for that squad. (Cadre were interviewed separately.) Soldiers interviewed in Phase Two were privates (E-1) through specialist 4's (E-4). The interviews included discussion of how new soldiers come to fit into a unit, as well as their evaluation of cohesion, morale, and leadership in their units.

The third phase involved observation and informal interviews conducted in the field, in the days before and after insertion of replacements. This was accomplished during a major Army field exercise involving an entire division facing a selected opposition force in extremely realistic rural and mountainous fighting conditions. The purpose of this phase was to help understand the replacement process in general terms. The focus of the observations was to describe what happened to the new soldiers as they went through the replacement process. Interviews were conducted with the replacements and persons in the units around them to gain an understanding of these individuals' beliefs and reactions concerning the replacements.

The final phase of the study two weeks after the field exercise involved interviews of the squad members and chain of command that had received replacements. A series of separate interviews was conducted with the platoon sergeants, platoon leaders, first sergeants, company commanders, battalion command sergeant major, and battalion commander of the gaining unit. Here we focused on how the replacements were integrated into their units, and the attitudes and behaviors at different organization levels that facilitated or hindered this process. Feelings of the squad (old members and replacements) concerning the replacement and integration process were also discussed.
Results and Discussion

The individual companies were allowed to assign replacements according to company needs. However, they were required by the brigade commander to maintain the replacements together in at least two man "buddy teams." We will first present results from the first two phases of data collection and then discuss the socialization process as observed in the latter two phases. These will be related to newcomers' adaptation and reported stress. Finally, these results will be discussed in terms of the development of military cohesion.

Replacement soldiers interviewed during Phase One described high levels of "bonding" with their squad and team members. The greatest level of personal trust was reported in those associations. Most also reported that they trusted the combat efficacy of their fellow squad members. Inter-platoon associations reportedly were not common, and few friendships existed outside the platoon. Replacements were very anxious and expressed much apprehension concerning their next duty assignment. They expected that they would have to prove themselves in some sort of unit ritual. Rumors of "thousand mile road marches" and "hundred pound ruck sacks" were common. Above all, soldiers feared rejection from their new unit. They expected that it would be some time before they would fit in, but were unsure how to make this happen. These soldiers seemed to be highly enthusiastic and well motivated. Each group commented that talking with a cadre member from the gaining units about the new unit early on would have relieved them of much of their apprehension.

During these interviews we also discussed a number of leadership issues, including fraternization and enlisted-leader relations. Without exception, these soldiers believed that the NCOs who trained them were highly skilled and competent. At the same time, they reported having had little contact with any other NCOs, and (except for the members of one squad) no contact with officers. Only three of the replacements had heard of the term "fraternization." However, virtually all who had been appointed to a leadership position had been told that enlisted soldiers should not socialize with NCOs.

Interviews during Phase Two revealed that the gaining units also comprised close, tightly knit groups. The concern expressed by replacements about fitting in seemed well founded. Soldiers in the gaining units referred to members of their respective squads as their "brothers" and regarded their platoons "like a family." Each of these troops expressed confidence in their ability to perform well with their unit in a combat situation. These COHORT trained and assigned soldiers reported multiple cross-platoon friendships, such that they were very familiar with most other members of their companies. They also clearly stated that they did not trust outsiders, that is, people who were not "COHORT trained" with them. This sentiment was illustrated by
one platoon sergeant, who said, "These COHORT soldiers are so tightly 'bonded' that the cadre are the outsiders that have to prove to the troops that we are worthy of them. These guys would do anything for one of their buddies." The soldiers repeatedly referred to themselves as "high-speed" and "the best."

Members of these units knew that replacements were scheduled to be assigned somewhere in the battalion. There was uniform concern that the "newcomers" would not be physically able to keep up with their unit, and that they would not be as well trained as the more "experienced soldiers." Each squad said that the newcomers would be welcome if they didn't out-rank them, were willing to learn, and could prove themselves to the experienced soldiers. These COHORT soldiers had been together for almost a year; none of the squads had had any direct experience with replacements. Integration of new soldiers into such a squad could be difficult. However, all welcomed the idea of receiving new soldiers since they were understrength and replacements would help to even out the load.

In spite of their initial anxieties, the replacements were accepted very well at the squad and team levels. During Phase Three (the field problem) we followed the replacements from the time they arrived at the brigade headquarters to their assignment to a fire team. Both squad level cadre and soldiers made efforts to welcome them, and get them involved with the mission. In most cases, someone "took them under his wing" and helped ensure that each was made to feel part of the group. Usually the team leader helped the replacement with those areas needing immediate attention (introducing him to the other squad members, packing his ruck sack, learning hand and arm signals, etc.). This orientation typically evolved into an entire fire team effort, with support coming from a number of individuals. The sentiment, "they are our brothers," was frequently mentioned. Trust and confidence levels of both newcomers and experienced soldiers toward one another appeared high within two or three days. The fact that the units were involved in a rigorous field problem, the replacements were able to keep up on tasks such as a forced road march (thereby "proving" themselves), and were willing to adopt the standards of the new unit certainly contributed to their rapid acceptance by the group. As expected, the replacements within the buddy teams also got support from one another. They reported that their initial anxiety about fitting in was rapidly alleviated, and they soon felt accepted.

The effectiveness of initial socialization at the squad level is also demonstrated by a group of replacements which was to be transferred to a different battalion at the end of the field exercise. All replacement soldiers in that group asked to remain with their platoon instead of transferring to yet another unit. Replacements requested this stability despite the extreme demands of the field problem and expectations of more of the same in their present unit. Each reported that he felt comfortable with his new friends in his squad, and did not want to be a
"newbie" again.

Horizontal cohesion thus seems to have developed rapidly and effectively. This was apparently due to the outstanding job done by the squads to incorporate new members, the fact that the groups were sharing in a rigorous training problem, and to the new member's willingness to learn the ways of his unit. There was no evidence to suggest that these highly cohesive COHORT units would reject new members, or that the new members would isolate themselves from the pre-existing group. Quite the contrary, well integrated squads insure survival by bringing the newbies on board quickly and correctly.

At levels above squad the welcoming process was less effective. There was no standing operating procedure (SOP) for the integration of new soldiers. In fact, a number of officers expressed the need for such a plan to handle the expected replacements. The senior NCOs had already formulated and promulgated such a plan, but it only covered where to assign replacements, not how to integrate them; furthermore, the NCOs had not shared their plan with their officers.

Although a number of NCOs did greet and talk with the replacements, there was little contact with the new men by senior NCOs and officers. Only one company commander and one lieutenant had spoken with them within the first week of their arrival. This reflected the stated belief of a number of officers that greeting and integrating new soldiers is "NCO business." In our view, this assumption contributed to some degree of distance between officers, many senior NCOs, and the lower ranking enlisted. Few unit leaders made an early effort to "know their men." Thus, in spite of their acceptance and positive attitudes of the squads toward the new members, the senior cadre and officers widely believed that the 19 replacements, as a group, represented cast-offs and poor performers (e.g. two had fallen asleep on duty and one wanted to get out of the Army; these were also not well accepted by their peers). Such social distancing and stereotypic thinking hindered development of vertical cohesion. There is yet another important consequence of this implied social distance. A most painful task of the commander is to write a letter of condolence to a deceased soldier's next of kin. The difficulty of writing such a letter could surely be eased by having some personal knowledge of the soldier, but company officers confused essential information for future combat with appearing too close ("buddy-buddy") to their subordinates.

We believe that there are at least two causes for these findings. First, as reported above, training of soldiers concerning enlisted-leader relations appeared to begin, informally, during basic training. The thrust of this training is that such relations are to be avoided. Furthermore, we observed surprisingly little informal discussion among officers and NCOs. Small unit leaders, in general, are not attending to the importance of developing or fostering vertical cohesion in
their units.

Second, our leaders do not recognize the importance of supporting and maintaining the primary group, nor do they think in those terms. When introduced to the gaining squads, the replacements were required, by the brigade staff, to remain in buddy teams of at least two. This was done to eliminate isolation and provide a sense of cohesion from the onset of their assignment to the new unit. This idea met with much resistance from the company level cadre. Virtually every small unit leader reported that if the assignment of replacements were up to him, he would assign replacements as individuals rather than in pairs or groups. The leaders contended that replacements could not and should not be assigned in order to build cohesion, but rather to the squad that had the greatest numerical need. Their rationale was: "If I am down two men in three squads and I receive three replacements then each squad should receive one man, to even out the work load. Equity is more important than keeping the troops happy." "Fairness" rather than combat effectiveness was the dominant issue for unit leaders. This conviction, that "spaces" had priority over "faces", was held from squad leaders through company commanders. Our data from the Phase Two interviews, as well as research with other COHORT companies, clearly show that COHORT troops are well acquainted with soldiers throughout their companies. Such troops could not only easily adjust to within-platoon leveling to maintain replacements together, but should have little problem with cross-platoon assignments. The small unit leaders also reported that they would assign soldiers as individuals rather than as buddy teams in a combat situation. This probably has its genesis in the Army's predominantly individual replacement policies under which most soldiers have served.

Conclusion and Recommendations

We have examined the socialization and integration of replacement soldiers into COHORT units. We found that fears that replacements would not be accepted into highly cohesive COHORT units were unfounded. In fact, such units did a surprisingly good job of integrating newcomers, and quickly mitigated the stress of being the replacements ("newbies"). Horizontal cohesion was quickly and effectively established. This is extremely important to the Army as it implements plans for refilling COHORT units (which lose large numbers of soldiers due to simultaneous separation) and augers well for the new CIM (Concept Implementation Model) for those plans. On the other hand, leaders did not pursue the development of vertical cohesion. We attributed this latter finding to 1) implicit rules proscribing informal contacts among leaders and led and 2) failure to recognize the importance of small group ties, and failure to establish, nurture, and capitalize on such ties to strengthen psychosocial readiness for combat.
We, therefore, make the following recommendations:

1) Assigning and maintaining soldiers who had trained together in buddy teams worked well for newcomers and gaining units. "Buddy-teams" felt well supported, primarily as a result of actions by members of the squads. Having a familiar face helped in the light of the considerable anxiety that all newcomers felt. Assignment in three-man buddy teams might prove to be even more advantageous to ensure that at all times at least one buddy is available even when one member is absent. We believe that the advantages of maintaining an intact replacement group outweigh the potential problems. The high levels of cohesion we observed at the platoon level in COHORT units argues that soldiers could be shifted within the platoon to accommodate keeping small teams of replacements together. We recommend that the Army consider using buddy-teams of two or three men to replace soldiers in COHORT units.

2) The rapid acceptance of replacements, and the extent and quality of relations (crossing platoon boundaries) among members of COHORT companies, suggests a reconstitution policy for badly mauled COHORT units. The Army should adopt a policy of cross-leveling from larger units to fill the smaller units. The policy could be based on the procedure used by the 101st Division following the Gander disaster. Squads could be transferred from elsewhere in the company to the affected platoon, and from battalion to company. Other replacements should be assigned in buddy teams of two or three men. These would come from brigade and division, with MILPERCENT filling the remaining requirements.

3) At every echelon of leadership above the squad, most small unit leaders stated they would assign replacement soldiers individually rather than in buddy teams. The historical importance of cohesive soldier groups to survival on the battlefield has not been learned. There is as yet no commitment in the Army to building and maintaining group cohesion, and few leaders understand its importance. Group cohesion might be the single most critical factor capable of increasing combat power; it is also one factor Army leaders can influence. Our soldiers must be trained at every level to think "group." In terms of replacements, each service school should discuss how to teach leaders to better integrate and socialize new soldiers into the unit. Practical exercises, including role playing, should be considered, along with development of a check list of what is required to effect changes in behavior.

4) The integration of new soldiers is viewed incorrectly by many officers as an NCO area of responsibility. The integration of new soldiers is clearly a military unit responsibility and
a primary concern for commanders. Soldiers do not fight as officers, or as NCOs, or as enlisted soldiers. They fight as groups, in teams, squads, platoons and companies. This must be uppermost in every soldier's thinking about how to win in combat. As such, the company commander should make an effort to meet and greet every new soldier, and should take an active role in assuring the development of vertical cohesion.

5) We observed little communication among officers, NCOs, and enlisted soldiers. This is a serious omission. Platoon leaders often had a poor understanding of what was going on, tactically or socially, among the enlisted soldiers and NCOs in their units. Yet, they might have to lead them to battle on the future battlefield. We believe that all company grade leaders must be taught the importance of informal communication to reinforce the concept of "group" and "company." We recommend that service schools teach the importance, particularly for officers, of using every opportunity to talk with troops in order to keep their fingers on the "pulse" of the unit. Examples of how and when to do this (such as during chow, when officers frequently sat alone) should be included for junior leaders.
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Chapter VI

Unit Manning System
Human Dimensions Field Evaluation
Survey Report IV

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The efforts of the following members of the UMS Survey Research Team are gratefully acknowledged: Doris Bitler, Matthew Chopper, Elizabeth Hoover (research associates); Denise Dickman (data manager); Jill Davies, Sharon McBride, Sheela Singh, and Daniel Schubert (data processors). Thanks are also due Richard Oldakowski for his technical advice and support. The Combined Arms Testing Activity, BDM Corporation, and the Soldier Support Center deserve recognition for their continued roles in the data collecting logistics, as do unit commanders and the soldier respondents themselves for their cooperation and participation.
Abstract

An initial analysis of the second iteration data utilizing company-level means from units that could be matched across iterations reveals that, although the differences are not as great as they were for the first iteration, COHORT companies still have significantly higher cohesion scale scores than nonCOHORT companies. The relative ordering of overall scale values remains the same from the first to second iteration, with soldiers expressing more negative estimations of the vertical and horizontal bonding in their units than other group-related phenomena, such as combat readiness, sense of pride, or confidence in leaders.

Looking in particular at horizontal bonding as measured by Unit Social Climate, we find that despite significant declines for COHORT-CONUS armor units and Light Infantry units, only the Light Infantry companies fall appreciably in their ranking vis-a-vis other unit types. Using this measure, COHORT armor companies remain as the most cohesive and nonCOHORT field artillery companies the least. CONUS companies generally fare better on Unit Social Climate than those CConUS, as we found in the first iteration. However, the opposite is true in the second iteration for COHORT Mechanized Infantry companies. No significant differences were found in Unit Social Climate by controlling for line company versus headquarters/support company status.

By arraying company mean differences from the first to the second iteration on Unit Social Climate, it was found that the average company declined about one point, but that some companies dropped as many as fifteen points and others improved by as many as thirteen points. By focusing on those companies with the steepest declines and comparing their written comments with those from soldiers in companies with improved scores, it was discovered that declines could be attributed to leaders who were perceived as exploitative, unfair, incompetent, and oblivious to the soldiers’ needs and welfare. These problems in leadership seemed to be manifested most especially by the scheduling of many field exercises with excessive periods of down time, leading in turn to a forfeiting of time for a personal and social life and subsequently to a loss of unit morale. Company-level changes in item responses tapping such dimensions and consequences of leadership proved to be correlated across all companies with changes in horizontal cohesion as measured by Unit Social Climate.
Introduction

This fourth UMS action officer survey report spotlights the following:

1. A status update of field operations, response rates, and data set construction for the four iterations of the human dimensions survey.

2. Initial scale score and demographic comparisons for first versus second iteration data with a focus on battalion type and COHORT status as explanatory variables.

3. A more detailed examination of changes in company level horizontal cohesion over time, as measured by Unit Social Climate.

4. The thrust of future data analyses.

Survey Administration and Data File Update

We now have available an archival data set containing all valid cases of the first iteration questionnaire. The data set represents 104 companies, including 56 whole battalions, for a total sample size of 9627. Analyses conducted for previous technical reports did not include all of the first iteration data. However, while the number of cases in subsequent tables will therefore be larger than in earlier reports, the statistical results do not significantly differ from those obtained with the incomplete data sets. The substantive conclusions drawn from the preliminary work remain unchanged.

For the second iteration questionnaire, we have a cleaned data set with all available cases whose units completed this version of the questionnaire. There are 9171 respondents in this data set who represent 106 companies, including 17 battalions.

The third iteration of the survey instrument was mailed in mid-July 86 and as of 31 October the majority of sample units had either completed the questionnaire or were scheduled to do so in the immediate future. The total number of companies surveyed is smaller for the third iteration due mainly to the shutdown of BDM operations at Ft. Carson. We have begun data processing for 18 of the units responding to the third iteration questionnaire.

A fourth iteration questionnaire has been prepared. WRAIR will provide personnel to the Soldier Support Center, Ft. Benjamin Harrison, for the mail distribution of this instrument in February 1987, with the hope that the bulk of the battalions can be scheduled for administration by 31 May 1987.

The overall response rate is lower for the second iteration questionnaire than the first (71% versus 77%). Both rates,
how... are reasonable for our analytical purposes. COHORT unit response rates remain higher than nonCOHORT rates (73% versus 66%) to not so much as to impair meaningful comparisons between these units. Lower response rates appear to be due mainly to soldiers' nonavailability during the questionnaire administration, rather than voluntary refusal to complete the instrument. (See Appendix A, Table 1 for specific response rates.)

Demographic Comparisons of First and Second Iteration Respondents

Despite the fact we had less than 100% response rates at both administrations, the two samples equally well represent the company populations from which they were drawn. There is less than a 6% difference on any one of the demographic categories between the two iterations, with the greatest difference occurring in the proportion of soldiers who are currently married (from about 42% to 46%), a finding that makes sense given the life-cycle progression of these units. The marital status finding is complemented by some apparent movement out of the barracks and into on-post housing (up to 16% from 12%).

Months in company is only up by three months, indicating that some turnover has in fact taken place. Not surprisingly, this turnover is reflected mostly by nonCOHORT soldiers, whose months in company mean remains at about 14 for both iterations, whereas COHORT soldiers report a jump from 10 months in the first iteration to 15 months in the second iteration. (See Appendix A, Table 2 for specific demographic comparisons.)

We reported in the third technical report (Griffith and Vaitkus, 1986) that COHORT soldiers in the first iteration sample were younger and more likely to be single and living in the barracks than the nonCOHORT counterparts. It remains the case that COHORT soldiers in the second iteration data set are slightly younger and more likely to reside in the barracks. However, at least for line companies, they are now no less likely than nonCOHORT soldiers to be currently married (about 46%). Aside from these considerations and the fact that the age of the COHORT companies themselves is generally less than nonCOHORT companies, the COHORT samples for both iteration data sets are as demographically equivalent to the nonCOHORT samples as is reasonable to expect.

Revising the Thruft of the Data Analysis to Date

The motivating force behind the bulk of the analyses contained in the OMS technical reports to date was to develop reliable and valid scale measures of the soldier's confidence in combat skills and weapons, confidence in leaders, vertical and horizontal cohesion, and identification with the unit and the Army. By grouping these perceptions under the rubric "of cohesion" or "the soldier's will to fight," analyses were carried out to show that COHORT soldiers (including those OSUT-
trained as well as personnel-stabilized) scored higher on such measures than nonCOHORT soldiers even when controlling for other variables. The intention, therefore, was to provide Army policymakers with data for an evaluation of its COHORT program.

At the Military Psychiatry Department's In-Process Review of 16-17 September 1986, it became clear that it was not enough to know simply whether a company was COHORT in order to estimate its morale or level of cohesion. One practically needed to take a company by company approach in order to understand how any company's growing pains or successes varied depending on such complex variables as command climate and training intensiveness. We decided, therefore, that the survey (in conjunction with the qualitative observations) should attempt to identify and examine as many of these unit differences as possible before making generalizations. Furthermore, since we were really interested in group level phenomena, analyses should be conducted with the company as the unit of analysis, as had been done by the Army Research Branch during World War II (e.g. ARB, 1944). In short, we will now do a greater service to the Army by revealing and understanding how the various facets of cohesion are related and change over the life cycle of both COHORT and nonCOHORT units.

The remainder of this report serves as the first step toward aligning the analysis with this new focus. It is a transitional report, however, in that for the sake of continuity we will be presenting changes in scale scores from the first to the second iteration with a concentration on COHORT status, much as we planned to do originally. However, we will be sticking to a company level analysis and then looking in some detail at those companies, COHORT and nonCOHORT, whose horizontal cohesion scores (as measured here by the Unit Social Climate scale) changed significantly from the first to the second iteration. If we can begin to discern those factors that may account for such changes, either positive or negative, we may learn how to improve levels of cohesion throughout the Army system.

First and Second Iteration Company Scale Scores

In Graphs 1A and 1B, we present the company grand means of our cohesion scales for the first and second iterations respectively (91 matched companies). All scores have been converted to the same 0-100 scale for easy comparison. We have also enhanced their interpretation by drawing a horizontal line at the 50 mark to represent the theoretical neutral point, above which scores average to more positive responses, and below which scores average to more negative responses. The scales displayed are Company Command Confidence (CCC), Senior Command Confidence (SCC), Small-Unit Command Confidence (UCC), Concerned Leadership (CL), Sense of Pride (SP), Unit Social Climate (USC), and Unit Teamwork (UT). (The reader should consult Appendix A, Table 3 and previous UMS Technical Reports for definitions of these scales and their statistical properties.)
If we overlay Graph 1B onto Graph 1A, we detect small downward shifts on all of the scales, most on the order of two points. All in all, however, these scale means show remarkable stability over time, which probably attests to the reliability of the scales more than anything else. The relative ordering of scale values remains the same from the first to the second iteration and, except for Unit Teamwork, all scales maintain their position vis-a-vis the neutral line. The only statistically significant changes in scale scores due to time alone are for Senior Command Confidence and Unit Teamwork. If we rerun the data for first-term soldiers separately, the same patterns emerge with slight decreases of a point or two on the relevant scales. Although none of the scale means stray too far from the neutral line, we conclude based on two iterations' worth of data that companies express more negative estimations of the vertical and horizontal bonding in their units than other related group phenomena, such as combat readiness, sense of pride, or confidence in leaders. Furthermore, this lack of bonding has both affective and instrumental or task-related components, as measured by Concerned Leadership, Unit Social Climate, and Unit Teamwork.

We have information about four structural or descriptive features of the 91 companies with respect to which we can meaningfully group them. These features are COHORT status, the type of battalion unit to which the company belongs, assignment location, and line company status. The distribution of companies by these features is given below:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Count</th>
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</thead>
<tbody>
<tr>
<td>COHORT</td>
<td>57</td>
</tr>
<tr>
<td>nonCOHORT</td>
<td>34</td>
</tr>
<tr>
<td>MECHANIZED INFANTRY</td>
<td>27</td>
</tr>
<tr>
<td>LIGHT INFANTRY</td>
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</tr>
<tr>
<td>AIRBORNE INFANTRY</td>
<td>8</td>
</tr>
<tr>
<td>ARMOR</td>
<td>27</td>
</tr>
<tr>
<td>FIELD ARTILLERY</td>
<td>13</td>
</tr>
<tr>
<td>CONUS</td>
<td>65</td>
</tr>
<tr>
<td>OCONUS (USAREUR)</td>
<td>26</td>
</tr>
<tr>
<td>LINE COMPANIES</td>
<td>73</td>
</tr>
<tr>
<td>OTHER COMPANIES</td>
<td>18</td>
</tr>
</tbody>
</table>

We should note that the COHORT category includes personnel-stabilized units that were not CUS-trainned, and that companies other than line include 15 headquarters companies, 1 combat support company, and 2 combat service support companies.
Taking one characteristic at a time, knowing that a company is COHORT or nonCOHORT is the most important of the four in accounting for the cohesion scales across both iterations, with overall COHORT company means being higher than nonCOHORT means. The greater of these COHORT effects on perceptions of Army group life, as we would expect, have to do with company-level perceptions of personnel relationships, i.e., Unit Social Climate, Unit Command Confidence, Unit Teamwork, and Concerned Leadership. The absolute differences are small (between two and six points), and for the second iteration even smaller, due to slight decreases in overall COHORT company scores and slight increases for nonCOHORT companies. Nevertheless, COHORT companies statistically still have significantly higher means than nonCOHORT companies in the second iteration.

The type of battalion with which a company is identified is next in terms of its importance in understanding scale score variation. In general, we can rank order the battalion types on the cohesion scales as follows from high to low:

1. Armor
2. Airborne Infantry
3. Mechanized Infantry
4. Light Infantry
5. Field Artillery

The Light Infantry and Mechanized Infantry are given the same rank because they average out about the same over the two iterations. However, one would rank the Light Infantry over Mechanized Infantry based on the first iteration data, and Mechanized over Light for the second iteration. Armor units maintain their superior ranking despite slightly larger declines in scores from iteration to iteration than for Airborne units. Again, however, there is no more than a five point difference on the scales at either point in time across battalion types.

Assignment location is a less important source of differentiation than either COHORT status or Unit Type, though it does account for significant variation on all the cohesion scales across time except Small-Unit Command Confidence and Unit Social Climate. The CONUS company means are generally higher than those from USAREUR, although for the second iteration data these means converge (CONUS down, OCONUS up) and often lose their significant difference. Differences are never more than a few points.

Line company status does not have a statistically significant effect on company cohesion scores, except for Senior Command Confidence where HQ and support companies have higher scale means. (See Appendix A, Table 4 for the results of a repeated measures analyses of variance on each of the developed scales for the 91 companies participating in both the first and second iteration questionnaire administrations.)
A More Detailed Investigation of Changes in Unit Social Climate

We have withheld attempts at explaining many of the results presented thus far because we have been speaking collectively about a set of scales which, though certainly related at some level, have substantially different content and analytical properties. Likewise we have refrained from presenting page after page of company means both because we did not want touddle the focus on patterns and directionality within the data, and because we are not yet close to being able to directly associate criterion variables with the magnitude of such numbers and their differences over time. We believe higher is better given the historical record for the kind of items that make up our scales, but we do not yet know how much higher is how much better in terms of such variables as combat effectiveness and sustainability.

While admitting that the meaning of the size of our average differences remains problematic, we will use them in this section in order to understand in depth what happened to the scores on one scale, Unit Social Climate, over time. The selection of this scale for further analysis, as explained in the Third Technical Report, is far from arbitrary. It is our closest approximation at this time for horizontal bonding within the unit, with more of the actual or type of items that have shown relationships with group military performance from the work of World War II researchers (e.g., Stouffer, et al., 1949) to those of today (e.g. Marlowe, 1979; Gal, 1983; Manning and Ingraham, 1983). It is on Unit Social Climate where we would expect more company mean variation to be explained by COHORT status, and this in fact is the case. Furthermore, in the company characteristics model presented above, the explained variance on UNITSOC was higher than on any other scale for both first and second iteration data (R-squared=.52 and .32 respectively). In short, it is relatively more important at this juncture to understand UNITSOC scores than other scale scores.

As we did at the end of our individual-level analysis of Unit Social Climate for the Third Technical Report, Table 1 presents line company means for a three-way company classification. The means are ordered from high to low for the first iteration, with the second iteration means and their new ranking beside them. We see the consistent fall in Unit Social Climate scores for COHORT companies from the first to second iteration, with most on the order of two points. However, the drop is not uniform, as witnessed by the COHORT-Armor-CONUS companies (-4.5) and the Light Infantry companies (-3.5). The Mechanized-OCONUS companies are the exception to the COHORT trend with an increased mean of a point and a half. The non-COHORT increases are less than two points, except for the Mechanized-OCONUS companies (+2.2), and the Field Artillery companies that experience a point and a half decline.
<table>
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<tr>
<th>COMPANY LABEL</th>
<th>ITER1 (RANK)</th>
<th>ITER2 (RANK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT-ARMOR-CONUS</td>
<td>51.4 (1)</td>
<td>46.9 (1)</td>
</tr>
<tr>
<td>COHORT-ARMOR-OCONUS</td>
<td>47.4 (4)</td>
<td>45.4 (4)</td>
</tr>
<tr>
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<td>46.1 (2)</td>
<td>45.6 (2)</td>
</tr>
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<td>45.0 (5)</td>
<td>42.9 (5)</td>
</tr>
<tr>
<td>COHORT-LIGHT-CONUS</td>
<td>44.4 (11)</td>
<td>40.9 (11)</td>
</tr>
<tr>
<td>COHORT-MECHANIZED-OCONUS</td>
<td>44.1 (6)</td>
<td>45.6 (3)</td>
</tr>
<tr>
<td>NONCOHORT-ARMORED-CONUS</td>
<td>42.3 (7)</td>
<td>42.8 (6)</td>
</tr>
<tr>
<td>COHORT-ARTILLERY-CONUS</td>
<td>42.2 (12)</td>
<td>40.3 (12)</td>
</tr>
<tr>
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<td>42.5 (8)</td>
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<td>40.9 (10)</td>
</tr>
<tr>
<td>NONCOHORT-ARTILLERY-CONUS</td>
<td>37.8 (13)</td>
<td>36.3 (13)</td>
</tr>
</tbody>
</table>

* Includes only those categories where at least three companies are represented (excludes COHORT-ARTILLERY-OCONUS with N=1).*
Note that while the range of scores has diminished from the first to second iteration (51.4 to 37.8 vs. 46.9 to 36.3), the relative ranking of the company types remains roughly equivalent. COHORT-Armor-COUS and non-COHORT-Artillery-COUS companies maintain their first and thirteenth rankings respectively, and there is a one or two rank difference for most of the company types in between. The major exceptions are COHORT-Artillery-COUS (four ranks down), nonCOHORT-Mechanized-COUS (four-ranks up), and the companies with the greatest rank shift, those of the Light Infantry (six ranks down). The top five ranking company types share COHORT status at both questionnaire administrations.

These means across time are portrayed visually in Graphs 2A, 2B, 2C, and 2D. The neutral line for this scale cuts across the page for all four graphs at the 45 mark. Graphs 2A and 2B present the first iteration data, and Graphs 2C and 2D the second iteration data. Graphs 2A and 2C compare Mechanized Infantry with Armor and Field Artillery units, and 2B and 2D compare Mechanized Infantry with the other infantry units, i.e., Light and Airborne. COHORT-COUS (CC), COHORT-OCONUS (CO), nonCOHORT-COUS (OC), and nonCOHORT-OCONUS (NO) are then compared within battalion type where data are available.

We should notice that, especially with the decline in the Armor-COHORT means, there is a general leveling off toward the neutral line for the second iteration. Still however, the ordering of company types remains fairly similar within battalion types. For example, armor units at both points in time, COHORT-COUS companies are followed by COHORT-COUS, and then by nonCOHORT-COUS, and nonCOHORT-OCONUS in terms of the magnitude of their Unit Social Climate means. Likewise, horizontal cohesion means remain higher for COHORT than nonCOHORT companies in both airborne and field artillery units, though by a little less for the second iteration. COHORT Mechanized Infantry units as a whole show higher cohesion than nonCOHORT Mechanized Infantry units. However, in contrast to the first iteration, this is due to the OCONUS-COHORT companies rather than the CONUS ones.

We might posit a kind of relative deprivation theory here that says companies with especially high expectations for the quality of their social interaction based on their small group structure (e.g. armor units), or "elite status" (e.g. light infantry), or special training and labeling (e.g. COHORT units) are more likely to be disappointed than their counterpart units since their higher expectations are more difficult to meet. Still, that would not explain why not all armor units or airborne units or COHORT units decline, or why some decline more than others, or why artillery units with "lower expectations" decline still further. We are clearly missing some additional factor or set of factors, a situation that necessitates some company by company investigation.
If we were looking for a key to this puzzle based on the foregoing analysis, we would logically look first at the companies where the greatest deviations from the first to the second iteration occurred, namely Armor-COHORT-CONUS and Light Infantry companies. But since we decided to do a full company by company analysis, there was no need to limit ourselves to any previous categorizations. Therefore, we simply arrayed all 91 companies at our disposal by their Iteration 2 minus Iteration 1 Unit Social Climate means. The mean of these 91 mean differences is -1.1. However, the range is -15.5 to +13.4 with a standard deviation of 4.0. The best thing to do seemed to be to look intensively at the companies whose mean difference was atypical. Companies which had mean differences which were more than a standard deviation away from the mean of mean differences, (i.e. those companies who were -5.1 and less, and those who were +2.9 and greater were selected). This procedure turned up 12 companies with large declines and 13 with large increases in Unit Social Climate.

Having identified these companies, we were still left with the question of what to look for. Qualitative data from these units would be one place to start, but while we have such data from some units, for example the Light Infantry (to be discussed in upcoming reports), we do not have them for all, for example the Armor COHORT unit that dropped over 15 UNITSOC points. However, we do have the soldiers' written comments on their questionnaires, which were specifically solicited for the second iteration. By comparing the comments of those companies that went significantly down on UNITSOC with those that went significantly up, we might be able to isolate key variables explaining those changes.

We read these sets of comments, and at least in a cursory way, began to make objective assessments of differing content or issue areas. For the Armor COHORT company that suffered the greatest decline in Unit Social Climate, certain issues quickly emerged that were to become fairly commonplace for the other companies that also experienced large mean score decreases. Some examples:

This unit spends entirely too much time down range, considering the reason we go down. Most of the time we sit around for three to four days, just because there is nothing to do! Morale gets extremely low because of this.

The unit's NCOs do not respect the enlisted members as soldiers. They think we are still damn trainees. They need to stop and think about how they want us to respect them. But I can tell you this, us EM are definitely getting tired of it. We tried to bring it up to them in a presentable manner, but it didn't work. That is the reason for low company morale and other related problems.
The leadership in the unit isn't all that I expected. They tell you to keep good morale, but do not provide adequate extra-curricular activities.

We go down range too goddamn much. No time for a social life.

...Also when we are not in the field, we are almost always doing stupid things to impress somebody who you never see and could care less about what he thinks about you!

...The numbers game should not be played to make higher ranking personnel look good for OERs and promotion, by time we are spent SIC down range.

My unit claims that the family is important, but so far they have made it so there is no home life or time with family. My company is at a very low morale right now (this includes enlisted and NCO) due to the way we are treated. The unit spends way too much time down range—250 days last year. And when we're not with our unit, we're being attached to some other unit.

It seems like the NCOs are assholes. They think they are COHORT too! How many of them can you talk to? 0!

Exploitative leaders, uncaring leaders, and excessive time in the field, especially if it includes a lot of down time, are mentioned over and over again by members of companies with steep UNITSOC declines:

In my unit they never tell you how good a job you're doing when you are trying to do your best.

It's not right to get cursed out everyday for no reason...

I feel this unit's field time is too constant. No time to take care of personal things...

Very dissatisfied on how you are treated as a person...

The leaders in this unit do not care about the men only that we put on a show for them...

This unit has a bunch of back-stabbing SOBs. Many lack knowledge of what it means to be a real NCO and officer. This damn BN is mainly concerned about going into the history books as one of the greatest at our expense.
I have witnessed unprofessional officers degrade NCOs in front of troops. Also, I have witnessed a Warrant Officer in my battalion level maintenance show complete disrespect for officers in my battery to include NCOs and below. To simplify it, officers don’t really communicate with me as a Private.

We spend a lot of time in the field doing nothing unless an officer is around.

My company has a very weak, backstabbing, and unknowledgeable and biased company commander. He has truly lost his men’s respect. Our first sergeant is a liar and has no backbone as far as taking care of his people. I have grown to hate this COHORT unit from experience.

Lack of fairness and a sense that leaders are incompetent become additional areas for loss of morale:

I really don’t believe this type of Army is going to help our country’s national defense. Most of the officers and NCOs are just here to draw a paycheck. The way that I feel is: What if we really had to go to war. I cannot be sure if I could trust my leaders to know what the fuck they were doing.. Most leaders don’t seems to know their shit.

The NCOs were not introduced to us until after basic training. They seem to rate people on favoritism and controllability as far as from one NCO to another.

Lack of consistent standards and discipline...

Also, it seems that discipline depends on how the NCO or CO feels, rather than what the act was, itself.

I have a black friend and he went AWOL for some days and he was punished by extra duties and demoted to Z-1, which he was a PFC. Then two CPLs (white) went and for the same day(s). They were not punished.

The biggest problem I see is that NCOs and especially officers get a chip on their shoulders... When you run into one who does not know what he is doing, he or she will plow ahead acting like they know what they are doing.

There are, of course, unit specific problems that get mentioned, e.g. racial prejudice, lack of privacy, drugs, and alcohol. With respect to the use of drugs and alcohol, however, the soldiers themselves see these as merely symptoms of the larger problem:
The pressures put on people in the army cause them to tense up and people either smoke a few joints or they drink like sailors. I don’t like drinking so I mellow out my way. Can you help?

I think that the Army may be better only if the soldiers stop doing drugs. They do it because they’re depressed.

The fact that all of these things contribute to a loss of horizontal bonding, but shore up the validity of our Unit Social Climate measure, is clear:

The backstabbing for approval and low life techniques of attempting to make rank are many times disheartening. I find this unit not working together, but working against itself a majority of the time.

It’s bad to see this brown-nosing because those same SM’s are going to war with me and when I need them, they are not going to be there in the rough times.

Never in my life have I ever felt more mentally weak and unstable. If we went to war right now half of us would kill the other half.

One of the problems with asking for open comments on an Army survey is that their valence tends to be exclusively negative. For the companies then that significantly improved on their Unit Social Climate, there was certainly no dearth of criticisms and complaints about the Army. However, while we did not test this in a rigorous or quantitative way, the tone and content of comments from units that improved in their social climate was qualitatively different. Complaints centered more on tangible things like poor Army pay, benefits, food, equipment, transportation, standard of living, and physical conditions in the barracks. Lack of schooling opportunities and recruiters who lied to them are also among the problems mentioned most frequently by soldiers in these companies. One definitely does not read in such companies about the kind of alienation, backstabbing, drug use, thorough disgust with leader practices, and loss of heart that one does with the companies on the other end of the UNITSOC change spectrum. In fact, there seem to be fewer comments about anything at all, and even an occasional statement complimentary to the Army.

The Army Research Branch in World War II (ARB, 1943) recognized that the “intangibles,” e.g. fairness, being told why a task is necessary, and officer interest in the personal welfare of his men, were more important in establishing unit morale than the “tangibles,” e.g. food, shelter, pay, and medical care. So this is nothing new. What we are attempting to learn now, however, is how, given certain structures like COHORT that are
designed to enhance horizontal cohesion, units may still change with respect to their degree of cohesion due to other factors.

This analysis is just at the beginning phase, but looks promising. By using the soldier's comments and other qualitative data from the field, we can begin to zero in on the factors that inhibit or promote cohesion over time and construct hypotheses. For example, based on the foregoing comments, we would say that loss of UNITSOC is based at least partially on declining evaluations of the command climate as well as a sense of lost time for a social life. Let us approximate the former by company mean changes on Concerned Leadership and the latter by the changes in response to the item "I have enough time to spend with family members and friends." The correlation between Unit Social Climate change and Concerned Leadership change is .87, while the correlation between Unit Social Climate change and Time for Social Life change is .52, using company mean changes as the unit of analysis. These high correlations lend credence to the hypothesis that horizontal cohesion is associated with leadership practices and perceptions.

Pending further analysis then, we will conclude this section with the message that unless soldiers perceive genuine interest and concern from their leaders, and this concern and interest is sustained over time, horizontal bonding will diminish. COHORT companies, due to their higher level of horizontal bonding to begin with, appear to be especially vulnerable in this regard. In addition, the horizontal bonding of soldiers is less likely to deteriorate if the soldiers feel they have enough personal time to escape from one another now and again. In particular, if the keeping of soldiers in the field for long periods of down time is mission essential, that justification has not yet been internalized by the soldiers themselves. And this, of course, can be related back to leadership quality itself.

**Plans for Future Analyses**

We have just suggested that more work needs to be done investigating changes in horizontal bonding over the two iterations, either by way of Unit Social Climate or some refined version of it. In general, the scales developed in the first iteration analysis, though still reliable in the second, could use some fine-tuning and streamlining. Certainly, we need to be more parsimonious in the number of scales we deem to be important to understanding Army group cohesion. For example, though Senior Command Confidence is a very reliable scale, it does not really mean very much since soldiers often write in the margins, whether they respond to the items or not, that they don't know who their Corps Commander or the Army Chiefs of Staff, etc. are and what effect these officers have on them.

At a minimum, as we have begun to do here, we need to model facets of cohesion with respect to one another, instead of
trating them as simultaneous outcomes of some structural variable, be it COHORT, type of combat arms unit, or something else. COHORT itself should be viewed as having an effect primarily on horizontal bonding, with vertical cohesion, quality of training, etc. acting as independent influences on such bonding. Horizontal bonding itself then may be theorized to have an independent effect on other group-related perceptions, e.g. company combat confidence, or individual-related perceptions, such as sense of pride. These kinds of models would definitely take us in the right direction to understanding how the separate dimensions of what we have broadly referenced as cohesion are interrelated.

Given the importance of a stable core of personnel in company group life, actual turnover rate from iteration to iteration should be considered as an additional variable for statistical control in analyzing company means. For the sake of comparison, we will redo some analyses only with individuals we can match by SSAN for both iterations. In addition, more individual level analysis will be carried out since it is only at this level that we can understand fully the effects of length of time in the company or the perceived turnover of personnel. The individual level also remains important for planned variance components analyses, e.g. we know that company identification accounts for between 5 and 8 percent and battalion identification for between 2 and 4 percent of the total individual variance on Unit Social Climate from iteration to iteration. With the receipt of squad and platoon identity information for the third iteration, we will be able to ascertain further the relative importance of group level for explaining variations in cohesion perception. We can then break out more meaningfully the relative importance of perceptions regarding the different levels of leadership.

We will begin a more detailed analysis of the soldiers' written comments and develop workable categories for issues raised. Theory development and testing will commence in earnest for the interaction between social supports, duty stress, perceptions of Army group life, and psychological well-being. We are preparing for the analysis of the third iteration questionnaire that includes new items on battalion rotation, PCS, and buddy network estimation which will open up new points of interfacing with the qualitative data collection. Finally, we hope to begin establishing historical norms for some of our survey items by going back to World War II data with the help of Dr. William Reeder, formerly of the Army Research Branch and now professor emeritus from Cornell University. We indeed have a formidable research agenda before us.
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LTC Mark Hamilton, Unit Manning Division, briefing at WRAIR, 29 October 1986.


Comparison of Cohesion Subscale Grand Means (Rescaled to 0–100)

First Iteration Data

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Comparison of Cohesion Subscale Grand Means (Rescaled to 0-100)

Second Iteration Data

Graph 1B

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<td>55.9</td>
</tr>
<tr>
<td>USC</td>
<td>45.8</td>
</tr>
<tr>
<td>UT</td>
<td>47</td>
</tr>
</tbody>
</table>
Unit Social Climate Means By Line Co. Classification Within Battalion Type

First Iteration Data

Graph 2A
Unit Social Climate Means By Line Co. Classification Within Inf. Bn. Type

First Iteration Data

Graph 2B
Unit Social Climate Means By Line Co. Classification Within Battalion Type

Second Iteration Data

Graph 2c
Unit Social Climate Means By Line Co. Classification Within Inf. Bn. Type

Second Iteration Data

Graph 2D
Appendix A

UNIT MANNING SYSTEM
HUMAN DIMENSIONS FIELD EVALUATION
SURVEY REPORT IV: Technical Appendix

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CPT, MS

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Division of Neuropsychiatry
Walter Reed Army Institute of Research
Washington, D.C. 20307-5100
TABLE 1

RESPONSE RATES FOR UNITS PARTICIPATING IN FIRST AND/OR
SECOND ITERATION QUESTIONNAIRE ADMINISTRATIONS
(BASED ON NUMBER SURVEYED/NUMBER ASSIGNED TO COMPANY)

<table>
<thead>
<tr>
<th></th>
<th>FIRST ITERATION</th>
<th>SECOND ITERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADMINISTRATION DATES</td>
<td>85May-85Nov</td>
<td>85Nov-86May</td>
</tr>
<tr>
<td>OVERALL RESPONSE RATE</td>
<td>76.6%</td>
<td>71.2%</td>
</tr>
<tr>
<td></td>
<td>(9016/11712)</td>
<td>(8594/12065)</td>
</tr>
<tr>
<td>COHORT RATE</td>
<td>78.1%</td>
<td>73.3%</td>
</tr>
<tr>
<td></td>
<td>(6121/7837)</td>
<td>(6259/8535)</td>
</tr>
<tr>
<td>NONCOHORT RATE</td>
<td>73.6%</td>
<td>66.2%</td>
</tr>
<tr>
<td></td>
<td>(2895/3935)</td>
<td>(2335/3530)</td>
</tr>
<tr>
<td>CONUS RATE</td>
<td>77.3%</td>
<td>68.9%</td>
</tr>
<tr>
<td></td>
<td>(6442/8330)</td>
<td>(5004/7258)</td>
</tr>
<tr>
<td>USAREUR RATE</td>
<td>74.8%</td>
<td>74.7%</td>
</tr>
<tr>
<td></td>
<td>(2574/3442)</td>
<td>(3590/4807)</td>
</tr>
</tbody>
</table>

N.B. For the first iteration, information concerning number assigned was not available for 12 companies and, in the case of the second iteration, for 8 companies.
**TABLE 2**

**DEMOGRAPHIC COMPARISONS OF RESPONDENTS WHO BELONG TO COMPANIES INCLUDED IN BOTH THE FIRST AND SECOND ITERATION ADMINISTRATIONS**

*(NUMBER OF MATCHING COMPANIES=91)*

<table>
<thead>
<tr>
<th></th>
<th><strong>FIRST ITERATION</strong></th>
<th><strong>SECOND ITERATION</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RACIAL BACKGROUND</strong></td>
<td>(8607)</td>
<td>(7541)</td>
</tr>
<tr>
<td>White</td>
<td>63.3%</td>
<td>62.8%</td>
</tr>
<tr>
<td>Black</td>
<td>25.2</td>
<td>24.7</td>
</tr>
<tr>
<td>Mexican American</td>
<td>4.0</td>
<td>3.9</td>
</tr>
<tr>
<td>Puerto Rican</td>
<td>3.3</td>
<td>3.4</td>
</tr>
<tr>
<td>Other</td>
<td>5.2</td>
<td>5.2</td>
</tr>
<tr>
<td><strong>MARITAL STATUS</strong></td>
<td>(8581)</td>
<td>(7501)</td>
</tr>
<tr>
<td>Not/Never Married</td>
<td>52.6%</td>
<td>48.2%</td>
</tr>
<tr>
<td>Presently Married</td>
<td>42.4</td>
<td>48.4</td>
</tr>
<tr>
<td>Separated</td>
<td>2.1</td>
<td>0.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>2.9</td>
<td>2.8</td>
</tr>
<tr>
<td><strong>RESIDENCE LOCATION</strong></td>
<td>(8356)</td>
<td>(7466)</td>
</tr>
<tr>
<td>In the Barracks</td>
<td>58.2%</td>
<td>53.9%</td>
</tr>
<tr>
<td>On-Post Housing</td>
<td>12.1</td>
<td>15.8</td>
</tr>
<tr>
<td>Off-Post Housing</td>
<td>29.7</td>
<td>30.3</td>
</tr>
<tr>
<td><strong>EDUCATIONAL LEVEL</strong></td>
<td>(8631)</td>
<td>(7547)</td>
</tr>
<tr>
<td>Up to 11 Years</td>
<td>7.2%</td>
<td>6.2%</td>
</tr>
<tr>
<td>12 Yrs./B.S. Diploma</td>
<td>63.6</td>
<td>68.0</td>
</tr>
<tr>
<td>Over 12 Years/College</td>
<td>29.1</td>
<td>25.8</td>
</tr>
<tr>
<td><strong>RANK</strong></td>
<td>(8669)</td>
<td>(7505)</td>
</tr>
<tr>
<td>Junior Enlisted</td>
<td>67.4%</td>
<td>65.2%</td>
</tr>
<tr>
<td>NCOs</td>
<td>27.9</td>
<td>29.4</td>
</tr>
<tr>
<td>Officers</td>
<td>4.7</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>AGE</strong></td>
<td>(8435)</td>
<td>(7374)</td>
</tr>
<tr>
<td>Mean (Years)</td>
<td>23.6</td>
<td>24.0</td>
</tr>
<tr>
<td><strong>MONTHS IN COMPANY</strong></td>
<td>(8527)</td>
<td>(6739)</td>
</tr>
<tr>
<td>Mean</td>
<td>11.4</td>
<td>14.6</td>
</tr>
</tbody>
</table>

**TOTAL SAMPLE N**

<table>
<thead>
<tr>
<th></th>
<th>(8719)</th>
<th>(7593)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

**N.B.** The number of valid cases for each variable is given in parentheses in the variable label line. Percentages in this or subsequent tables may not sum to 100% due to rounding error. For the second iteration questionnaire, the marital status category "not married" was changed to "never married." Also, the educational level categories were changed from ones designating...
ranges of years to ones incorporating both years and diploma/degree levels. Rank was phrased in terms of open-ended pay grades in the first iteration as opposed to close-ended ones in the second. The "months in company" variable only included pay grades E1-E3 and 01-03 for the first iteration, but in addition included no members of the battalion staff for the second iteration.
TABLE 3  
DEFINITIONS OF SCALES PREVIOUSLY DEVELOPED  
FOR THE UMS FIELD EVALUATION

There are twelve scales that were developed in previous analyses of first iteration data that we can replicate for the second iteration. We briefly lay out the meaning of these scales below, although the reader should go back to the first and third UMS Technical Reports for information on their construction, item-total correlations, and other statistical properties.

1. Company Combat Confidence (COMPCON): Measures perceptions of company combat readiness, level of training, and quality of weapons for company-level personnel.

2. Senior Command Confidence (SENICON): Measures confidence in the tactical decisions of the battalion commander on up to the Army General Staff for all personnel.

3. Small-Unit Command Confidence (UNITCON): Measures combat confidence in the company commander down the leadership chain to the individual for E1-E4s.

4. Concerned Leadership (CONLEAD): Measures perceptions that officers and NCOs are interested in the soldier's welfare and feelings. E1-E4s only.

5. Sense of Pride (SENPRID): Measures the individual's pride in the Army, including his company, as well as sense of belonging for all personnel.

6. Unit Social Climate (UNITSOC): Measures perceptions of trust, closeness, friendship, and reliance among soldiers mainly at the company level for E1-E4s.

7. Unit Teamwork (TEAMSOC): Measures perceptions of cooperation and loyalty between soldiers in the company and their NCOs and officers for all personnel.

8. General Well-Being (GWB): Measures the individual's perceived lack of distress, depression, anxiety, and presence of health, energy, and sureness of self for all personnel.

9. Army Satisfaction (ARMISAT): Measures satisfaction with Army pay, benefits, security, way of life, unit policies, duty hours, and location for married soldiers.
10. Life Satisfaction (LIFESAT): Measures satisfaction with marriage, health, neighborhood, friendships, standard of living, and education for married soldiers.

11. Spouse Support (SOCSUP): Measures perceptions that soldier's wife can count on neighbors, friends, Army leaders or agencies for help. For married soldiers living with their wives.

12. Psychological Sense of Community (COMSEN): Measures involvement in community, trust in community leaders, and perception that community would band together in an emergency. For married soldiers living with their wives.
## TABLE 4

**Repeated Measures Analysis of Variance for Twelve Survey Scales**  
*Each with 91 matched pairs of company means*  
*With between company effects for cohort status, unit type,  
assignment location, and line company status*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grand Mean</th>
<th>Iter 1</th>
<th>Iter 2</th>
<th>Neut</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>COH0RT/nonCOH0RT</td>
<td>17.2***</td>
<td>5.7***</td>
<td>4.6*</td>
<td>0.9</td>
<td></td>
</tr>
<tr>
<td>Unit Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line/Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Between Company Effects:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time*COH0RT/nonCOH0RT</td>
<td>4.6*</td>
</tr>
<tr>
<td>Time*Unit Type</td>
<td>0.6</td>
</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
<td>7.6**</td>
</tr>
<tr>
<td>Time*Line/Other</td>
<td>0.9</td>
</tr>
</tbody>
</table>

**Within Company Effects:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>0.4</td>
</tr>
<tr>
<td>Time*COH0RT/nonCOH0RT</td>
<td>4.6*</td>
</tr>
<tr>
<td>Time*Unit Type</td>
<td>0.6</td>
</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
<td>7.6**</td>
</tr>
<tr>
<td>Time*Line/Other</td>
<td>0.9</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Scale</th>
<th>Grand Mean</th>
<th>Iter 1</th>
<th>Iter 2</th>
<th>Neut</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>COH0RT/nonCOH0RT</td>
<td>17.8</td>
<td>17.3</td>
<td>15</td>
<td>5-25</td>
<td></td>
</tr>
<tr>
<td>Unit Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line/Other</td>
<td></td>
<td></td>
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</table>

**Between Company Effects:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F Value</th>
</tr>
</thead>
<tbody>
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<td>COH0RT/nonCOH0RT</td>
<td>6.7*</td>
</tr>
<tr>
<td>Unit Type</td>
<td>2.8*</td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>7.6**</td>
</tr>
<tr>
<td>Line/Other</td>
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</tbody>
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**Within Company Effects:**

<table>
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<tbody>
<tr>
<td>Time</td>
<td>5.6*</td>
</tr>
<tr>
<td>Time*COH0RT/nonCOH0RT</td>
<td>2.6</td>
</tr>
<tr>
<td>Time*Unit Type</td>
<td>3.9**</td>
</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
<td>3.6</td>
</tr>
<tr>
<td>Time*Line/Other</td>
<td>0.3</td>
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</tbody>
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*P<.05  
**P<.01  
***P<.001
(TABLE 4 Continued)

<table>
<thead>
<tr>
<th>SCALE=UNITCON</th>
<th>GRAND MEAN ITER1=36.9</th>
<th>ITER2=35.7</th>
<th>NEUT=33 RNGE=11-55</th>
</tr>
</thead>
</table>

BETWEEN COMPANY EFFECTS:

<table>
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<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT/nonCOHORT</td>
<td>37.9***</td>
</tr>
<tr>
<td>Unit Type</td>
<td>3.4*</td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>1.8</td>
</tr>
<tr>
<td>Line/Other</td>
<td>3.7</td>
</tr>
</tbody>
</table>

WITHIN COMPANY EFFECTS:

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>1.6</td>
</tr>
<tr>
<td>Time*COHORT/nonCOHORT</td>
<td>7.6**</td>
</tr>
<tr>
<td>Time*Unit Type</td>
<td>3.2*</td>
</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
<td>4.0*</td>
</tr>
<tr>
<td>Time*Line/Other</td>
<td>0.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SCALE=CONLEAD</th>
<th>GRAND MEAN ITER1=24.7</th>
<th>ITER2=23.9</th>
<th>NEUT=27 RNGE=9-45</th>
</tr>
</thead>
</table>

BETWEEN COMPANY EFFECTS:

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT/nonCOHORT</td>
<td>24.4***</td>
</tr>
<tr>
<td>Unit Type</td>
<td>6.0***</td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>4.7*</td>
</tr>
<tr>
<td>Line/Other</td>
<td>0.3</td>
</tr>
</tbody>
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WITHIN COMPANY EFFECTS:

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>0.0</td>
</tr>
<tr>
<td>Time*COHORT/nonCOHORT</td>
<td>9.4***</td>
</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
<td>9.4***</td>
</tr>
<tr>
<td>Time*Line/Other</td>
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</tr>
</tbody>
</table>

*P<.05  
**P<.01  
***P<.001
(TABLE 4 Continued)

<table>
<thead>
<tr>
<th>SCALE=SENPRID</th>
<th>GRAND MEAN</th>
<th>ITER1=26.4</th>
<th>ITER2=25.9</th>
<th>NEUT=24</th>
<th>RNGE=8-40</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETWEEN COMPANY EFFECTS:</td>
<td>F VALUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COHORT/nonCOHORT</td>
<td>16.5***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit Type</td>
<td>9.0***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>6.0*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line/Other</td>
<td>0.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| WITHIN COMPANY EFFECTS: |
| Time | 0.1 |
| Time*COHORT/nonCOHORT | 5.1* |
| Time*Unit Type | 1.9 |
| Time*CONUS/OCONUS | 3.4 |
| Time*Line/Other | 0.5 |

<table>
<thead>
<tr>
<th>SCALE=UNITSOC</th>
<th>GRAND MEAN</th>
<th>ITER1=43.6</th>
<th>ITER2=42.5</th>
<th>NEUT=45</th>
<th>RNGE=15-75</th>
</tr>
</thead>
<tbody>
<tr>
<td>BETWEEN COMPANY EFFECTS:</td>
<td>F VALUE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COHORT/nonCOHORT</td>
<td>54.4***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit Type</td>
<td>7.8***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>2.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Line/Other</td>
<td>0.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| WITHIN COMPANY EFFECTS: |
| Time | 0.5 |
| Time*COHORT/nonCOHORT | 6.9* |
| Time*Unit Type | 2.1 |
| Time*CONUS/OCONUS | 2.3 |
| Time*Line/Other | 0.1 |

*P<.05
**P<.01
***P<.001
(TABLE 4 Continued)

<table>
<thead>
<tr>
<th>SCALE=TEAMSOC</th>
<th>GRAND MEAN ITER1=15.2</th>
<th>ITER2=14.4</th>
<th>NEUT=15 RNGE=5-25</th>
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</thead>
</table>

**BETWEEN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT/nonCOHORT</td>
<td>30.1***</td>
</tr>
<tr>
<td>Unit Type</td>
<td>7.6***</td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>16.6***</td>
</tr>
<tr>
<td>Line/Other</td>
<td>1.1</td>
</tr>
</tbody>
</table>

**WITHIN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>5.2*</td>
</tr>
<tr>
<td>Time*COHORT/nonCOHORT</td>
<td>9.8**</td>
</tr>
<tr>
<td>Time*Unit Type</td>
<td>4.0**</td>
</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
<td>4.4*</td>
</tr>
<tr>
<td>Time*Line/Other</td>
<td>0.4</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>SCALE=GWB</th>
<th>GRAND MEAN ITER1=61.3</th>
<th>ITER2=64.2</th>
<th>NEUT=NA RNGE=0-110</th>
</tr>
</thead>
</table>

**BETWEEN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT/nonCOHORT</td>
<td>8.8**</td>
</tr>
<tr>
<td>Unit Type</td>
<td>19.2***</td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>16.8***</td>
</tr>
<tr>
<td>Line/Other</td>
<td>5.7*</td>
</tr>
</tbody>
</table>

**WITHIN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time</td>
<td>12.4***</td>
</tr>
<tr>
<td>Time*COHORT/nonCOHORT</td>
<td>2.0</td>
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<td>1.7</td>
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</tr>
<tr>
<td>Time*Line/Other</td>
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*P<.05  
**P<.01  
***P<.001
(TABLE 4 Continued)

<table>
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<th>GRAND MEAN ITER1=41.3</th>
<th>ITER2=41.8</th>
<th>NEUT=42 RNGE=14-70</th>
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**BETWEEN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Factor</th>
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<tbody>
<tr>
<td>COHORT/nonCOHORT</td>
<td>11.1***</td>
</tr>
<tr>
<td>Unit Type</td>
<td>11.2***</td>
</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>37.4***</td>
</tr>
<tr>
<td>Line/Other</td>
<td>3.6</td>
</tr>
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**WITHIN COMPANY EFFECTS:**

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Time</td>
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</tr>
<tr>
<td>Time*COHORT/nonCOHORT</td>
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</tr>
<tr>
<td>Time*Unit Type</td>
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</tr>
<tr>
<td>Time*CONUS/OCONUS</td>
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<tr>
<td>Time*Line/Other</td>
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**BETWEEN COMPANY EFFECTS:**

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<tbody>
<tr>
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<tr>
<td>Unit Type</td>
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</tr>
<tr>
<td>CONUS/OCONUS</td>
<td>18.7***</td>
</tr>
<tr>
<td>Line/Other</td>
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**WITHIN COMPANY EFFECTS:**

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<tr>
<td>Time*Line/Other</td>
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*P<.05  
**P<.01  
***P<.001
(TABLE 4 Continued)

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**BETWEEN COMPANY EFFECTS:**

<table>
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<th>Effect</th>
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<td>Line/Other</td>
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**WITHIN COMPANY EFFECTS:**

<table>
<thead>
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**BETWEEN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Effect</th>
<th>F VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>COHORT/nonCOHORT</td>
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<tr>
<td>Unit Type</td>
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</tr>
<tr>
<td>CONUS/OCONUS</td>
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<td>Line/Other</td>
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**WITHIN COMPANY EFFECTS:**

<table>
<thead>
<tr>
<th>Effect</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>Time*COHORT/nonCOHORT</td>
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<tr>
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*P<.05  
**P<.01  
***P<.001

N.B. Degrees of freedom are (1,83) for all effects except for Unit Type and the interaction of Unit Type and Time where dfs(4,83). Unit Type levels include Mechanized Infantry, Light Infantry, Airborne Infantry, Armor, and Field Artillery.