

**THE FORCE XXI MECHANIZED INFANTRY PLATOON:
WILL IT BE AN EFFECTIVE ORGANIZATION?**

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MASTER OF MILITARY ART AND SCIENCE

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This study examines the effectiveness of the Force XXI mechanized infantry platoon organization. The study first reviews similar historical mechanized platoon organizations. The purpose of the historical review is to determine the evolution of these organizations and to gain insights as to why they changed. Second, the study assesses the current effectiveness of the Army of Excellence light and mechanized platoon's to reveal the potential effectiveness of the Force XXI platoon. Finally, the thesis assesses the effectiveness of the Force XXI platoon by using the historical conclusions drawn from previous organizations combined with the analysis of current platoon effectiveness. The study confirms the hypothesis raised in this thesis. Historical conclusions and demonstrated marginal effectiveness of current organizations, reveal that the Force XXI platoon may not be an effective organization for twenty-first century. Finally, this thesis concludes with a recommendation that is organized to correct the issues and problems raised in this thesis.

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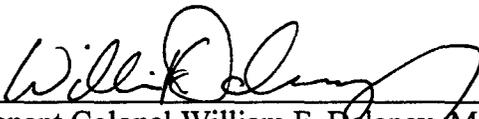
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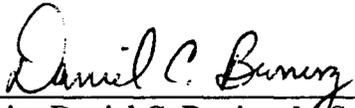
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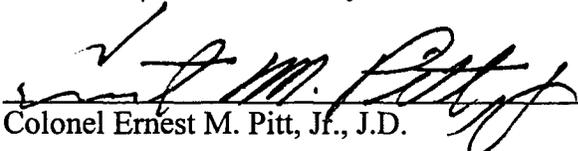
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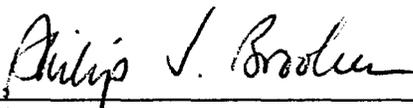
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The opinions and conclusions expressed herein are those of the student author and do not necessarily represent the views of the U.S. Army Command and General Staff College or any other governmental agency. (References to this study should include the foregoing statement.)

ABSTRACT

THE FORCE XXI MECHANIZED INFANTRY PLATOON: WILL IT BE AN EFFECTIVE ORGANIZATION? by MAJ JOHN G. NORRIS, USA, 69 pages.

This study examines the effectiveness of the Force XXI mechanized infantry platoon organization.

The study first reviews similar historical mechanized platoon organizations. The purpose of the historical review is to determine the evolution of these organizations and to gain insights as to why they changed. Second, the study assesses the current effectiveness of the Army of Excellence light and mechanized platoon's to reveal the potential effectiveness of the Force XXI platoon. Finally, the thesis assesses the effectiveness of the Force XXI platoon by using the historical conclusions drawn from previous organizations combined with the analysis of current platoon effectiveness.

The study confirms the hypothesis raised in this thesis. Historical conclusions and demonstrated marginal effectiveness of current organizations, reveal that the Force XXI platoon may not be an effective organization for twenty-first century.

Finally, this thesis concludes with a recommendation that is organized to correct the issues and problems raised in this thesis.

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ABBREVIATIONS

APC	Armored Personnel Carrier
AOE	Army of Excellence
AOE 2 X 9	Army of Excellence Mechanized Platoon consisting of four Bradley's and two nine-man rifle squads
AOE 3 X 9	Army of Excellence Light Infantry Rifle Platoon consisting of three nine-man rifle squads
ARI	Army Research Institute
BC	Bradley Commander of a BIFV
BIFV	Bradley Infantry Fighting Vehicle
BLC	Bradley Leader Course
CTC	Combat Training Center
IOAC	Infantry Officers Advanced Course
IOBC	Infantry Officers Basic Course
JRTC	Joint Readiness Training Center
NTC	National Training Center
TOE	Table of Organization and Equipment
TRADOC	The U.S. Army Training and Doctrine Command
USAIS	United States Army Infantry School

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CHAPTER 1

DEFINING THE PROBLEM

Introduction

On 9 June 1998, General Dennis J. Reimer, U.S. Army Chief of Staff, announced the new division redesign for the twenty-first century: "We have developed a division that is strategically deployable, agile, flexible and the type of decisive, full spectrum force we will need in the 21st century."¹ The division redesign will change the organization of the mechanized infantry platoon significantly with the addition of a nine-man rifle squad. This will now provide three rifle squads, a standard doctrinal rifle platoon of dismounted infantrymen to the mechanized platoon. The additional rifle squad poses new challenges for the mechanized platoon leader's responsibility to effectively lead and train his platoon. The U.S. Army capstone doctrinal Field Manual (FM) 100-5, *Operations*, states that of the four elements of combat power, leadership is the most essential element.² FM 100-5 further states, "There is no peacetime duty more important for leaders than studying their profession, understanding the human dimension of leadership, becoming tactically and technically proficient, and preparing for war."³ Will the Force XXI Mechanized Infantry Platoon be tactically and technically proficient and prepared for war in the twenty-first century? This thesis examines whether the organizational change, with the addition of another rifle squad, inhibits the platoon leader's ability to be technically and tactically proficient and accomplish its wartime mission. Does this organization exceed the platoon leader's ability to effectively lead and train his platoon in the performance of the required collective and individual tasks?

Background

Since the 1980s when the infantry adopted the M2 Bradley fighting vehicle as the armored personnel carrier (APC) to replace the M113, the mechanized infantry community has struggled with the question of how the mechanized infantry platoon should be organized. What is the right mix of dismounted infantrymen to the Bradley crews? What is the optimum squad size for the mechanized infantry? These are just a sampling of the questions that have challenged the infantry for many years. All of the questions listed above have again risen from their dormant state as the Army enters into a new era, the twenty-first century.

General Sullivan, the Chief of Staff of the Army, initiated the Force XXI study in 1994 to address the force requirements for the Army in the twenty-first century.⁴ The immediate effects of the Force XXI study and ultimate redesign, chosen four years later, were the reduction of combat vehicles in the infantry and armor battalions. The battalions would be reduced from fifty-eight to forty-five vehicles per battalion. The forty-five-vehicle limit resulted in the United States Army Infantry School (USAIS) and the United States Army Armor School conducting additional studies to determine what the future battalions would look like. The study was to determine what would be better, four-company battalions with smaller three-vehicle platoons, or three-company battalions with four-vehicle platoons.

The studies conducted at USAIS, were initially focused more on the ultimate vehicle configuration of the battalion than the internal supporting dismounted infantry organizational structure. The initial studies conducted were designed to determine an optimum platoon vehicle configuration, three- or four-vehicle platoon, with no real

Although this study included possible squad organizations, it was not capable of clearly identifying the best solution due to the study's subjective design. This was a limited examination due to the time allocated for the study and to the limitations of the available simulations.

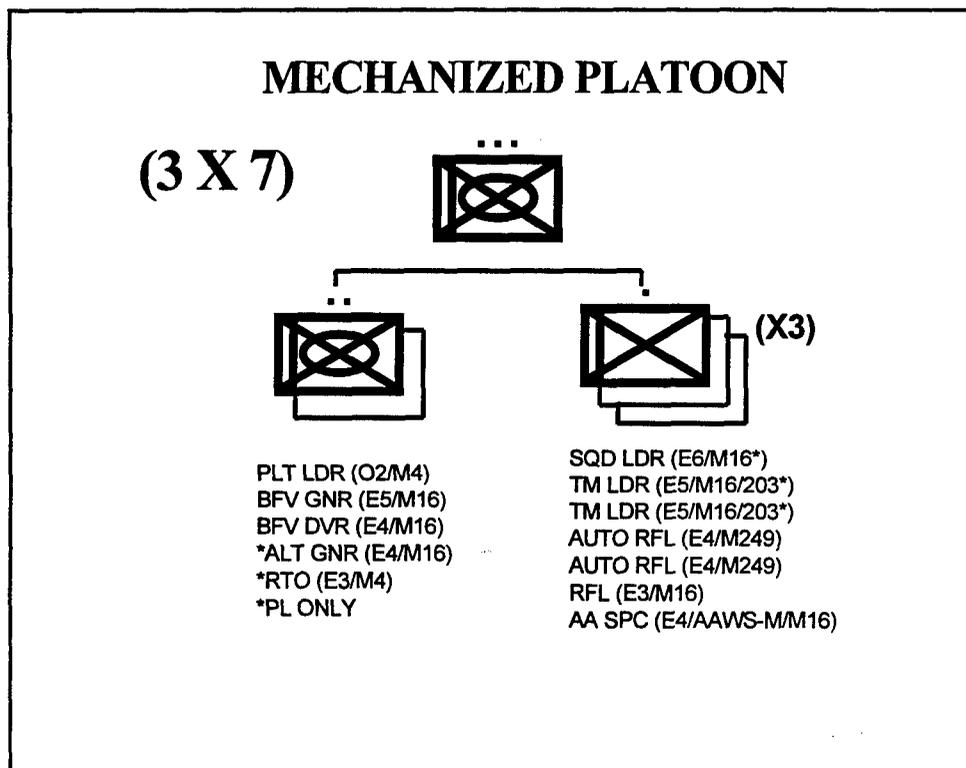


Figure 2. Platoon Organizational Chart 3 X 7

The decision to add an additional squad was not based on newly identified mission requirements or any studies that showed that the current organization was ineffective. It appears that the decision to add an additional rifle squad was based on the number one issue in the infantry, the shortage of infantrymen. The addition of a third squad occurred more as a result of the loss of one company per infantry battalion and an

effort to increase overall infantry strength in the mechanized infantry. General Maxwell D. Taylor once said that “numbers alone do not produce military strength. Soldier quality is essential to our strength. This quality is achieved by good leadership and instruction.”⁵ Although this concept of providing additional infantrymen to the fight is desirable, it is not necessarily the most effective or efficiently trained platoon organizational structure. The final USAIS recommendation, and the one accepted by the Chief of Staff of the Army, was a three-company battalion with four-vehicle platoons with three nine-man rifle squads (see fig. 3).

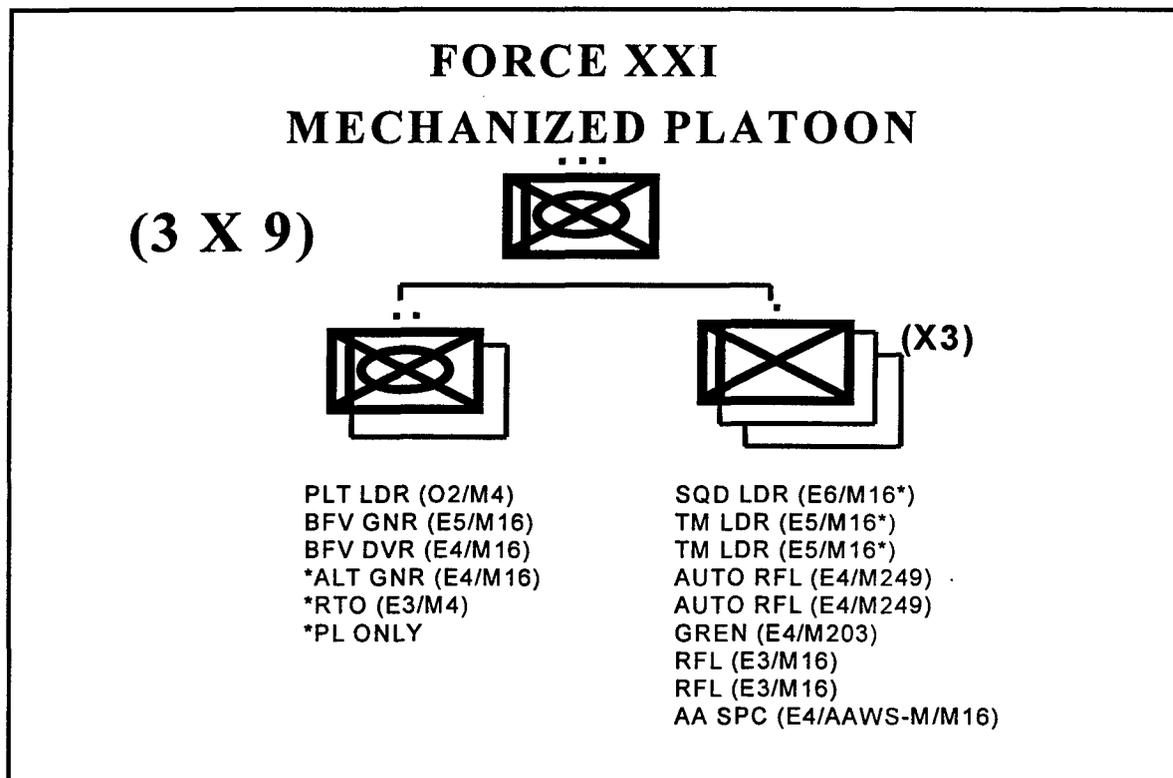


Figure 3. Force XXI Platoon Organizational Chart

Problem Statement

General William W. Hartzog, Commander of Training and Doctrine Command (TRADOC), announced on 9 June 1998 the new organization for the Army XXI heavy division. The approval of the Force XXI in 1998, and significant changes to the platoon organization, raise questions about its' effectiveness. Several issues impacting effectiveness of this new organization include the potential conflict in training both the mechanized platoon mounted and dismounted elements and the challenges impacting the platoon leader's ability to command and control this larger platoon successfully in combat. Is the proposed Force XXI Mechanized Infantry Platoon Organization a viable solution that can be effectively trained for war? This new organization will add an additional rifle squad to the current organization and provides the mechanized platoon leader with a standard dismounted rifle platoon-size element in addition to the four-vehicle-mounted platoon. The potential problem with this organization is that the platoon leaders will not be able to effectively train the mounted and dismounted platoon size elements simultaneously and will be challenged to successfully command and control both the mounted and dismounted platoons while in combat. The increased training requirements identified with this organizational change will affect the platoon leader's ability to successfully train two platoons simultaneously. Additionally, in a tactical situation, it is unlikely the platoon leader will be able to control both the mounted and dismounted platoons simultaneously without losing control of one or the other platoons. What the Army has gained in quantity with the addition of another squad of infantrymen, it has lost in quality, potentially with an ineffectively trained and organized force. It is the

thesis argument that this is not a viable and effective organization for the mechanized infantry platoon.

Research Questions

In order to build the foundation for the thesis argument that the Force XXI (3 X 9) is not an effective platoon organization for the infantry, this study must first explore a historical question to better understand the evolution of the mechanized infantry.

1. What organizational structures have the infantry used in the past?

The answer to this question provides a brief overview of the mechanized historical evolution and the background for the following questions.

2. What are the doctrinal war fighting training requirements, and how successful are we at training the current AOE (2 X 9) organization and the standard AOE rifle platoon?

3. What are the perceived advantages and disadvantages of the proposed Force XXI Mechanized Infantry Platoon?

4. What effective training examples and good organizational models can be used to form a more viable organization?

Assumptions

The principal assumption of this study is that the mechanized infantry will remain an integral element of the Force XXI vision. While the U.S. Army is changing to meet the challenges of the twenty-first century, the infantry must also change to fulfill its role as a decisive arm of the U.S. land forces. In discussing the future, General Dennis Reimer stated in the fiscal year 1999 U.S. Army posture statement, "It foresees an increasing

significance for land forces as the force of decision, and land forces are essential to our Nation's credibility."⁶

Secondly, it is assumed that the research findings will reveal that there are other alternatives to the Force XXI Bradley platoon organization.

Thirdly, the historical lessons and analysis from current performance of existing organizations have relevance and application to this study. The observations extracted from existing performance data will serve to illustrate the effectiveness of the Force XXI organization.

Limitations

The Force XXI Mechanized Platoon Organization recommended in 1998 is a new organization for the mechanized infantry. Because this is a new organization, there is a lack of statistical performance data available on the Force XXI platoon organization. Therefore, this study will use data from a combination of other existing organizations to provide support for this analysis. The combined capabilities of the AOE light and mechanized platoon's, represent the future capabilities of the Force XXI platoon. Performance data from the current Bradley platoon and the light infantry standard rifle platoon will provide insight into the effectiveness of the proposed Force XXI platoon.

Delimitations

This study will remain focused only on the issues that affect the training of the platoon and squad organizational structure. It will discuss the task organization possibilities at higher echelons only when it is required to support specific training issues.

The research will utilize both FM 7-7J and FM 7-8 to support the analysis because there is no current doctrine governing the Force XXI platoon organization.

This study will not address the tactical employment of the platoon other than to illustrate employment opportunities and challenges with the current doctrine. This study will not attempt to create doctrine for the Force XXI platoon. It will combine the doctrinal requirements of both the mechanized and light infantry platoons in order to achieve the doctrinal requirements of the Force XXI platoon.

Additionally, the analysis presented in this study will not address ramifications of the current trend of low manning levels of mechanized infantrymen. For the last ten years, the shortage of infantrymen, remains the number one infantry issue. Brigadier General Hendrix, USAIS Assistant Commandant, stated in a memorandum for U.S. Army Combined Arms Command that: "The shortage of dismounted Infantrymen . . . is one of the most significant combat deficiencies surfaced by commanders in the field in the last ten years."⁷ This study will not attempt to fix this manning problem. More importantly, this study will stay focused on the requirements and effectiveness of the organizations discussed or examined in this research.

Finally, this study contains only unclassified information.

Methodology

The research methodology will be described in this section and in greater detail later, in chapter three. The methodology as illustrated by figure 4 must first determine what the platoon must be effective at doing? FM 7-7J, *Mechanized Infantry Platoon and Squad (Bradley)*, states the mission as, "to close with the enemy by means of fire and

maneuver to defeat or capture him, or to repel his assault by fire, close combat, and counterattack.”⁸ It further says that in order to accomplish the mission stated above, it must be able to execute three tactical operations: movement, offense and defense. The platoon collective tasks outlined in the Mission Training Plan for the Mechanized Infantry Platoon (BIFV) ARTEP 7-7J are clearly defined and measurable actions the platoon must accomplish for the specific operation and mission. The tasks listed in the doctrinal manuals provide the best measure of effectiveness next to combat. If the platoon can accomplish the tasks as per the training and evaluation outlines in ARTEP 7-7J MTP and ARTEP 7-8 MTP, then it can be stated that the platoon is effective at those tasks.

METHODOLOGY

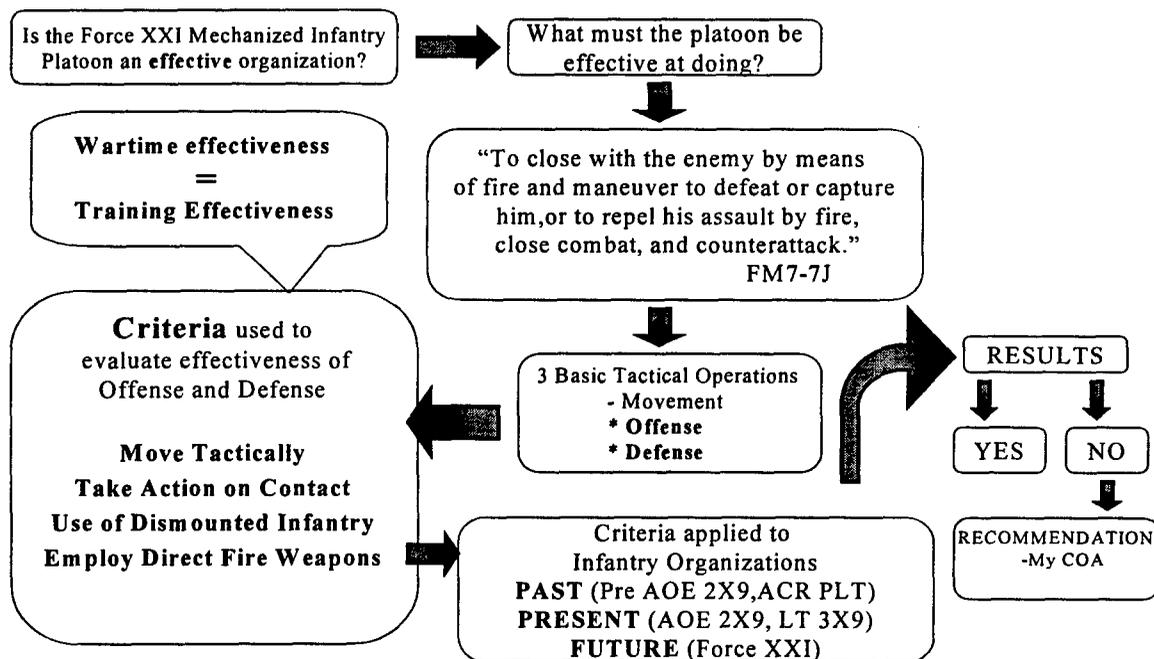


Figure 4. Research Methodology Chart

platoon and the Vietnam-era armored cavalry platoon to look at evolutionary changes of their organizations. Insight gained from the historical review of these organizations, will give historical conclusions for the reasons why they changed. The issues raised from the historical analysis will be applied to the Force XXI platoon.

The four collective task criteria will then be used to determine if present organizations are effective. The present Army of Excellence platoon organizations for the mechanized and light infantry platoons will serve as the vehicle for analyzing effectiveness. The results of the performance data provided in the Center for Army Lessons Learned (CALL) Combat Training Center (CTC) publications will illustrate the effectiveness of these two organizations. The combined results of the light and mechanized platoons will provide the necessary conclusions as to the potential effectiveness of the Force XXI platoon.

Finally, after drawing conclusions from the past and summarizing current infantry platoon effectiveness, I will then provide final analysis, conclusions of effectiveness for the Force XXI platoon and recommendations for improvement.

Significance of the Study

This thesis is significant because it will address potential problems with the Force XXI platoon organization and will provide recommendations to this problem before it is implemented in the mechanized infantry force. General Hartzog stated in an announcement of the Army redesign that, "The design that we have right now is still an interim design . . ." and additionally that "It's probably not precisely the way that division will be in the year 00. If there's a smart or good thing that develops before then,

we'll take heed of it and use it."¹¹ The recommendations from the analysis in this research provide a better solution that will enable the future mechanized infantrymen to be better trained, better led, and equipped for combat operations.

¹Jim Caldwell, TRADOC News Service, 9 June 1998, New Design Framework for Army XXI Heavy Division, accessed 20 August 1998; available from <http://www.tradoc.army.mil/pao/newdiv/newdesvn.html>; internet.

²Headquarters, Department of the Army, FM 100-5, *Operations* (Location: publisher, June 1993).

³Ibid.

⁴USAIS, *Holistic Review of the Infantry* (Ft. Benning: GA: Combined Arms and Tactics Directorate, 1994).

⁵General Maxwell D. Taylor, *Leadership Quotations from the Military Tradition*, (Colorado: Westview Press, 1994), 291.

⁶Honorable Robert M. Walker and General Dennis J. Reimer, United States Army Posture Statement FY99, February 1998, 24.

⁷Brigadier General Hendrix, Assistant Commandant, USAIS, Ft. Benning, GA, Memorandum for US Army Combined Arms Command, Ft. Leavenworth, KS, 6 November 1992.

⁸Headquarters, Department of the Army, FM 7-7J, *Mechanized Infantry Platoon and Squad (Bradley)* (Washington, DC: HQ Department of the Army, 1993).

⁹Headquarters, Department of the Army, FM 25-100, *Training the Force* (Washington, DC: Headquarters Department of the Army, November 1988).

¹⁰FM 25-100, 1-2.

¹¹Jim Caldwell, TRADOC News Service, 9 June 1998: New Design Framework for Army XXI Heavy Division, accessed 20 August 1998; available from <http://www.tradoc.army.mil/pao/newdiv/newdesyn.html>; internet.

CHAPTER 2

LITERATURE REVIEW

Introduction

The purpose of this chapter is to review the available literature on the thesis subject and ensure the literature is relevant to the study. There is a wealth of information available about the history of mechanized infantry, platoon organizations, and training. To facilitate the literature review and answer the thesis question, the research is organized into three subject areas that will address the key problem statement and answer the questions listed in this study. This study must first identify the historical requirements and evolution of the mechanized infantry. Analyzing what the Army has done in the past, so that its past may reveal what might be required in the future. This will build the foundation for the remainder of this research by providing the evolution, roles, responsibilities, and missions of the mechanized infantry and apply these to the current organizational force requirements for Force XXI.

The second area that must be researched is the doctrinal mounted and dismounted training requirements of the infantry platoon leader. Training effectiveness of the mechanized platoon is directly linked to the effectiveness of the platoon. This information will be used to identify the current requirements placed on the infantry platoon leader and the additional training requirements for the Force XXI platoon. The training requirements of both mounted and dismounted platoons will be combined to reflect the doctrinal capabilities and requirements of the Force XXI platoon.

The third area of research focuses on mechanized and light infantry platoon tactical performance data collected from previous and current training evaluations. This area of research will provide insights into the possible effectiveness of the Force XXI organization by evaluating and analyzing the tactical effectiveness of current and previous mechanized and light infantry platoons. The analysis of these platoon organizations will provide the justification as to the effectiveness of the proposed Force XXI platoon.

Mechanized Infantry--Historical Background, Evolution

Brigadier General (retired) Richard Simpkin's book *Mechanized Infantry* is an excellent starting point to discover the history, organization, and purpose of the mechanized infantry. While writing about the evolution of the mechanized infantry, General Simpkin, compares the roles of the vehicle crew to that of the ground force.

An outstanding document is the white paper *Bradley Fighting Vehicle Doctrine, Organization and Training* written by USAIS in 1989. This document describes the changes needed for the mechanized infantry organization as a result of field studies conducted and input provided by field commanders. This is important because this white paper recognized the need for change, acknowledged the organization was not effective, and corrected the identified problems with the organization.

Another document that reflects evolutionary changes in the mechanized platoon organizational structure is *The Mechanized Infantry Platoon (Bradley Fighting Vehicle) Interim Organization*, white paper, dated 1992. This paper presents the reasons USAIS selected the 2 X 9 + 5 organization over the recommended "Objective Organization 3 X 9

+ 4.” The principal reason for not selecting the objective organization and using an interim organization was due to resource constraints. Additionally, the paper contains the results of the analysis conducted in support of the organizational change, and a brief synopsis of previous infantry squad and platoon studies.

Chief of Staff, General Vuono’s 31 January 1991 Bradley Battalion Structure Memorandum to LTG Reimer identified four significant shortcomings in the mechanized infantry battalion organization; (1) insufficient dismount strength, (2) no emphasis on dismounted training, (3) HHC size, and (4) the antitank (AT) company. The issues raised in this paper led to organizational changes in the mechanized infantry.

The numerous School of Advanced Military Studies (SAMS) monographs used in this research provided thoughtful insight and analysis on similar related infantry issues. Major John M. Carmichael wrote the “Devising Doctrine for the Bradley Fighting Vehicle Platoon Dismount Element: Finding the Right Starting Point.” In this monograph he analyzes the effectiveness of the original Bradley squad organization of the 1980s. He identified several problems with the current organization and analyzed them using the dynamics of combat power, firepower, maneuver, leadership and protection. His analysis illustrates that the current organization of the squad should be changed using three-to-four-man teams in the squads.

Another SAMS monograph “The Bradley Infantry Squad Leader, a Breach of Faith,” written by Major Frederick S. Rudesheim, provides excellent supporting insight to this thesis. This monograph addresses the issue of the dual-hatted leadership roles of the mechanized squad leader. Under the current organization the squad leader is required to lead a mounted and dismounted squad. He traces the evolution of the mechanized

infantry and examines the BIFV squad leader. The analysis and questions asked in this monograph are similar to the questions raised in this thesis and will assist in providing parallels to this study.

Major Andrew S. Sandoy wrote "Span of Control and Initiative: Is More, Less?" This study analyzed the optimum span of control and what can be considered effective as it directly influences leader initiative. This monograph supports this study with historical information on the evolution of the span of control within the Army.

The article "Army After Next, Strategic Studies Institute" by Billy Wells addresses future requirements of mechanized infantry. He provided insight into the requirements for the twenty-first century and the capabilities needed for support.

Army of Excellence, the Heavy Division, 1984, describes changes to the Army of Excellence organization in an effort to reduce overall manpower while maintaining wartime capability. A subtask of this study was the heavy division restructuring of the Division 86. A change in organization was the reduction in the squad size from ten to nine soldiers. This reduction was an effort to improve the leader-to-led ratio and standardize the infantry squad throughout the infantry.

Infantry 2000 by USAIS, 1991, outlines the future role of the infantry force and how it will transition into the twenty-first century. It describes the desired force design, organization, and other relevant topics that support this research in the area of historical evolution of the infantry.

Doctrine and Training Requirements

The current doctrinal manual for the mechanized infantry platoon is FM 7-7J, *The Mechanized Infantry Platoon and Squad (Bradley)*. This manual discusses the tactics, techniques, and procedures for the mechanized infantry platoon. This manual is the owner's manual for the platoon leader. It provides the leader with instruction on how to effectively organize and train his platoon for combat. This manual will serve as the principal source for the organization of the platoon and the platoon's missions.

The Infantry School recently approved and published the ARTEP 7-7J, *Mission Training Plan*. This is the mission training plan for the mechanized infantry platoon (BIFV). It outlines the specific collective and individual tasks for the Bradley crews and rifle squads. The manual serves the leader as a training guide that will assist in the development of platoon training.

FM 7-8, *Infantry Rifle Platoon and Squad*, is the doctrinal manual for the infantry platoon leader. Just like FM 7-7J, this is the owner's manual for the light-platoon leader. This manual will be used to compare missions and responsibilities to those of the mechanized platoon leader. This manual also has its accompanying mission training plan, ARTEP 7-8MTP, *Mission Training Plan for the Infantry Platoon*. The tasks from this manual will be combined with the tasks listed in ARTEP 7-7J in order to outline the actual requirements of the Force XXI platoon leader. This is necessary because of the unavailability of published doctrine for Force XXI.

Evaluations and Current Performance

The Center for Army Lessons Learned (CALL) Trend Bulletins provide excellent data on the effectiveness of current organizations' performances at US Army Combat Training Centers. The results presented in these bulletins will provide insight on the effectiveness of the Force XXI organization.

TRADOC Research and Analysis Command, White Sands Missile Range (TRACWSMR) *BIFV Dismounted Platoon Study* is an excellent study that analyzed five different dismounted platoon organizations executing tactical scenarios in JANUS simulations. In addition to the results provided through this analysis, it also included subject matter expert (SME) evaluations leading to the final recommendation to USAIS.

Bradley Fighting Vehicle System Combat Effectiveness: Evaluations of Developments in Tactics, Training and Equipment, ARI 1985. The Army Research Institute (ARI) study in 1985 utilized a tactical field exercise to measure the effectiveness of the mechanized platoon leader and squad leader span of control. This study indicates that the training requirements of the AOE mechanized platoon leader were well within his capability.

Lieutenant Colonel Theodore R. Severn wrote the study "AirLand Battle Preparation: Have we Forgotten to Train the Dismounted Mechanized Infantryman?" In this War College study, Lieutenant Colonel Severn identifies the current training challenges facing the mechanized infantry leaders and presents possible recommendations to fix the shortcomings. The training issues he identifies in his study have changed little since the writing of his report in 1989, and support this study by reinforcing the training challenges raised in this research.

USAIS's *Heavy Division Redesign Study*, 1998, captures the process the USAIS used to recommend the Force XXI platoon organization. The USAIS study used six criteria to effectively analyze the possible platoon organizations, mission success, timely success, flexibility, survivability, lethality, and command and control. Additionally, this study analyzed each organization using the Doctrine, Training, Leadership, Organization, Material, and Soldier (DTLOMS) model and listed the advantages and disadvantages of the platoon organizations, 3 X 9, 2 X 9 + 5 and 3 X 7.

CHAPTER 3

RESEARCH METHODOLOGY

Overview

The purpose of this chapter is to describe the methodology that will be used to analyze the problem statement and determine if the Force XXI mechanized infantry platoon will be an effective organization. The missions required of the mechanized infantry platoon and the criteria defining effectiveness will be applied against the present Army of Excellence mechanized and light platoon organizations in order to reveal possible conclusions for the effectiveness of the Force XXI mechanized infantry platoon. This chapter will also describe the purpose for using the Combat Training Centers (CTCs) trend results as a critical source of data. This review and understanding will provide the basis for effectiveness comparison, analysis and findings that will be discussed later in chapter 4.

Defining Effectiveness

The problem statement of this thesis is based on the principal question of effectiveness. The age-old *Noah Webster Dictionary* defines effective as “having an expected or intended effect...prepared for use or in action, especially in warfare...a combat ready-soldier or piece of military equipment.”¹ Looking further into this definition raises additional questions that must be answered to better define effectiveness. What is the expected effect desired of the Force XXI mechanized infantry platoon? Is this platoon prepared for use in combat? It is clear that the first question, expected effect, implies that the platoon must be capable of performing its wartime tasks and missions. A

surrogate measure for determining combat effectiveness and the Army's number one priority is training effectiveness. The second part of the definition, prepared for use in warfare, addresses a very important training question: Can this organization be efficiently and easily trained for war and accomplish its critical wartime tasks and missions?

The mission and expected effect of the mechanized infantry platoon is "to close with the enemy by means of fire and maneuver to defeat or capture him, or to repel his assault by fire, close combat, and counterattack."² The mechanized infantry platoon must be capable of conducting three basic wartime tactical operations in order to be effective. The three tactical operations required are movement, offense, and defense. In this study, the two critical wartime operations, offense and defense will be the only operations used to evaluate effectiveness. A fundamental assumption of this research also assumes that the operations currently expected of mechanized infantry platoons will also be expected of the Force XXI platoon. The coordinating draft for the digitized heavy brigade confirms this. This manual details the same mission statement as reflected above and organizes the operations into three separate types of operations: the first category of operations is listed as information operations, the second is decisive operations, consisting of attack and defend, and the final type is security operations.³ The assumption stated earlier is in fact true; offensive and defensive missions will remain the same. In the introduction of a interim doctrinal extract, the Student Text 7-7J, *Digitized Mechanized Infantry Platoon and Squad (Bradley)*, stated that the "Digital and own the night equipment employment does not markedly change the way the mechanized infantry platoon plans and executes operations from a tactical perspective."⁴ Another important observation is that the technological advances, forthcoming with the Force XXI organization, are increasing the

number of tasks for maneuver forces. The ST 7-7J, *Digitized Mechanized Infantry Platoon and Squad (Bradley)*, supports this in the responsibilities section of the manual. "It states that the increased complexity of the digitized platoon requires highly trained soldiers and leaders. The increase in equipment in the platoon will require more cross training to ensure that soldiers can fill vacancies or shortfalls in critical positions. The increases and complexity of equipment and the transfer of increased information at every level requires the platoon members to work closer than ever before."⁵ It is clear that the platoon collective tasks will increase, not decrease, due to the addition of the third squad and technological advancements. The third squad now provides a rifle platoon to this organization and with that the associated rifle platoon collective tasks.

Determining Criteria for Effectiveness

Understanding the wartime requirements of the platoon is only half of the challenge. Gauging whether or not this platoon can be trained to reach the required expectations is another. The use of criteria will enable this study to ascertain if the platoon can be efficiently and easily trained for its wartime operations. The source of the chosen criteria is found in ARTEP 7-7J, *MTP*, the mechanized infantry platoon doctrinal mission training plan which includes the platoons wartime tasks, conditions, and standards. The selected warfighting criteria are: move tactically, take action on contact, use of dismounted infantry, and employ direct-fire weapons. These platoon collective tasks will address the Army of Excellence mechanized and light platoon's ability to meet the expected training requirements covering both offensive and defensive missions.

Combat Training Center Performance Data

As previously mentioned, training effectiveness is a surrogate measure for combat effectiveness. Currently, the Combat Training Centers (CTCs) composed of: the National Training Center (NTC) in Fort Irwin, California; the Joint Readiness Training Center (JRTC) in Fort Polk, Louisiana; and the Combat Training Center in Germany play a critical role in providing a realistic combat environment to measure training effectiveness. These facilities provide tough realistic training with the capability to provide feedback to the training units and more importantly, a principal data source for lessons learned. The lessons learned, found in the CTC trend compendium publications, will be used in this study to determine the training effectiveness of current platoon organizations.

Organizations to Illustrate Effectiveness

Due to the recent approval of the Force XXI platoon organization, there is little performance reports and material available that will answer the question as to the effectiveness of this platoon. The method used in this study is to apply the effectiveness criteria against similar organizations where actual performance data is available. To do this, I have chosen to use mechanized infantry organizations from the past and present. In order for this study to answer the question of the effectiveness of a conceptual, unobserved organization, this study will first review the organizational changes that have occurred in the past. Next, I will analyze the effectiveness of current and similar light and mechanized platoon organizations of the Army of Excellence. Using the established criteria and insights from the analysis of the AOE organizations effectiveness, I will draw

possible conclusions as to the future effectiveness of the Force XXI platoon. The emerging insights of these previous and existing organizations will continue to provide the evidence needed to conclude if the Force XXI platoon will be effective.

The first mechanized organization reviewed is from the 1960's, Reorganization Objective Army Division ROAD. I will review the organizational changes of this organization as it transitioned from the M113 to the new M2 Bradley Infantry Fighting Vehicle (BIFV). This study will also look at a Vietnam era organization, the Armored Cavalry Regiment (ACR) platoon. Like the mechanized infantry platoon, the ACR platoon had multiple subunits and assists in illustrating the command and control and training challenges facing the Force XXI platoon. The present organization of the Army of Excellence (AOE) 2X9 and the AOE Light Infantry rifle platoon (3 X 9) will be compared against the criteria established to determine their effectiveness. The purpose of this combined comparison is very simple, the combined effects of both of these organizations will be the desired outcome of the Force XXI mechanized platoon. Conclusions of the Force XXI effectiveness will then be made based on the analysis of the two current organizations.

¹*Webster II Dictionary* (1988), s.v. "effective."

²HQS. Dept. of the Army, *Mechanized Infantry Platoon and Squad (Bradley)* (Washington, DC: HQ Department of the Army, 1993), 1-1.

³Department of the Army, FKSM 71-3-1 (A), "The Digitized Heavy Brigade" [Coordinating Draft] (location??: organization, 15 February 1997), 1-3.

⁴ST 7-7J, *Digitized Mechanized Infantry Platoon and Squad (Bradley)* (Location??: Headquarters, Department of the Army, 1 June 1996), 1-1.

⁵ST 7-7J, 1-5.

CHAPTER 4

FINDINGS AND ANALYSIS

Overview

In this chapter the results of the organizational review and analysis are presented in order to answer the research question. First, a review of two previous organizations provides useful observations that, when applied to the Force XXI platoon, raise questions concerning its effectiveness. Second, the results from the effective analysis of two Army of Excellence platoons are compared to determine the effectiveness of the results.

Influence from the Past, Pre-Army of Excellence

The starting point for discussion of the organizational changes leading to the decision to select the Force XXI platoon begins with the pre Army of Excellence mechanized infantry organization. This period of mechanized infantry history captures the transition from Vietnam era M113 APC infantry to the fielding of the new M2, (BIFV) in 1983. The BIFV offered significant technological and tactical advantages to the infantry organization.

Specifically, the Bradley added new capabilities in firepower, mobility, and protection. The organization that would be applied to the Bradley platoon would be lifted directly from the M113 platoon organization. The original Bradley organization would include a platoon headquarters and three maneuver squads. Each of these squads and the headquarters element would be assigned to one BIFV. As in the M113 infantry squad, the BIFV squad leader would be responsible for his rifle squad and the vehicle.

This dual-hatted responsibility would pose two significant challenges to the new Bradley platoon organization. The first challenge to the platoon's effectiveness stemmed from the requirement to conduct two time consuming training areas, the new BIFV gunnery requirements and the dismounted rifle squad tasks. This new training dichotomy was not an issue with the former M113 mechanized infantry. The squad leader understood his principle mission was the successful employment of the rifle squad and the M113 served as troop transport. The introduction of the Bradley and the three new weapon systems with assigned rifle squad, required significantly more training to achieve proficiency. The second challenge facing this new organization was command and control. When should the squad leader dismount from the BIFV to command and control the dismounted element of his squad?

The issue of how a platoon leader could effectively train two elements immediately came under scrutiny by the infantry community and the United States Army Infantry School (USAIS). Shortly after the introduction of the BIFV, the Army Research Institute (ARI) stationed at Fort Benning, Georgia, conducted a study titled, BIFV Squad and Platoon Leader Span of Control. This study was designed to closely examine issues concerning BIFV squad and platoon leader span of control.¹ The study reported that squad and platoon leaders in the newly organized BIFV units in Europe and CONUS experienced numerous difficulties controlling their units. The purpose of this study was to determine if the platoon and squad leaders were able to effectively perform all of their assigned duties in a combat environment.

The research team of subject matter experts (SMEs), recommended conducting a seventy-two hour field test to examine span of control concerns. The field test included

four tactical operations that provided sufficient leader action necessary to measure span of control issues. The four operations chosen for the field test were: movement to contact/hasty attack, hasty defense, delay, and deliberate defense.² Upon completion of the study, the research team presented a summary that identified over one-hundred separate deficiencies associated with BIFV doctrine, equipment, and training.

Although the study identified many deficiencies, it stated that it was misleading to focus on the quantity of issues surfaced; the final conclusion was “there was no specific area of measurement in which leader performance errors could be attributed directly to fatigue, stress or preoccupation with other critical tasks.” The study concluded in saying, “current duties assigned to BIFV squad and platoon leaders are considered to be well within their capability and capacity.”³ Recommendations for improvement included in this study were: needed improvements in leader training, the development of a combat leaders guide, and leader instruction using BIFV tactical exercises without troops (TEWT).

Although the ARI study concluded that the current duties assigned to squad and platoon leaders were well within their capability, the mechanized infantry platoons continued to experience problems in this area. Based on input from the field, the infantry school continued to examine this issue.

The fielding of the Bradley in 1983 presented the infantry force with many challenges. During this period, the doctrine for employing and fighting the newly fielded BIFV was not in line with the technical advances of the BIFV. USAIS recognized this issue and held regular conferences to focus on changing doctrine for the infantry and serve as a professional forum for exchanging ideas between Bradley units undergoing

these changes. The Third Infantry Division, which was the first unit to field the BIFV, served as the principle influence on changing infantry organization and doctrine.

The Third Infantry Division took the lead by conducting evaluations of the doctrine outlined in the FM7-7J, The Mechanized Infantry Platoon and Squad. The initial evaluations were first conducted by LTC (P) Wendell Kot's 1st Battalion, 15th Infantry. Major General Krawciw, the Division Commander, impressed with LTC (P) Kot's evaluations, directed all infantry battalions in the Third Infantry Division to evaluate the new concepts presented by LTC (P) Kot. These key observations, lessons and recommendations prepared for the Commander of VII Corps in Europe were captured in a memorandum titled, "Bradley Doctrine, Training and Organization Issues" and forwarded to USAIS. This critical memorandum significantly influenced future training and organizational changes for the mechanized infantry.⁴

The memorandum prepared by MG Krawciw outlined several significant issues concerning the Bradley doctrine and its organizational problems. For the purposes of this study, I will only illustrate two issues from this paper that are relevant to the problem statement. The first issue pointed out the command and control problem faced by the squad leader since current doctrine required him to be in two places at once. The current organization required squad leader's to control both the BIFV and the rifle teams. From their observation they found, " the squad leader in most tactical situations could not control both the BIFV and the rifle team without improperly siting or losing control of either or both."⁵

The paper cited several reasons for this loss of control. First, it focused on the different requirements of mounted and dismounted employment techniques and although

they were totally different, they must be mutually supporting. The uniqueness of the mounted and dismounted elements made control of both by one squad leader nearly impossible. Second, they presented the training conflict to illustrate the current organization was incompatible with the prescribed doctrinal employment.

The dichotomy of the squad leader position requires the squad leader to be proficient in two critical areas, mounted and dismounted. This results in the equivalent of two jobs for every leader, requiring extensive cross training in order to maintain proficiency. The paper stated that the necessity of cross training is obvious, we must seriously come to grips with the achievability of this training goal.⁶

The second relevant issue surfaced in the paper addressed the combined amount of training requirements with the mounted and dismounted elements of the BIFV platoon. The training problem is directly linked to the combat effectiveness of the platoon. With the introduction of the BIFV, the overall number of required collective and individual training tasks increased two to three times, with no additional training time provided. Additionally noted was the significant increase in maintenance tasks for the platoon. The issue focused on time available for the squad leader to train both elements to proficiency. The paper used several options to reveal that this was not possible, and stated that without an organizational change in the platoon leadership that eliminated the dual hatted responsibilities of the leader, the platoon would not reach or sustain the standards required in combat.

USAIS, influenced heavily by the Third Infantry Division memorandum, published a White Paper in 1989 that addressed the then current weaknesses of the BIFV platoon. This paper indicated that in the current organization, with the squad leader in

control of both a Bradley and a rifle squad, he could not “in most tactical situations, control the BIFV and the rifle team without improperly siting [weapons positioning, establishing sectors of fire] or losing control of one or the other or both.”⁷

Based on this problem, the white paper also identified a training dilemma, the requirement for the squad leader to train in two complimentary means of fighting, mounted and dismounted tasks. This would require further examination of the current training strategy for mechanized platoons. Recognizing that the squad leader must be capable of training both requirements equally well, he must be fully trained in the following skills: the skills of a dismounted infantry squad, the mounted and gunnery skills of a Bradley fighting vehicle, and the antitank skills required of the TOW weapon system. This training issue almost doubled the collective and individual tasks the squad leader would have to master, with no additional training time to accomplish this.⁸

The white paper stated that as a result of these competing demands, there is generally less emphasis on critical dismounted training, resulting in a loss of the infantry squad's combat effectiveness. The white paper presented a new recommended organization that would consolidate the dismount element into two standard nine man rifle squads and add two noncommissioned officer section leaders for two Bradley sections. This recommendation would eliminate the dual hatted training and command and control problem experienced with the old organization and would focus leadership for training dismounted and mounted operations. The addition of the two nine man squads would align mechanized infantry squad doctrine to that of the light, airborne, and air assault squads. This alignment would produce one infantry squad doctrine for one infantry.

The mechanized platoon recommendations listed in the white paper, were presented by MG Spigelmire, Commander USAIS to over 250 subject matter experts at a world wide infantry conference at Fort Benning, Georgia. The organization underwent additional studies and scrutiny by the field before receiving approval by the Training and Doctrine Command.⁹ The new Bradley platoon organization consisting of two nine-man rifle squads began implementation in January 1990 and remained the platoon organization until the recent approval of the Force XXI platoon.

Influence from the Past, Armored Cavalry Regiment

The Armored Cavalry Regiment (ACR) platoon organization, H-series TOE used during the early seventies, was reviewed for this thesis because of the platoon's similarities to the Force XXI mechanized infantry platoon organization. The armored cavalry platoon during this period was the smallest combined arms team in the U.S. Army. The ACR platoon consisted of four types of maneuver elements: scouts, armor, and mortars (see fig. 5). This organization, faced many challenges similar to those faced by the Force XXI platoon. These challenges will be discussed in this chapter which will provide historical insight to the effective analysis of the Force XXI platoon.

The platoon consisted of ten vehicles; the platoon leader with a M113 APC, a scout section that consisted of four M113s, a mortar squad with one M106 mortar vehicle, a light armor section with three M551 Sheridan light tanks and a rifle squad with one M113 (fig. 5).¹⁰ This organization presented two significant challenges. The first challenge was the obvious platoon leader span of control and his ability to control ten

vehicles. The second challenge was being capable of training of four separate maneuver elements.

Armored Cavalry Platoon

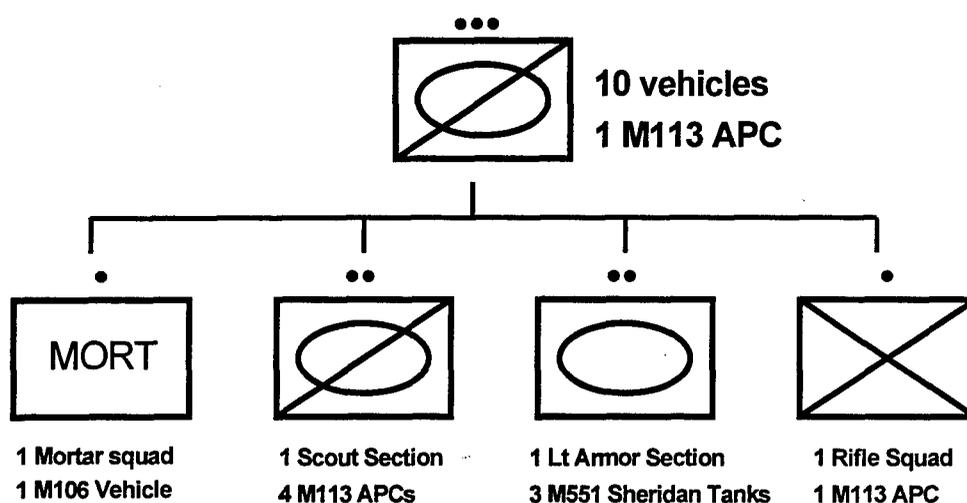


Figure 5. Armored Cavalry Platoon Organization

The United States Armor Center conducted a thorough analysis of the Armored Cavalry organization in July 1974 that included an examination of these issues. *The Cavalry/Scout Study* consisted of 932 pages in four volumes. This study represented the most detailed and the “first comprehensive evaluation of U.S. Army Cavalry doctrine since the Stillwell Board nearly thirty years ago.”¹¹ The purpose of the study was to present a detailed analysis of the then current cavalry organization and the doctrine for its

employment to determine the need for organizational changes required for mission accomplishment through 1985. After comparison with other organizations through the use of simulations, this study determined that the current cavalry H-series platoon organization was not the best mix for mission accomplishment.¹² The reasons cited in the ACR study relevant to this study were the platoon leader span of control problems with ten vehicles, and the complexity of this organization presented by the four distinct maneuver elements. The study recommended reducing the span of control burden on the platoon leader by removing the mortars and consolidating them at the troop level. This recommendation was supported by study simulations and by recommendations received from cavalry units in the field. Removing the mortars from the platoon would reduce the platoon leaders span of control and training burden making the platoon and mortars more effective.

The span of control problem was further highlighted in a personal interview with Major General Krawciw, former Third Infantry Division commander and veteran of the Fifth Cavalry in Vietnam. During this interview, he indicated there were span of control problems with the cavalry platoon in Vietnam. He further stated that it was routine to remove the mortars and scouts from the platoon and consolidate them at the troop level. This served two purposes, first it eased the control problems of the platoon leader and secondly it provided more mortar firepower and scout redundancy by consolidating them at troop level.¹³ MG Krawciw stated that the purity of the four maneuver element platoon organization was not always feasible because of combat losses and routine attrition. In many situations, the armor and infantry would operate as one element, thus, naturally reducing the command and control challenges facing the platoon leader.¹⁴

The next organizational study that affected the cavalry platoon organization, came from the Division 86 study of the heavy force. This extensive study was designed to capture the new systems being fielded and create organizations that optimized their employment. The Division 86 study changed the organization of the four-maneuver element combined arms cavalry platoon to a pure platoon consisting of only four M1 Abrams tanks or six M3 cavalry fighting vehicles. This change reduced combined arms integration at the platoon level, moving this responsibility to the troop. The reason cited for this radical change was that the captain troop commander is better qualified to integrate the separate maneuver elements at his level verses the lieutenant at platoon level.¹⁵ Additional justification was the increase in leader training responsibilities as a result of recognizing the sophistication of the newly fielded combat vehicles now being fielded, the M1 Abrams tank and M3 Cavalry Fighting Vehicle.

Historical Conclusions and Observations

There are many factors that affect the platoon's ability to effectively accomplish its war-time mission. The historical examples listed in this chapter provided several examples that can be used as indicators for the potential effectiveness of the Force XXI platoon; these include span of control problems, increased training responsibilities verses available time to train, and the challenges of dual leadership roles. The following paragraphs expand on these historical conclusions.

The first factor that influenced the effectiveness of the historical infantry platoon organization was span of control. The problem with span of control can best be seen in the cavalry platoon example mentioned in the interview with MG (RET) Krawciw. This

organization was not effective due to the four maneuver elements the platoon leader was required to control simultaneously. The span of control problem was confirmed in the ACR study and reinforced by routine practice in combat operations. The significance of this earlier span of control problem to this thesis, was the reduction in the maneuver elements for one leader to control. This reduction of the armored cavalry platoon elements for more effective command and control began in the early seventies and continued until today, where the cavalry platoon is a pure organization consisting of only one maneuver element.

The second key observation derived from historical organizations was the conflict caused by increased training responsibilities verses the available time to train. This observation was clearly evident when the mechanized infantry transitioned from the M113 APC to the BIFV. The organization that accompanied this transition did not change and experienced significant challenges in obtaining proficiency. The dual leadership roles of the squad leader and the significant increase in tasks to be trained resulted in a loss of effectiveness. A contributing problem was that available training time did not increase with increased responsibilities. This forced the squad leader to prioritize his tasks for training. This caused a training deficit for either mounted or dismounted training. Not all tasks could be trained and usually the dismounted skills suffered.

An important observation of past mechanized infantry platoons is the significant problems these organizations experienced with the dual leadership roles of the squad leader. All research indicates that this dual responsibility severely affected the overall effectiveness of the platoon. This directly affected the squad leader's ability to train and command two elements simultaneously, the squad and BIFV.

The final historical observation that can be used as an indicator for the effectiveness of the Force XXI platoon is the continuing increase in tasks and responsibilities. The infantry recognized the increase in tasks to be trained with the introduction of the Bradley fighting vehicle and how it affected the platoon leader's and squad leader's ability to train and command and control effectively. This transition from the M113 APC to the BIFV presented many new training difficulties principally associated with the ability of a platoon leader to supervise the training of significantly more and diverse tasks. This problem eventually led to an organizational change in the platoon structure in order to overcome this deficiency. The intent of the organizational change was to reduce the training and supervisory control, to improve the platoon's combat effectiveness.

Determining Current Effectiveness

Now that we understand some of the problems that faced previous organizations, we must take a closer look at present mechanized and light infantry platoon organizations to determine if their effectiveness will serve as an indicator for the Force XXI platoon's effectiveness. Effectiveness as described earlier in this study stated that training effectiveness is the surrogate measure for combat effectiveness. As a means of analysis to determine training effectiveness, I have chosen to use four infantry platoon collective tasks which are identified in both FM 7-7J, *MTP Mechanized Infantry Platoon and Squad*, and FM 7-8 MTP, *Infantry Rifle Platoon and Squad Mission Training Plans*. The selected tasks represent Army doctrine for both offense and defense operations at the platoon level for mechanized and light platoons. The tasks, conditions and standards

listed in these manuals are the standards we expect the platoons to be able to accomplish in combat and provide a measure for determining effectiveness. Therefore, if the platoons are effective at accomplishing the tasks listed in a demanding training environment, then there is some reasonable assurance that they will be capable of effectively executing them in combat.

The four collective tasks selected as a basis for comparison of effectiveness are:

1. Move tactically, movement formations and techniques
2. Take action on contact
3. Use of dismounted infantry
4. Employ direct fire weapons

These represent critical tasks required for the platoon to be effective in accomplishing its wartime mission and are included in the CTC compendium trend publications with observed performance data. A collective task matrix shown in table 1, summarizes the ability of selected Army of Excellence mechanized and light platoon organizations to execute the tasks in a realistic training environment. The data included in this table was collected from a twenty-four month, eight quarter period beginning the first quarter, fiscal year 1995 to the fourth quarter, fiscal year 1996. During this period at NTC and JRTC, there were twenty-one reporting opportunities for each collective task. Each opportunity is better defined as a cumulative observation of collective tasks for a unit rotation at the CTC. The matrix reflects multiple observations of units training exercises during the period covered. Following each comment, needs emphasis, is the number of times the observer controllers documented the negative trend during the evaluated period. Within each unit rotation, a unit would average five missions where each collective task

could be observed and reported by observer controllers. For example, if a negative trend was reported ten times, it was reported ten times out of a possible twenty-one. This would then indicate, that the units observed during this period could not effectively execute this task forty-seven percent of the time. This matrix contains the negative trends that appear more than once in all of the CTC Trends during this period.

Table 1. Collective Task Matrix		
Collective Tasks	Organizations	
	AOE 2 X 9 (MECH)	AOE 3 X 9 (LT)
Move Tactically	Needs Emphasis 10/21	Needs Emphasis 2/21
Take Action On Contact	Needs Emphasis 8/21	Needs Emphasis 3/21
Use of dismounted infantry	Needs Emphasis 7/21	Not Observed
Employ Direct Fire weapons	Needs Emphasis 5/21	Needs Emphasis 5/21

AOE 2 X 9 (M) Results of Effectiveness

What is the effectiveness of the present AOE Mechanized platoon (2X9) in accomplishing the following tasks? The results of the analysis of the data presented in the CTC compendium trend publications reveal that the mechanized infantry platoons appear not to be effective at accomplishing their critical wartime tasks. Table 1 represents the selected tasks and number of reported observations during a twenty-four month period. The data reveals the limitations within each task listed and will be presented in the following paragraphs.

Move tactically, movement formations and techniques. This task is documented ten separate times in the matrix and is a reoccurring problem reflecting the current effectiveness of the mechanized infantry platoon. The observed mechanized units had significant problems moving tactically. During the period of observation, units could not effectively execute this task forty-seven percent of the time. Specific challenges executing the task of move tactically were the poor or non-existent use of movement formations and techniques. Units continually failed to adjust both their movement formation and movement technique resulting in many units making contact while using the travelling technique and a column formation.¹⁶ This failure resulted in the units entering the fight piecemeal and unable to mass friendly fires on the enemy.

Another negative trend that is documented eight times is the mechanized platoons' ability to successfully take action on contact. The observers reported that units rarely executed effective actions on contact because they failed to plan for all forms of contact, or poorly understood, practiced or rehearsed. This inability to effectively react to contact resulted in the units' inability to mass firepower and quickly became combat ineffective.¹⁷

The task, use of dismounted infantry, is reflected seven times with very discouraging negative trend comments. The negative comments reflect a growing trend as to the overall ineffectiveness of the mechanized infantry in both offense and defensive operations. The comments also indicate a much more significant underlying training problem with the dismounted infantry squads. Several of the comments are as follows, units did not effectively use dismounted infantry, infantry squads are not integrated into the scheme of maneuver, when the infantry dismount they were unprepared to

accomplish the mission and the infantry squads are unfamiliar with the dismounted drills from FM 7-7J. The list continues on with many more negative observations but the end results were all the same. The summary of these comments is that the infantry squads execution was ineffective, they routinely operated independently of the BIFV, the squads contributed little to mission success, and were considered irrelevant and unable to influence the fight.¹⁸

Both heavy and light infantry units continually experienced difficulty with direct fire planning for offensive and defensive operations at the NTC. Table 1 identifies five separate needs emphasis observations at the NTC. Several negative comments state that units failed to prepare range cards, platoon sector sketches, fire plans, and needed control measures were not present. The results of this critical oversight is the inability to mass fires adequately, no control over fires, a loss in fire discipline, integration and effectiveness. Engagements normally resulted in individual vehicles firing rather than integrated platoon and company teams.¹⁹

The inability of units to effectively execute direct fire planning and execution triggered the U.S. Army Armor Center to conduct an individual research project that would further investigate company and platoon direct fire planning at NTC. The RAND Corporation conducted this year long, extensive research project in 1997, evaluating 330 battles and 74 individual companies. This report indicated that units performance was worse than indicated by table 1. Supporting the negative trend statements above, this study reported the overall ineffectiveness of direct fire execution for companies and platoons. In this report it stated that two principle elements affect direct fire planning. The first is the plan and the second is the execution of that plan. These elements

combined would reflect the units ability to successfully execute and engage the enemy with direct fires.

The overall findings presented in their study were defined in terms of percent performed adequately. The study examined how well units could adequately develop an effective direct fire plan, execute the direct fire plan and finally their ability to accomplish the mission. Units were only able to develop an effective plan fifty percent of the time and only able to execute effectively thirty seven percent. Overall the observed units were only able to accomplish their mission adequately thirty one percent of the time.²⁰ This demonstrated poor performance clearly is not an effective unit.

AOE 3 X 9 (LT) Results of Effectiveness

The Army of Excellence light infantry platoon, consisting of three nine-man rifle squads, performed much better overall, but demonstrated many of the same negative trends as the mechanized platoon. Table 1 reflects the results of three of the collective tasks listed. Use of dismounted infantry is not evaluated separately at the Joint Readiness Training Center (JRTC), therefore no specific performance data is available. Dismounted infantry operations are all inclusive at JRTC.

A critical skill and element required to move tactically is land navigation. The negative trend reports the loss of critical land navigation skills due to the dependency upon global positioning system (GPS) navigation aides. With an unexpected loss of the GPS, the units became lost and disoriented, resulting in units not being able to effectively perform their mission.²¹ Without the ability to navigate effectively, units were unable to perform the task, move tactically.

The infantry squads and platoons at JRTC experienced some difficulty at executing actions on contact. Units were slow in reacting to contact, initiating battle drills and leaders were not analyzing the situation effectively nor issuing clear and concise orders for their units to execute. These ineffective actions on contact resulted in the enemy immediately gaining and maintaining the initiative and the unit in contact not being capable of effectively establishing a base of fire while reacting to contact.²²

Similar in comparison to the mechanized platoon, the light infantry platoon experienced many of the same difficulties in direct fire planning and employment of direct fire weapons. The negative observations were: support by fire positions were rarely established, platoon maneuver was rarely overwatched by effective fire, there was a general lack of knowledge of the key dismounted weapon system, the M-60 machine gun, and there was poor weapon positioning, no fire plan or sector sketches. All of these observations greatly affect the effectiveness of the platoon. The combined result of these noted deficiencies is that the platoon and the direct fire weapons are not employed to their maximum effectiveness and the maneuver element is not effectively supported by the support element.²³ This critical disconnect ultimately results in the platoon being unable to accomplish defensive or offensive operations.

¹ARI, "BIFV Squad and Platoon Leader Span of Control" (U.S Army Research Institute for the Behavioral and Social Sciences, December 1985).

²ARI, "BIFV Squad and Platoon Leader Span of Control" (U.S Army Research Institute for the Behavioral and Social Sciences, December 1985), 3

³ARI, "BIFV Squad and Platoon Leader Span of Control," 91.

⁴Major General Nicholas S. H. Krawciw, Commander 3ID, "Bradley Doctrine, Training and Organization Issues," for COMMANDER, VII Corps, APO NY 09107-0200, 5 July 1998.

⁵Krawciw, "Bradley Doctrine, Training and Organization Issues," 2-1.

⁶Ibid., 2-2.

⁷United States Army Infantry School, White Paper, "Bradley Fighting Vehicle Doctrine, Organization, Training," 17 February 1989, 3.

⁸Ibid., . 4.

⁹Infantry, Commandant's Notes, Major General Michael F. Spigelmire, Chief of Infantry. January-February 1990.

¹⁰*The Cavalry Scout Study*, vol. 1 (Fort Monroe, VA: Department of the Army, HQ U.S. Army Training and Doctrine Command, 4 July 1974).

¹¹*The Cavalry Scout Study*.

¹²*The Cavalry Scout Study*, p57

¹³MG (RET) Nicholas S. H. Krawciw, Former ADC (M) and Commander of 3ID, personal interview 8 February 1999.

¹⁴ Krawciw, interview, 8 February 1999.

¹⁵LTC Ralph G. Rosenberg, "Increased Combat Power," *Armor Magazine*, November-December 1980, 34.

¹⁶CALL, NTC Priority Trends, "Bradley Doctrine, Training and Organization Issues 4QFY94 through 2QFY96 (Fort Leavenworth, KS: CALL), N-11.

¹⁷CALL, NTC Priority Trends, N-15.

¹⁸CALL, NTC Priority Trends, N-12-15.

¹⁹NTC Priority Trends, N-16-17.

²⁰RAND Arroyo Center, "Company Performance at the National Training Center" (RAND Santa Monica, CA: RAND Arroyo Center, 1997), 28-29.

²¹JRTC Priority Trends, N-12-13.

²²JRTC Priority Trends, N-13-14.

²³JRTC Priority Trends, N-8-9.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

Overview

In this chapter the thesis research question and the secondary research questions will be addressed. Using the conclusions and insights drawn from the analysis of past organizations, this chapter will identify possible reasons why the Force XXI platoon will not be effective. Finally this chapter will close with a recommendation for improving the effectiveness of the Force XXI platoon.

The purpose of this study was to determine if the Force XXI Mechanized Infantry Platoon is an effective organization capable of conducting its war-time mission. The answer to this question is no. The Force XXI platoon, as indicated by the research in this paper, will not be an effective organization for the twenty-first century. The methodology chosen to answer the research question was to first gain and examine historical conclusions from previous organizations that offered insight to the Force XXI platoon. Secondly, the methodology determined the current effectiveness of the Army of Excellence mechanized and light infantry platoons. The purpose of determining the current effectiveness of the AOE organizations was to show their ability to perform their war-time tasks. The purpose of the research was not to answer why the organization is not effective, but to simply state whether or not it is effective. The analysis from the historical conclusions will provide indicators that give possible reasons why the organization is not effective. These reasons can then be addressed as recommendations.

The research answered the question and clearly showed that the AOE 2 X 9 mechanized platoon is not effective at accomplishing its war-time tasks. The research showed that the BIFV platoons were not effective in accomplishing the following tasks; move tactically, take action on contact, use of dismounted infantry and employment of direct fire weapons. The AOE 3 X 9 light platoon did not perform as poorly as the AOE 2 X 9, but did experience similar difficulties with the same tasks. Understanding that the capabilities of the Force XXI platoon will equal the combined capabilities of both AOE platoon's, it follows that the Force XXI platoon will not be effective. If one of these two platoons is not effective then how can we expect one platoon leader to accomplish the missions currently required of two leaders? The leadership will not change, the time restricted training conditions will not change, the only thing that changes is the increased training and command and control responsibilities for one leader, the Force XXI mechanized infantry platoon leader.

Secondary Questions

What organizational structures have the infantry used in the past?

This study reviewed several organizations from the past in order to provide historical insights leading to the evolutionary changes of the Force XXI organization. The study examined two organizations, the Vietnam era armored cavalry regiment platoon, and the pre-Army of Excellence mechanized infantry platoon. The analysis of these two organizations revealed several significant conclusions that affected the effectiveness of these organizations and will similarly affect the Force XXI platoon organization.

The first conclusion is drawn from the span of control problem experienced with the armored cavalry platoon. The study listed the difficulties experienced by the cavalry platoon leader in attempting to command and control four separate maneuver elements. This same span of control difficulty is now facing the mechanized infantry platoon leader of the Force XXI. The Force XXI platoon leader will be required to operate with a span of control of five to one. He will be required to maneuver two Bradley sections and three rifle squads simultaneously. The cavalry recognized that this span of control was not desirable in combat or peacetime and corrected the organization to reduce the span of control. The infantry on the other hand has continued to increase the operational span of control for the mechanized platoon leader.

The next conclusion that will have a tremendous impact on the effectiveness of the Force XXI platoon is the significant increase in training responsibilities verses available time to train. The review of the initial Bradley platoon organization as it transitioned from the M113 APC to the BIFV revealed an organizational problem that impacted the training effectiveness of that platoon. The training responsibilities of the squad leader increased three fold with the introduction of the BIFV. This increase presented a training dilemma that the squad leader could not solve alone. Recognizing the problem, USAIS introduced an organizational change that added a squad leader to the platoon in order to ease the training burden and allow each squad leader to focus on either mounted or dismounted training. This dilemma has surfaced again with the Force XXI platoon, however, this time the burden is placed on the platoon leader. This new organization, with the addition of the third rifle squad, will challenge the platoon leader's ability to train this platoon effectively. The platoon leader is now faced with training two

platoons simultaneously, the mounted BIFV platoon and the rifle platoon. If you then consider the current organization and how both the AOE 2 X 9 mechanized and AOE 3 X 9 light platoons were not effective, then you clearly see a major problem with the Force XXI platoon. A critical assumption of this paper is that the time available to train would not change. If this is true and we currently are not effective, then how do we expect the Force XXI platoon to be effective if the training responsibilities are increased?

Another closely linked historical observation results from the dual leadership roles of the squad leader. The study showed that the squad leader was dual hatted in his responsibilities and could not effectively train, or command and control, two separate elements simultaneously without losing control of one or both. This issue is repeated in the Force XXI platoon. The issue is no longer resting with the squad leader, it is now placed on the platoon leader. The Force XXI platoon leader with the dual responsibilities of maneuvering and training two platoons, a mounted platoon and a rifle platoon, will face the same challenges the squad leader faced. If the results of the current AOE platoon organizations effectiveness are considered, it would indicate that the leadership responsibilities should decrease verses increase.

What are the current and future training requirements and how successful are we at training the current AOE 2 X 9 and AOE 3 X 9 organization?

The second part of the research methodology answered the question of how successful are we at training the current organizations. The answer to this question is the current organizations are not effective as indicated by the reports included in the Center for Army Lessons (CALL) publications. In order to appreciate the relevance of this analysis, one must compare the training requirements for these organizations to what will

be expected of the Force XXI platoon. ARTEP 7-7J MTP, *Mission Training Plan for the Mechanized Infantry Platoon (BIFV)*, lists forty-seven platoon collective tasks the platoon is required to execute. ARTEP 7-8, MTP, *Mission Training Plan for the Infantry Rifle Platoon and Squad*, lists fifty platoon collective tasks the rifle platoon is required to execute. The Force XXI platoon leader will be required to execute the combined total of ninety-seven platoon collective tasks. Supporters of the Force XXI platoon organization will argue that the tasks listed for the mechanized and light platoons are the same with the exception of four different tasks for the light infantry platoon. This statement is true, however, what is required to effectively accomplish collective tasks for the mechanized platoon is totally different for the light platoon. It must also be understood that each element, the mounted and dismounted, will require an equal amount of time to train on each task in order to be proficient. Currently platoons are challenged to train to standard the tasks specific to their platoon as indicated by their effectiveness at the CTC's. To date, there are no plans to provide more training time to the Force XXI platoon.

What are the perceived advantages and disadvantages of the proposed Force XXI Mechanized Infantry Platoon?

Immediately, the first significant advantage that comes with this organization is the increased infantry strength in the platoon with the addition of the third squad. This increase is a tremendous selling point to the infantry force. For the last ten years the number one issue with the chief of infantry at USAIS has been the reduced infantry strength of the mechanized infantry platoon. The Army wide shortage of infantrymen has resulted in units routinely reducing their platoons to only one nine man rifle squad instead of the authorized two. Obviously, the addition of more infantrymen is welcomed. The

dismounted infantry strength of the current AOE mechanized infantry battalion at full strength is two hundred and sixteen with four companies of fifty-four infantrymen each. Although the Force XXI organization requires the loss of a company, the overall dismounted infantry strength of the battalion increases. The Force XXI battalion dismounted infantry strength will be two hundred and forty three infantrymen. This is an increase of twenty-seven dismounted infantrymen.

Another advantage with the Force XXI platoon is the increased maneuver and mission capabilities now afforded with the dismounted rifle platoon. Commander's now have the capability of employing organic dismounted infantry platoons in support of combat operations that are capable of performing platoon collective level tasks. This is not a capability with the current AOE 2 X 9 mechanized platoon. The current AOE battalion is capable of employing twenty squads at full strength with no organic dismounted platoons. If the commander should need an organized rifle platoon he would be required to create a adhoc platoon and task organize rifle squads from separate platoons and assign a platoon leader to be in charge of this adhoc platoon organization. Although the potential exists for this to occur, it is not desirable because this platoon would not have conducted any platoon collective level tasks training. The only dismounted training would be squad level training. The Force XXI platoon now affords this tremendous opportunity to commanders. The Force XXI battalion now will have nine dismounted platoons at its disposal or a total of twenty-seven rifle squads verses the AOE twenty squads.

The disadvantages of the Force XXI platoon that specifically address why the organization will not be effective are drawn from the historical conclusions and personal experience. The significant disadvantages are listed below.

1. Dual hatted leadership roles for the platoon leader.
2. Span of control challenge for the platoon leader.
3. Available training time to train the mounted and dismounted platoons.
4. Experience level of the platoon leader.

The disadvantages are listed in bullet format for simplicity because the disadvantages were already discussed earlier in this paper. The only exception to this is the disadvantage of the experience level of the platoon leader. This observation comes from personal experience while serving in command of a mechanized company and as a tactics instructor at the Bradley Leaders Course. The mechanized platoon in the current AOE organization is a leadership challenge for the platoon leader. The new platoon leader is required to become a proficient crewman of the Bradley fighting vehicle, master the multiple weapon systems with this vehicle, command and control four BIFV's, know, understand and train two rifle squads with all organic weapons. The requirements listed only touches the surface of the platoon leader's responsibilities. Now considering the results of how poorly platoons are performing at the CTC's, we can see a contributing problem is the inexperience of the platoon leaders. The platoon leader is the newest leader in the Army and is currently entrusted with a difficult and challenging platoon. When the third rifle squad is added with the Force XXI platoon, it will only increase the platoon leader's leadership challenges.

Recommendation

What effective training examples and good organizational models can be used to form a more viable organization?

The following recommendation is presented as a possible solution to improve the effectiveness of the Force XXI platoon. The example takes into consideration the observations and disadvantages identified in this study in an effort to produce a more effective organization for the twenty-first century. The proposal is a possible course of action that focuses on leadership, command and control and enhances the training difficulties observed in the past, present and proposed organizations.

In order to create a more effective organization for the Force XXI platoon it must address the disadvantages discovered in this study.

1. Dual-hatted leadership roles for the platoon leader.
2. Span of control challenge for the platoon leader.
3. Available training time to train the mounted and dismounted platoons.
4. Experience level of the platoon leader.

A possible organization could look like the example shown in figure 6.

The example shown will consist of three Bradley platoon's with four BIFVs and a separate robust rifle platoon with three rifle squads with eleven men each and a heavy weapons squad with seven men. The rifle platoon will have a platoon leader and a platoon sergeant. The thought process in support of this recommendation is that it recognizes the disadvantages with the Force XXI platoon and corrects the problems organizationally. The following paragraphs will explain how this recommendation will address the disadvantages found in this study.

POSSIBLE COMPANY ORGANIZATION

(4 X 3 X 11 + 7)

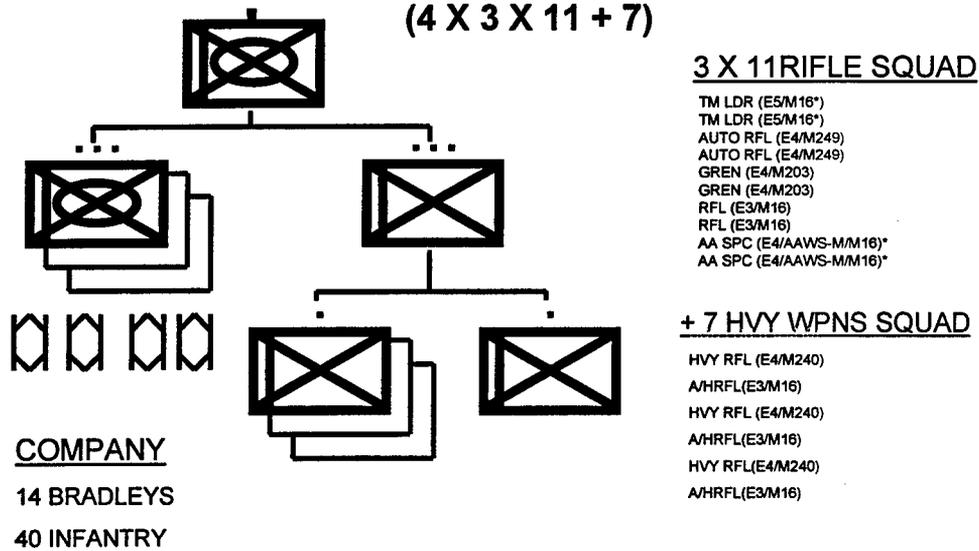


Figure 6. Possible Company

This organization would eliminate the dual hatted leadership responsibilities of the platoon leader with the removal of the infantry squads from the platoons and organizing them into their own separate rifle platoon. The rifle platoon will be assigned its own platoon leader and platoon sergeant. The BIFV platoon will no longer experience the dual hatted missions. The BIFV platoon will only have four BIFV's and the crews under its operational control. By organizing mounted and dismounted platoons, this now eliminates the responsibility for one leader to assume dual missions. Each platoon leader now has the opportunity to focus on one primary mission, either the BIFV or dismounted platoon. Given the opportunity to train on one principle mission would enhance the overall effectiveness of that platoon.

This recommended organization would also correct the current span of control problem. The separation of platoons eliminates span of control problems as identified with the Force XXI platoon by creating smaller, more manageable platoons.

The biggest advantage with this recommended organization is its ability to train more effectively within the available training time. Currently, the platoon leader is faced with the dual hatted responsibility of training simultaneously, the mounted and dismounted elements within the limited training time available to him. The reason behind this is quite simple, he cannot be in two places at the same time. This organization eliminates this problem with the creation of a rifle platoon leader position. He is now solely responsible for the training and employment of the rifle platoon. Likewise, the BIFV platoon leader is solely responsible for the training and employment of the BIFVs. Each leader now has the opportunity to focus on one primary mission and dedicate his efforts more effectively, thus increasing the overall effectiveness of each platoon. Each platoon can also train simultaneously within the time constrained environment.

Finally, this recommended organization would enhance the abilities of the infantry platoon leader. The logical flow and assignments in this organization is the lieutenant would first serve as a BIFV platoon leader then would serve as the company rifle platoon leader. This would serve several purposes. First, it would function as a specialty platoon within each company thereby making selection for this platoon competitive and secondly, it would bring a seasoned platoon leader into the rifle platoon with the basic understanding of how to employ the BIFV platoon. This knowledge and experience would increase the effectiveness of the rifle platoon and create a more effective combat multiplier. The rifle platoon leader would be responsible for the

employment of his platoon and would task organize his squads based on mission requirements. The endstate with this proposed organization is a well trained, led and more effective platoon for the mechanized infantry in the twenty-first century.

Summary

The Force XXI organization is bringing revolutionary changes to the Army of the twenty-first century. The central revolutionary capability and combat multiplier of the Force XXI organization is the information dominance we will have over our adversaries. The technologies of the twenty-first century offer tremendous capabilities. We will experience information dominance on the battlefield of tomorrow unlike any battles before. We will have a clear picture of the dispositions of the enemy force that will enable the infantry a decisive advantage. This tremendous advantage of improved situational awareness is only part of the equation. The infantry of the twenty-first century will still be required to close with fire and maneuver to destroy the enemy. This will not change. The tip of the spear and the first element to engage the enemy is the platoon. If this platoon is not an effective force and cannot accomplish its purpose, then all of the capabilities with the Force XXI organization are rendered useless and the Force XXI concept as whole is in jeopardy. The tip of the spear must be an effective fighting force, therefore it is time to look closer at other infantry platoon organizations that promise to be more effective. This thesis illustrated that the Force XXI platoon under the current conditions appears not to be effective. Maybe it is time to create an organization that will be effective and lead us into the twenty-first century. In summary, the Army needs to

learn from its past and utilize their own lessons learned to create a more effective mechanized infantry platoon organization.

Areas for Further Research

This thesis did not attempt to answer all of the problems presented with the Force XXI mechanized platoon organization. This study answered the thesis question by creating reasonable doubt as to the effectiveness of the Force XXI mechanized platoon. In the process of answering the thesis question, this study identified several areas worthy of more research.

One area of potential benefit to the mechanized infantry is a closer examination of the span of control issue raised in this study. What is the most effective span of control for the Force XXI organization?

Another area that deserves closer scrutiny is training requirements compared to the available time to train. How will the infantry handle the digitized task and communications overload while retaining combat effectiveness?

How do you train the Force XXI platoon efficiently and effectively? Additional research could possibly identify a realistic training strategy for the Force XXI platoon.

BIBLIOGRAPHY

Official US Army Studies and Reports

Ney, Virgil. *Organization and Equipment of the Infantry Rifle Squad: From Valley Forge to R.O.A.D.* Ft. Belvoir, VA: 1956.

_____. *The Evolution of the Armored Infantry Rifle Squad.* Cameron Station, Alexandria, VA: Defense Technical Information Center, 1965. Headquarters United States Army Combat Developments Command, Fort Belvoir, Virginia 22060.

Combat Developments Command. *Optimum Composition of the Rifle Squad and Platoon.* Ft. Ord, CA: Combat Developments Command, 1961.

Optimum Loading Plans for the M113 Armored Personnel Carrier. Combat Development Experimentation Center, Ft. Ord, CA, 1961.

United States Army Infantry School. White Paper, *Bradley Fighting Vehicle Doctrine, Organization, Training,* United States Army Infantry School (USAIS), Ft. Benning, GA, 1989.

_____. White Paper, *Mechanized Infantry Platoon (Bradley Fighting Vehicle) Interim Organization,* United States Army Infantry School, Ft. Benning, GA, 1992.

Tradoc Analysis Command (TRACWSMR) BFV Dismounted Platoon Study. *BIFV Squad and Platoon Leader Span of Control.* Army Research Institute. Research study, U.S. Army Research Institute for the Behavioral and Social Sciences, Ft. Benning Field Unit, Ft. Benning, GA, 1985.

USAIS, Dismounted Warfighting Battlelab Briefing, Dismounted Warfighting Battlelab, Fort Benning, GA, 12 January 1993.

Army of Excellence Final Report. Vol. 3 The Heavy Division, U.S. Army Combined Arms Combat Development Activity Force Design Directorate, Fort Leavenworth, KS, 1984.

The Bradley Battalion Structure Memorandum, Chief of Staff General Vuono for LTG Reimer, 31 January 1991. Headquarters Department of the Army.

RAND Arroyo Center *Company Performance at the National Training Center Battle Planning and Execution.* RAND Santa Monica, CA 1997.

JRTC Priority Trends *A Compendium of Trends with Techniques and Procedures that work!* Center for Army Lessons Learned (CALL) 4 QFY94 through 3QFY96., Fort Leavenworth, KS.

NTC Priority Trends *A Compendium of Trends with Techniques and Procedures that work!* Center for Army Lessons Learned (CALL) Number 97-17 September 1997, Fort Leavenworth, KS.

NTC Priority Trends *A Compendium of Trends with Techniques and Procedures that work!* Center for Army Lessons Learned (CALL) 4 QFY94 through 2QFY96., Fort Leavenworth, KS.

Krawciwn Nickolas Commander Third Infantry Division, Department of the Army APO New York 09036., Memorandum for Commander VII Corps, APO NY 09107, SUBJECT Bradley Doctrine, Training and Organization Issues 5 July 1988.

Books

English, John A. *The Mechanized Battlefield A Tactical Analysis*. VA: Pergamon-Brassey's 1985.

_____. *On Infantry*. New York: Praeger, 1984.

Simpkin, Richard E. *Mechanized Infantry*. New York: Pergamon Press, Inc., 1980.

Monographs and Theses

Carmichael, John M., Major, USA. "Devising Doctrine for the Bradley Fighting Vehicle Platoon Dismount Element, Finding the Right Starting Point." SAMS Monograph, Command and General Staff College, 1989.

Esper, Michael H., Major, USA. "Dismounted Mechanized Infantry on the Future AirLand Battlefield: Is the Squad Big Enough?" SAMS Monograph, Command and General Staff College, 1991.

Hughes, Stephen E., Major, USA. "The Evolution of the U.S. Army Infantry Squad: Where do we go from here? Determining the Optimum Infantry Squad Organization for the Future." SAMS Monograph, Command and General Staff College, 1995.

Melody, Paul E., Major, USA. "The Infantry Rifle Squad: Size Is Not the Only Problem." SAMS Monograph, Command and General Staff College, 1990.

- Rudesheim, Frederick S., Major, USA. "The Bradley Infantry Squad Leader A Breach of Faith?" SAMS Monograph, Command and General Staff College, 1993.
- Sandoy, Andrew S., Major, USA. "Span of Control and Initiative: Is More, Less?" SAMS Monograph, Command and General Staff College, 1991.
- Ling, David H., CPT (P), USA. "Combined Arms in the Bradley Infantry Platoon." MMAS Thesis, Command and General Staff College, 1993.
- Weimer, Michael B., Major, USA. "Leadership Implications of the Technology on Bradley Fighting Vehicle Squad Leaders." MMAS Thesis, Command and General Staff College, 1987.
- Gibbons, Edward G., Jr., Major, USA. "Why Johnny Can't Dismount: The Decline of America's Mechanized Infantry Force." SAMS Monograph, Command and General Staff College, 1996.
- Severn, Theodore R., LTC, USA. "Airland Battle Preparation: Have we Forgotten to Train the Dismounted Mechanized Infantryman?" USAWC Military Studies Program Paper, U. S. Army War College Carlisle Barracks, PA, 30 March 1988.

Periodicals and Articles

- Landis, Steve E., MAJ, U.S. Army. "Let's Reorganize Our BFV Companies." *Infantry*, July-December 1997, 19-22.
- Huba Wass de Czege, COL, U.S. Army. "Three Kinds of Infantry." *Infantry*, July-August 1985, 11-13.
- Simpkin, Richard E., Brigadier, British Army (Ret), "When the Squad Dismounts." *Infantry*, November-December 1983, 14-18.
- Spigelmire, Michael F., U.S. Army, "Bradley Platoon Organization." *Infantry*, January-February 1990, 1-2.
- Work, Robert O., MAJ, USMC. "Improving Combat Control: The Case for an 11-Man Triangular Rifle Squad." *Marine Corps Gazette*, August 1990, 101-109.
- Wells, Billy, Jr., "The Future of Infantry: Maneuver in the 21st Century. Army After Next Project." Strategic Studies Institute, Army War College, Carlisle Barracks, PA., 6 April 1998.

Government Documents and Manuals

Headquarters Department of the Army. FM 7-7J, *Mechanized Infantry Platoon and Squad (Bradley)*. Washington, DC: Government Printing Office, 1993.

_____. FM 7-7J, *MTP Mechanized Infantry Platoon and Squad (Bradley)* Final Draft, Washington, DC: Government Printing Office, 1997.

_____. FM 7-8, *Infantry Rifle Platoon and Squad*. Washington, DC: Government Printing Office, 1992.

_____. ST 7-7J, *Digitized Mechanized Infantry Platoon and Squad (Bradley)*. Student Text Fort Benning GA: Headquarters, Department of the Army), 1 June 1996.

_____. FM 23-1, *Bradley Gunnery*. Washington, DC: Government Printing Office, 1996.

_____. FM 71-1, *Tank and Mechanized Infantry Company Team*. Washington, DC: Government Printing Office, 1998.

US Army Infantry School. *Infantry 2000: The Force That Leads the Way*. Ft. Benning, GA: USAIS, 1991

Interviews

Davis, Addison T., Lieutenant Colonel. Interview by author, Ft Leavenworth, KS., 19 October 1998.

Cox, Michael, Sergeant Major. Interview by author, Ft Leavenworth, KS, 9 September 1998.

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