

IBCT Operations on the Depopulated Battlefield

**A Monograph
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Abstract

IBCT OPERATIONS ON THE DEPOPULATED BATTLEFIELD by MAJ Richard P. Andrise, U.S. Army, 63 pages.

The United States Army is transforming from its Legacy Force, to the Objective Force. Until the Army completes this transformation, the Interim Brigade Combat Teams (IBCT) are likely to conduct the bulk of the workload during stability operations and support operations. New doctrine advocates the employment of widely dispersed forces in a noncontiguous, nonlinear operating environment, and the IBCTs are the first elements likely to operate using these methods. Their enhanced capabilities need to facilitate effective operations on the depopulated battlefield (defined as a reduction in the concentration of units and soldiers on a battlefield). Extending the battlefield's depth and breadth creates numerous problems. The IBCTs will encounter and must overcome these problems in order to remain effective. Therefore, this monograph examines the IBCT Organizational and Operational (O&O) Concept to determine whether it overcomes the challenges inherent in conducting depopulated operations.

This monograph identifies the historical problems related to depopulation, offers solutions, and then compares the solutions against the O&O. Its primary focus is on newly generated, or intensified, depopulation problems caused by the IBCT O&O. Problems already associated with Legacy Forces, that depopulation does not intensify, do not fall within the scope of the research question.

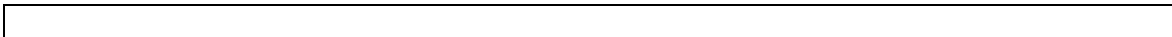
The findings of this monograph have immediate importance to the IBCTs, as the first two brigades are currently achieving Initial Operational Capability (IOC). As fielded, the IBCTs provide strategic responsiveness, not currently resident in the Army, and serve as the first phase in the transition to the Objective Force. The IBCTs also have the mission to research, and determine necessary changes in organization, doctrine, training, leader development, and equipment to facilitate transition to the Army's second step toward the Objective Force, the Interim Force. This monograph directly supports the search for those necessary changes by examining the IBCT's ability to operate on the depopulated battlefield and subsequently identifying shortfalls in capability and recommending possible solution sets.

This monograph determines that the IBCT O&O adequately addresses the majority of the problems associated with depopulation of the battlefield. The O&O, however, inadequately addresses some key issues that could significantly impact upon the IBCT's ability to successfully accomplish many of its missions. Critical inadequacies in the IBCT O&O include TBM defense (ADA coverage), PGM delivery and defense, intelligence support, CSS unit security, medical evacuation, and force sustainment. The optimum solution to overcome these inadequacies is to designate various units, which possess critical capabilities missing from the IBCT, as designated augmentation forces.

The problems associated with depopulation apply to the future battlefield upon which the IBCT will conduct operations. To ensure its own mission success, and simultaneously facilitate the Army's transformation to the Objective Force, the IBCT must address and solve several problems associated with depopulation. As a force specifically designed to ensure that the Army maintains its relevancy in the 21st Century, the IBCT must ensure it maintains its own relevancy in relation to supporting Army operations worldwide. Getting to the fight is only half the relevancy battle. The other half is to accomplish the mission successfully. The IBCT must ensure that it has the ability succeed in all assigned mission sets, in all operating environments, including the depopulated battlefield.

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Chapter 1

INTRODUCTION

The Army Evolves

The increasing frequency of U.S. Army contingency operations since 1989 has correspondingly increased the importance of its strategic responsiveness, or lack thereof. The deployment, and delayed employment, of Task Force Hawk in 1999 highlighted to Army leadership that the future relevance of the Army would depend on its strategic responsiveness.¹ In response to the potential for even higher numbers of contingency operations in the future, the Secretary of the Army, Louis Caldera, and the Army Chief of Staff (CSA), General Eric K. Shinseki, issued an updated Army Vision to guide the Army's transformation into a strategically responsive force capable of full spectrum operational dominance.² This strategically responsive Army is the Objective Force. The Interim Brigade Combat Teams (IBCTs) are the units designed to facilitate the Army's transition from its current Legacy Force to the Objective Force.

Throughout the last century, the United States Army devoted significant effort attempting to enhance capabilities while minimizing vulnerabilities. A combination of theory, history, and experience generated evolutionary doctrine, such as the Pentomic Division, Airmobile Operations, AirLand Battle, and Force XXI Operations. Each doctrinal generation improved capabilities, and unit efficiencies. Force developers then identified lessons learned, in conjunction with detailed after action reviews, and incorporated revised concepts into subsequent doctrine.

As the 20th Century ended, technological advances in automation significantly enhanced the ability to command and control forces throughout the battlespace. This phenomenon provides

¹ PBS Frontline interview with General Shinseki in 2000, p. 2-3. General Shinseki discusses the difficulties and extended timeline associated with Task Force Hawk's deployment in 1999.

² Michael K. Mehaffey, "Vanguard of the Objective Force," *Military Review* 80:5 (September/October 2000): 6.

armies the ability to disperse their forces over wide areas. It allows units to operate, unlike in times past, far removed from their headquarters.

The Interim Brigade Combat Team (IBCT)

In July 1999, The CSA cited the need for a force that is more survivable, mobile, and lethal than current light forces and more deployable than contemporary heavy forces. The CSA's vision of a force designed to meet these requirements led to the development and implementation of the IBCT program.³

The IBCT O&O describes the IBCT as follows,

The Interim Brigade Combat Team is a full spectrum, combat force. It has utility, confirmed through extensive analysis, in all operational environments against all projected future threats, but it is designed and optimized primarily for employment in Small Scale Contingencies (SSC), in complex and urban terrain, confronting low-end and mid-range threats that may employ both conventional and asymmetric capabilities. Fully integrated within the joint contingency force (under command and control of a division), the IBCT deploys very rapidly, executes early entry, and conducts effective combat operations immediately on arrival to prevent, contain, stabilize, or resolve a conflict through shaping and decisive operations. The IBCT participates in major theater war (MTW), with augmentation, as a subordinate maneuver component within a division or corps, in a variety of possible roles. The IBCT also participates with appropriate augmentation in stability and support operations (SASO) as an initial entry force and/or as a guarantor to provide security for stability forces by means of its extensive combat capabilities.

The IBCT is a divisional brigade. It is designed to optimize its organizational effectiveness and balance the traditional domains of lethality, mobility and survivability with the capabilities required for responsiveness, deployability, sustainability and a reduced in-theater footprint. Its core qualities are high mobility (strategic, operational, and tactical) and its ability to achieve decisive action through dismounted infantry assault, supported by organic direct and indirect fire platforms, and enabled by situational understanding. The IBCT is specifically designed for employment as an early entry combat force. Its likely operational environment includes a number of distinguishing features: urban/complex terrain; a weak transportation and logistical infrastructure; uncertain political situation; coalition involvement; and, the presence of an asymmetric threat including mostly mid- but some high-end technologies.⁴

Initial IBCT mission development focused on the performance of the following key operational capabilities: responsive deployment, mobility, lethality, survivability, dismounted

³ Department of the Army, TRADOC Analysis Center, Analysis Annex to the Interim Brigade Combat Team (IBCT) Organizational and Operational (O&O) Concept (Technical Report TRAC-TR-0200, Fort Leavenworth, February 2000), 1.

⁴ Department of the Army, The Interim Brigade Combat Team Organizational and Operational Concept: v 4.0 (FINAL) (Washington D.C.: Government Printing Office, 2000) 7.

operations, situational understanding and awareness, reach, force utilization and effectiveness, joint interoperability, and the ability to operate successfully in any spectrum of conflict.⁵

Responsive deployment capability, a key phrase in the CSA's vision, drove much of the initial IBCT planning. This planning identified three mobility standards the IBCT must meet. Its strategic mobility standard is the ability to deploy the entire brigade in ninety-six hours or less. Its operational standard is to be C-130 lift capable to support intra-theater movement. Finally, its tactical mobility standard is to achieve the equivalent level of mobility of a mechanized brigade.⁶

Today, the United States Army stands on the verge of a major transformation from its Legacy Force units to the Objective Force. Until the Army completes the fielding of the Objective Force, however, the IBCTs are likely to conduct much of the workload during rapid deployment and short duration operations.⁷ In addition, new doctrine like FM 3.0 advocate the employment of widely dispersed forces in a noncontiguous operating environment.⁸ The IBCTs, as the first elements likely to operate using this new doctrine, are already transitioning towards full battle readiness.⁹ Their enhanced capabilities will need to facilitate effective operations on a nonlinear, noncontiguous battlefield. The real concern now is whether, or not, these new formations are up to the challenges posed by further depopulation of the modern battlefield. Therefore, this monograph examines the IBCT O&O to determine whether it overcomes the challenges inherent in conducting depopulated operations.

⁵ IBCT O&O Analysis Annex, 2.

⁶ Ibid., 6.

⁷ U.S. Army Public Affairs Office, "Army Officially Begins Transformation to Initial Brigade Combat Teams," 13 April 2000, Internet, http://www.tradoc.army.mil/transformation/data%20pages/army_officially_begins_transformation.htm accessed 29 November 2001.

⁸ Department of the Army, FM 3-0 (Washington D.C.: United States Government Printing Office, 2001) 4-41, 5-49, 6-60-64, 8-35, 13-33.

⁹ U.S. Army Public Affairs Office, "Army Announces Locations of Next Interim Brigade," 12 July 2001, Internet, <http://www.5tharmy.army.mil/New%20Stories/interim%20brigade.htm> accessed 10 October 2001.

Depopulation

Depopulation of the battlefield is defined as a reduction in the concentration of units and soldiers on a battlefield. The phrase is easier to understand when viewed as an equation concerned with mass versus spatial dispersion in direct relation to the lethality of the battlefield.¹⁰ As the lethality (L) of the battlefield increases, increased dispersion (D), measured as area per person, of massed units and soldiers (M) becomes necessary for their survival (S). Thus $S=DM/L$. If we use S and M as constants, then it can be shown that the variables L and D have a direct relationship in that as L increases, D must increase accordingly to ensure the survival of M. Simply put, as an adversary gains the ability to adequately target and subsequently cause extensive casualties among massed troops, it becomes necessary to disperse formations, or depopulate the battlefield, just to survive.

A note of caution is that this theoretical formula implies an equal rate of dispersion throughout the entire battlespace. In reality, some areas will achieve greater dispersion than others, usually caused by the increased lethality of particular areas of the battlefield. Initially designed to predict casualties in massed formations, the formula now portrays the overall depopulation experience across the entire battlefield for large formations. This depopulation creates numerous problems as it extends the depth and breadth of the battlefield. Large formations will encounter and must overcome these problems in order to remain effective. The challenge for the IBCT is to either mitigate the effects of these problems or eliminate them.

Depopulation and the IBCT

The IBCT will exploit technology to conduct distributed maneuver, across a depopulated battlefield, in an attempt to avoid the high casualty, attritional warfare normally associated with operations on a linear battlefield. There is, however, no body of work examining the problems

¹⁰ Trevor N. Dupuy, The Evolution of Weapons and Warfare (Fairfax, VA: Hero Books, 1984), 309-314.

generated by these nonlinear, noncontiguous operations. Therefore, this monograph examines the IBCT Organizational and Operational Concept (O&O) to determine whether, or not, the O&O fully addresses problems associated with continued depopulation of the battlefield. After reviewing the history of battlefield depopulation (Chapter 2), identifying potential depopulation related problems (Chapter 3), proposing countermeasures needed to overcome depopulation's problems (Chapter 4), and reviewing the IBCT O&O to determine whether needed countermeasures are applied (Chapter 5), this monograph finds that the IBCT O&O adequately addresses the majority of the problems associated with depopulation of the battlefield. The O&O is inadequate, however, at addressing a few critical issues that could significantly impact upon the IBCT's ability to successfully accomplish many of its missions. Critical inadequacies in the IBCT O&O include TBM defense (ADA coverage), PGM delivery and defense, intelligence support, CSS unit security, medical evacuation, and force sustainment.

The evaluation criteria, in Chapters 3-5, include both cybernetic and moral domain issues, and address their impact on IBCT operations. Historical studies employing empirical methods to measure moral and cybernetic issues assisted in the identification of the evaluation criteria. The cybernetic domain criterion are concerned with the thinking part of warfare, while the moral domain criterion address factors of war such as cohesion, Esprit de Corps, bonding, and courage. In particular, the cybernetic domain criteria focus on command and control, security and survivability, training, and sustainment. This monograph focuses on newly generated or intensified depopulation problems caused by the IBCT O&O. Problems already associated with Legacy Forces, that depopulation does not intensify, do not fall into the scope of this monograph.

These findings have immediate importance to the Interim Brigade Combat Teams, as the first two teams are currently achieving Initial Operational Capability (IOC). As fielded, the IBCTs provide strategic responsiveness, not currently resident in the Army, and serve as the first phase in the transition to the Objective Force. The IBCTs also have the mission to research, and determine necessary changes in organization, doctrine, training, leader development, and

equipment to facilitate transition to the Army's second step toward the Objective Force, the Interim Force.¹¹ The findings of this monograph directly support the search for those necessary changes by revealing the IBCT's ability to operate on the depopulated battlefield, by identifying shortfalls in capability, and by recommending possible solutions.

Depopulation is not a new phenomenon. Rather it is a recurring theme of warfare that man has only recently recognized. However, recognition of the problem is only the start towards an adequate solution. Awareness must lead to understanding, which in turn must lead to application of solution sets. This monograph facilitates the understanding portion of depopulation. It is now incumbent upon the U.S. Army and the IBCT leadership to ensure that application follows understanding.

¹¹ U.S. Army Public Affairs, "Army Announces Locations of Next Interim Brigade," 12 July 2001, Internet, <http://www.5tharmy.army.mil/New%20Stories/interim%20brigade.htm> accessed 10 October 2001.

Chapter 2

The History of Depopulation

Depopulation Prior to World War I

Many consider the concept of the depopulated battlefield a recent phenomenon of war. T. N. Depuy, however, argues that depopulation has probably always existed.¹² He points out that what has changed, and subsequently caused so much attention and controversy, is the recent exponential accelerated growth of battlefield depopulation rates.

The theory of depopulation owes its modern, literary origins to the observations, and evaluations, of the increased lethality of the battlefield during the Napoleonic Wars.¹³ By the late 19th Century, detailed analysis transformed observations into an awareness and understanding of the survival advantages offered by dispersion.¹⁴ Dispersion translated into depopulation that continued to progress throughout the remainder of the 19th and 20th Centuries. Today, at the start of the 21st Century, depopulation continues unabated.

The Napoleonic Era showed the first signs of the impending depopulation of the battlefield. While depopulation began during Napoleonic warfare, survivability considerations were not the driving force. Yes, increased lethality provided some motivation for depopulation, but other operational considerations resulted in Napoleon's use of multiple routes for dispersed corps. David Chandler succinctly details how Napoleon used dispersion to facilitate rapid movement, provide security, control occupied areas, facilitate feeding, and to deceive adversaries as to his true intentions to conduct his campaigns.¹⁵

¹² Depuy, The Evolution of Weapons and Warfare, 312

¹³ Antoine Henri Jomini, The Art of War, ed. Brig. Gen. J. D. Hittle (Mechanicsburg, Pa.: Stackpole Books, 1987 reprint), 452.

¹⁴ Ardant du Picq, Battle Studies, ed. Colonel John N. Greely and Major Robert C. Cotton (Mechanicsburg, Pa.: Stackpole Books, 1987 reprint), 277.

¹⁵ David G. Chandler, The Campaigns of Napoleon, (New York: MacMillan Publishing Company, 1966), 144-155.

By dispersing his Corps over a wide area, Napoleon ensured that his adversary could not decisively engage more than one of his corps at a time. While that corps held off the attackers, Napoleon would maneuver the rest of his army onto an unprotected flank of the enemy army. Chandler further states that Napoleon initially employed dispersed forces that eventually phased together in a carefully concentrated mass as the decisive battle approached. Napoleon did not originate these ideas, though he was the first to apply the idea of dispersed operations on a grand operational scale.¹⁶

In his short work, “The Theory of the Empty Battlefield,” Dr. James Schneider argues that depopulation of the battlefield dramatically increased during the United States Civil War primarily due to the increased lethality of the battlefield.¹⁷ This increase in lethality directly resulted in development of new tactics that emphasized dispersion, prone firing, and extensive use of field fortifications.¹⁸ Whether, or not, the battlefield actually became more lethal during the Civil War is debated today.¹⁹ The undeniable fact is that both commanders and soldiers recognized the need to adjust their massing techniques and tactics in order to improve survivability.

In another article, Schneider points out that, prior to the United States Civil War, armies fought at a single time and geographical point on the battlefield.²⁰ Even Napoleon, who

¹⁶ Chandler, The Campaigns of Napoleon, 54-155. Pierre Bourcet and H. Guibert were instrumental in the transformation of the French Army prior to Napoleon’s appearance. Their writings on reform and the conduct of battlefield operations were studied by the young Bonaparte prior to his meteoric rise to fame. Many of the brilliant ideas, such as dispersion, attributed to Napoleon were actually theorized and implemented, at least on a small scale by Pierre Bourcet and H. Guibert. Napoleon simply expanded their tactical innovations to an operational level.

¹⁷ James J. Schneider, “The Theory of the Empty Battlefield,” Journal of the Royal United Services Institute 132:3 (September 1987): 37.

¹⁸ *Ibid.*, 39-40.

¹⁹ Paddy Griffith, Battle Tactics of the Civil War (New Haven, CT: Yale University Press, 1989), 20. Griffith attributes the perception of a more deadly battlefield to the growing literacy of the populace and the subsequent books authored with the intention of painting a horrific and impersonal picture of the battlefield. Schneider, however, seems to do a better job backing up his argument by reconciling diminished casualties per square meter with increased lethality and its byproduct, greater dispersion of the fielded forces.

²⁰ James J. Schneider, “A New Form of Warfare: Cybershock,” Military Review 80:1 (January/February 2000): 58.

conducted operationally dispersed movements, tried to concentrate his entire army for decisive battles. During the Civil War years, 1861-1865, action became distributed across the breadth and depth of the battlefield as the telegraph and railroad gave commanders, on both sides, the ability to command and control, and maneuver their forces in a more dispersed manner that better facilitated operations across the vast expanse of geography of the United States.²¹

Prior to World War I, active debate on warfare included discussion about the increasing lethality on the battlefield. Jean De Bloch was one of the major contributors of the time that commented on this subject and the subject of depopulation.²² He argued that smokeless powder, the rifle, the magazine rifle, and the breach-loading cannon all contributed to raise the lethality and subsequently would cause modern armies to disperse their combatants to survive.²³ Using numerous facts and charts, he demonstrated that the increasing lethality of combat operations required both a general depopulation of the battlefield, and the creation of a neutral territory, or no mans land, between the combatants.²⁴ Drawing upon the insights gleaned from the American Civil War, Bloch saw improvised and deliberate field fortifications as offering the only chance for survival.²⁵ This favored the defense. Ultimately, he saw no way for offensive forces to survive on the deadly battlefields of the late 1800s and early 1900s; predicting that even the loosest, most depopulated, forces would not survive the hail of fire poured upon them before they reached their objectives.²⁶ Sadly enough, WWI proved the validity of most of Bloch's theory, specifically his insights relating to the necessity for dispersed forces protected by deliberate field fortifications.

²¹ Archer Jones, Civil War Command and Strategy (New York: The Free Press, 1992), 39.

²² John De Bloch, The Future of War (Boston, MA: Double Day and McClure Co., 1899, Fort Leavenworth, KS, CGSC, 1989 reprint), page xi. Bloch's main argument was that war would not occur because it was too militarily, politically, and economically expensive, and would lead to the ruin of those who prosecute it. WWI proved Bloch wrong. Warfare had not become so deadly and expensive to prosecute so as to prevent its occurrence. It had become, however, deadly and expensive enough to kill millions of people and bankrupt several of the participating nations.

²³ *Ibid.*, xvi-xix.

²⁴ *Ibid.*, xiv, xv, xxvii-xxx.

²⁵ *Ibid.*, xxvii, 11.

²⁶ *Ibid.*, xxvi.

Maneuver's Contribution to Depopulation

Over the next several decades depopulation continued to accelerate and led to the development of the following doctrine/tactics and the forces needed to execute them: infiltration, mobile armored, amphibious, airborne, and eventually heliborne forces. All of these force types facilitated further dispersion across the depth and breadth of the battlefield during the 20th Century. Air power made it necessary to protect the entire nation, especially the industrial complexes that fueled the war machine, which caused further dispersion of troops.

The World War I (WWI) battlefield, particularly in Western Europe, expanded in both depth and breadth as far as command and control permitted. By WWI there was no longer a main body to focus on because armies had essentially spread out across the entire frontier. Flank attacks and envelopment tactics virtually disappeared due to the dispersion along a linear front. In its place, doctrine appeared which advocated penetration for the purpose of rupture and exploitation for the purpose of disintegration of the enemy force.²⁷ Operations designed to bypass massed defenses made their debut at the end of WWI.

At the start of WWII, a major problem vexing all the competing armies was how to avoid attritional, static warfare characteristic of linear battlefields with heavily prepared defenses as experienced during WWI. Maneuver had to return to warfare in order to break the static fronts. Motorization and mechanization offered a possible solution to the problem.²⁸ The Germans were the first to correctly institute doctrine, organizations, and equipment that would facilitate maneuver warfare.²⁹ Germany's use of mobile formations led to further depopulation. Ignoring the historical precedence for linear fronts, the Germans organized their strike units into columnar formations to strike through a particular point on the enemy's defensive line.³⁰ Airpower then

²⁷ James J. Schneider, School of Advanced Military Studies, interviewed by author, hand written notes, Fort Leavenworth, 23 October 2001.

²⁸ Matthew Cooper, The German Army (Chelsea, MI: Scarborough House/Publishers, paperback edition, 1990), 135-138.

²⁹ *Ibid.*, 203-208.

³⁰ Alistair Horne, To Lose a Battle (New York: Penguin Books, paperback edition, 1988), 77-82.

destroyed the enemy's armored reserve while the force designated to counter any penetration of the line allowed the strike element to inflict command paralysis on the opponent.

During WWII, air power also contributed to a further dissipation of front line strength. It became even more necessary than in WWI to protect the federal government, the industrial complex, resource areas, and the industrial workers that fueled the war machine from the massive, strategic bombing campaigns launched by the competing powers.³¹ To counter the growing air threat, equipment and soldiers dispersed throughout the combatant countries' depth to resist air forces and airborne drops with continual fire.³² WWII proved to all, that there was no longer any safe place within a country and that geography alone no longer provided protection behind the front lines.³³ Therefore, rather than concentrating forces along a front, most nations dispersed their available manpower throughout their entire area, assuming risk and economy of force in some areas so as to mass in others.

S.L.A. Marshall succinctly summed up the development of depopulation during WWII.³⁴ He states that dilution of combat arms density at the front was directly attributable to the need for the belligerents to protect their entire territory. This led to a rise in the proportion of CS and CSS troops, especially those involved in air and anti-air fires. Instead of training infantry forces, many nations contributed a significant effort to train these new warfare specialists and distribute them throughout their integral territories. Thus, depopulation had grown to an extent that it now stretched the battlefield to every square meter that an opponent might be able to influence, and affected the dispersion of not only combat, but also combat support and combat service support soldiers.

³¹ Mark Clodfelter, The Limits of Airpower (New York: The Free Press, 1989), 2-9.

³² Richard Overy, Why The Allies Won (New York: W.W. Norton and Company, 1995), 117-122.

³³ Eric M. Bergerud, Fire in the Sky (Boulder, CO: Westview Press, 2000), 286.

³⁴ S. L. A. Marshall, Men Against Fire (Gloucester, MA: Peter Smith, 1978, reprint), 17.

Post WWII Depopulation

Depopulation of the battlefield slowed during the Korean War. Rather than take advantage of the lessons learned concerning dispersed, nonlinear operations in WWII, and the theoretical discussions that followed, most of the Army's Korean War commanders preferred to operate in a very linear and contiguous manner, reminiscent of WWI battlefields. Terrain, and the size of forces available, effectively limited opportunities to exploit the advantages of depopulation. As a precursor of today's nonlinear, noncontiguous operations, General Douglas MacArthur's brilliantly conceived and executed amphibious landings at Inchon serve as a notable exception. MacArthur seemed to be one of the few Generals who used WWII experiences, and reflection, to understand how dispersed, nonlinear tactics could provide a significant advantage in the Korean War.³⁵

MacArthur received a great deal of resistance to the Inchon landing plan, demonstrating the tremendous institutional preoccupation with defensive oriented linear tactics and attritional warfare common at the time.³⁶ Not only did immediate subordinates express concern, but also both the Department of the Army and the Department of Defense sent delegations, to MacArthur in Japan, to convince him to adopt a less risky course of action.³⁷ Undeterred by the conservatives of the Army and Defense Department bureaucracy, he pressed on to achieve tremendous success thanks to his vision and daring.

Marine General Chesty Puller cites an example of the Army's determination to conduct linear operations during the Korean War through comments concerning Army General Ridgway. Specifically, he disapproves of Ridgway's use of plodding, linear tactics to oppose the communist adversary in a traditional warfare of attrition.³⁸ His comments also demonstrate enlightenment as to the difficulties of operating on an increasing complex and lethal battlefield. In late 1951,

³⁵ Clay Blair, *The Forgotten War* (New York: Anchor Books, 1989 reprint), 270.

³⁶ *Ibid.*, 184.

³⁷ Matthew B. Ridgway, *The Korean War* (Garden City, NY: Doubleday, 1986 reprint), 38-40.

³⁸ Jon T. Hoffman, *Chesty* (New York: Random House, 2001), 426-428.

Puller provided further indications of his preference for nonlinear, noncontiguous operations by detailing theoretical and operational experimentation into the conduct of heliborne operations designed to vertically envelope the enemy while simultaneously preventing nuclear fires from destroying an amphibious task force.³⁹ Clearly a visionary during the early 1950s, it would take the Army leadership several more years to realize the brilliance and potential of Chesty Puller's comments.

In the interim, before that enlightenment occurred, the Army struggled with the reality and horror that the Soviet Union had developed, tested, and deployed the atom and hydrogen bombs. The formation of the Pentomic Division Concept, between 1955-1963, was the Army's counter to the expected effects of Soviet nuclear fires.⁴⁰ To minimize the damage nuclear weapons could inflict on fielded Army forces; the Army's new doctrine dispersed combat units across the battlefield. The idea was to limit the amount of losses the Army forces would take from any single strike. The Pentomic Division concept greatly advanced the idea of the depopulated battlefield. The Soviet Union, however, subsequently development and planned deployment of thousands of small tactical nuclear weapons across the battlefield, thus making the Pentomic Division's contribution to the protection of troops against nuclear fires obsolete. The plethora of nuclear weapons could target the Pentomic Division's dispersed units to clear the way for subsequent exploitation, behind the front lines, by conventional Soviet forces. The Army, in conjunction with U.S. National Policy, countered with a counter strike policy to prevent employment of these powerful weapons by the former Soviet Union and Warsaw Pact forces.⁴¹

Combat operations during the Vietnam War brought about the next evolution in depopulated battlefield operations for the Army. In Vietnam, the adversary preferred to operate in a dispersed,

³⁹ Hoffman, *Chesty*, 446-449.

⁴⁰ David H. Hackworth and Julie Sherman, *About Face: The Odyssey of an American Warrior* (New York: Simon and Schuster, 1989), 315-316.

⁴¹ Weigley, *The American Way of War* (Bloomington, IN: Indiana University Press, 1977), 402-411.

noncontiguous area of operations.⁴² In response, the Army employed heliborne assault units to conduct vertical envelopments against this strange foe that refused to fight in a linear manner.⁴³ Adversaries employed their asymmetric strength as the Ia Drang Battle brought these two different operational concepts together in a clash of arms. For the Army, it was the first of many operations testing and proving the validity of the new concept of Airmobile Operations. Though both sides claimed success in the operation, neither of them disputed the significant impact that heliborne operations had on the Vietnam War, and specifically on the outcome of the Ia Drang Battle.⁴⁴ Although they were operating on a noncontiguous battlefield, in the enemy's base camp, the U.S. forces were able to sustain themselves and evacuate their casualties using helicopters. In conjunction with the supporting air delivered fires, they were able survive and inflict serious casualties on a numerically superior opponent.⁴⁵ Airmobile operations in Vietnam demonstrated the effectiveness of conducting operations throughout the depth and breadth of the battlefield.

In the 1980s, the Army released AirLand Battle doctrine. This doctrine helped accelerate depopulation by further extending both the depth and breadth of the battlefield through a battlefield framework consisting of deep, close, and rear areas.⁴⁶ Originally designed to counter the large linear threat posed by the Warsaw Pact, AirLand Battle went through numerous developmental growth periods as Army leadership continually reviewed and refined the doctrine. The result was the overwhelming operational and tactical success achieved during OPERATION DESERT STORM.⁴⁷

⁴² Harold G. Moore and Joseph L. Galloway, We Were Soldiers Once and Young (New York: Random House, 1992), 54.

⁴³ *Ibid.*, 9.

⁴⁴ *Ibid.*, 53, 399.

⁴⁵ *Ibid.*, 233.

⁴⁶ FM 100-5, 5 May 1986, 6-11– 6-15.

⁴⁷ Michael R. Gordon and Bernard E. Trainor, The Generals' War, (New York, Little, Brown, and Company, paperback edition, 1995), 299-300. Key to this victory was not just the theoretical development of AirLand Battle, but also the development of the National Training Centers and homestation training support programs that instilled the concept into the warfighter's execution abilities.

Land area responsibilities dramatically increased for division and brigade sized elements during OPERATION DESERT STORM.⁴⁸ Unlike doctrine that called for Army units to operate in a contiguous environment, with neighboring units in physical contact, units in DESERT STORM often were not in sight of each other due to the vast expanse of area that they maneuvered through.⁴⁹ This posed significant command and control, and logistical, problems as commanders attempted to gain a synergistic result from nested unity of purpose and effort.⁵⁰ Fortunately for the Army, the opponent they faced was unable to take advantage of the huge seams separating the advancing divisions. Nonetheless, operations in DESERT STORM demonstrated the feasibility and effectiveness of noncontiguous operations.

Recent U.S. operations in Afghanistan continue to demonstrate the effectiveness of noncontiguous, continuous operations. While many observers have marveled at, or feared, the Army's ability to operate as an integral part of the Joint Force and take advantage of the application of a multitude of joint fires across a nonlinear and depopulated battlefield, the astute observer merely notes that it represents the latest evolution in Army and Joint Warfighting doctrine.⁵¹ General Schoomaker insists that the current success of Army forces and, in particular, Special Operations Forces is directly related to organizational and doctrinal changes to the overall force following the failure in OPERATION DESERT ONE. He states that a multitude of seriously critical after action reviews led Congress to mandate changes promulgated in the

⁴⁸ Gordon and Trainor, The Generals' War, 375-380.

⁴⁹ *Ibid.*, 420.

⁵⁰ *Ibid.*, 151-152.

⁵¹ General (Retired) Pete Schoomaker, interviewed by author, hand-written notes, Fort Leavenworth, 22 January 2002. Retired General and recent Commander in Chief, United States Special Operations Command. His experiences focus on Special Operations and the history, structure, and missions of the SOF community. Over the span of thirty-two years of service, he was in Joint, Armor, Special Operations, Personnel Assignment, and Interagency communities. Much of his career was spent in positions of tremendous responsibility for national security and service in the most sensitive national security organizations.

Goldwater-Nichols Act in 1986.⁵² That act served as the dominant piece of legislation propelling the U.S. Armed Forces to its current high level of operational execution.

The examples cited above allow the reader to comprehend the timeline transition of depopulation on the battlefield. Starting out slowly during the Napoleonic Wars, depopulation quickly accelerated during the U.S. Civil War. By WWI, the battlefield had evolved from earlier massed troop concentrations into a continuous front from Switzerland to the English Channel, as both sides dispersed their forces to prevent envelopment. WWII saw the battlefield extend across the entire depth and breadth of the combatant nations due to the need to protect soldiers, but also civilians, essential infrastructure, industry, and critical government facilities from airplane and missile attack. Vietnam provided the next major acceleration as the Army began employing vertical envelopment by heliborne forces to contest an adversary who preferred to operate in a nonlinear, noncontiguous environment. Operation Desert Storm brought another evolution in depopulation due to increased C2 capabilities and increased acreage of responsibility for the combat units. Finally, Afghanistan shows us our latest example of depopulation as scattered U.S. Special Forces soldiers, working in conjunction with Allied Afghan Fighters, overthrew the Taliban and al Qaeda.

In the 21st Century, depopulation is no longer the exception but the rule for survival on the battlefield. A poignant example is to consider the U.S. Civil War battle of Gettysburg. When fought, over 90,000 Union soldiers defended the area around Gettysburg. Today, the U.S. Army could defend the area with 700-800 soldiers, and possibly, if provided with reasonable air and missile support, as few as 100 soldiers.⁵³ How far will depopulation go? No one knows for sure, but many analysts are beginning to envision a future, empty battlefield where armies battle for

⁵² General (Retired) Pete Schoomaker, interviewed by author, hand written notes, Fort Leavenworth, 22 January 2002.

⁵³ Steven Lee Myers, "On Empty Battlefields, The Shadows of Cyberwarriors," New York Times (New York) 1 January 2000.

control of key territory without even seeing each other visually.⁵⁴ The IBCT is the first step in the movement towards this future.

The history of depopulation, as just covered, demonstrates that future U.S. Army operations will continue to accelerate depopulation trends. Depopulation generates problems that may limit operational success in the future. These problems are the subject of the next chapter.

⁵⁴ Steven Lee Myers, "On Empty Battlefields, The Shadows of Cyberwarriors," New York Times (New York) 1 January 2000.

Chapter 3

Problems Associated with Depopulation

Today, depopulation shows no signs of stopping, or even slowing, during the 21st Century. Though depopulation has served well to reduce casualties, it has also created, or added to, a whole host of problems faced by battlefield commanders and their soldiers. Foremost among these problems are those associated with the cybernetic and moral domains of warfare. The cybernetic problems include C2, increased information requirements, unity of effort, training, security, survivability, and complex logistical, maintenance, and medical evacuation problems associated with sustaining the dispersed force. Moral problems include cohesion, morale, bonding, and esprit de corps. Depopulation, a phenomenon of warfare, is by no means solely responsible for generating problems in these areas. Since the scope of this monograph is limited to determining if the IBCT O&O addresses the affects of depopulation, this chapter only considers those problems that depopulation either causes or intensifies.

Problems Related to Command and Control

Effective C2 is critical to mission success. “Command and control functions are performed through an arrangement of personnel, equipment, communications, facilities, and procedures employed by a commander in planning, directing, coordinating, and controlling forces and operations in the accomplishment of the mission.”⁵⁵ Increasing complexity, mobility, and dispersion of modern armed forces, however, places ever-increasing demands on C2 systems. This has made C2, especially on a depopulated battlefield, a much more difficult undertaking.⁵⁶

⁵⁵ Department of Defense, Joint Pub 1-02: DOD Dictionary of Military and Associated Terms (Washington D.C.: Government Printing Office, 2001), 27.

⁵⁶ Martin Van Creveld, Command in War (Cambridge, MA: Harvard University Press, paperback edition, 1985), 2.

As a force disperses, problems related to unity of effort, situational understanding, and information management increase in intensity.

An army with an ineffective C2 system is limited in its ability to conduct dispersed operations, and its forces are vulnerable to fires while massed.⁵⁷ To compensate for this shortcoming, the U.S Army developed advanced C2 systems that allow for greater dispersion of fielded forces. If an army has an extremely effective C2 system, however, it may over extend itself while dispersing to conduct nonlinear operations.

Modern automation systems like ABCS facilitate more efficient C2 and subsequently allow for far greater dispersed operations through the maintenance and subsequent distribution of advanced situational understanding. While a brigade, during the U.S. Civil War, had responsibility for a frontage of less than 500 yards, today an IBCT brigade expects to control effectively a fifty-kilometer by fifty-kilometer area of operations.⁵⁸ This dramatic expansion, in the area of responsibilities, has the potential to overwhelm even a sophisticated C2 system like ABCS. This may adversely affect the ability to maintain the practical application of C2 on the depopulated battlefield of today, and the near future. The very systems that enabled the U.S. Army to overcome the original problems caused by dispersion have now intensified pre-existing problems. The depopulated battlefield causes this C2 paradox.

Other C2 problems, specifically aggravated by depopulation, concern information needs and subsequent information management. Information needs relate directly to mass.⁵⁹ As mass expands, especially across time and space, information needs vastly increase. This causes strain on a C2 system and simultaneously raises the dilemma of how to achieve, maintain, and distribute situational understanding across all echelons of the dispersed force, from division and brigade

⁵⁷ Ibid., 131.

⁵⁸ Griffith, *Battle Tactics of the Civil War*, 55; Army News Service, "Initial Brigade Combat Teams are First Step in Creating Objective Force," Internet, <http://www.gordon.army.mil/regtmktg/ac/sumr00/dubik.htm> accessed 24 November 2001.

⁵⁹ James J. Schneider, School of Advanced Military Studies, interviewed by author, hand written notes, Fort Leavenworth, 25 September 2001.

headquarters to individual platoons and squads. As Anthony Kellett points out, it is dispersion itself, which causes a loss of situational understanding.⁶⁰ Preventing this loss is critical to mission success on a depopulated battlefield because situational understanding facilitates unity of effort. It is from unity of effort that commanders are able to mass the effects of their dispersed forces, at the critical time and place of their choosing. Therefore, if a force's C2 system is unable to conduct effective information management during dispersed operations, situational understanding will not materialize, and the force will not achieve synergistic operations and results.

Effective command and control is necessary for an army to succeed in combat operations. The depopulated battlefield, however, imposes intensified problems on C2 systems. The U.S. Army as a whole, and specifically the IBCT, must focus their efforts towards solving C2 problems, related to dispersed operations, to ensure future mission success.

Problems Related to Security and Survivability

Security and survivability is of paramount concern to all professional armies. Doctrine, training, weapon systems, and standard operating procedures combine efficiently to ensure that a unit's security and survivability is adequately maintained. Units and soldiers on a depopulated battlefield, however, often face an elevated security threat and challenges not usually trained for, or faced, by soldiers and units operating on a linear battlefield. Due to their dispersed nature, units often are isolated, unable to receive immediate support from their sister elements, and vulnerable to problems related to transiting white space, base defense, and infiltration. This significantly increases the importance that all elements possess the ability to defend themselves adequately so that they can defeat the threat forces, extricate themselves from the danger, or hold out until support arrives.

White space control on the depopulated battlefield is an issue of extreme importance. While combat arms forces often have enough organic firepower to adequately defend themselves, or

⁶⁰ Anthony Kellett, Combat Motivation (Boston, MA: Kluwer Nijhoff Publishing, 1982), 220.

even defeat an attacker, Combat Support (CS) and Combat Service Support (CSS) forces are at risk. Military Police (MP) are an exception, but CS and CSS units are usually neither equipped nor adequately trained to defend themselves as they transit white space areas. This is possibly due to the high level of rear area security afforded to them over the last thirty years, as the Army conducted linear operations. Combat forces prevented penetration, the Air Force protected against aerial attacks, and CS/CSS forces were relatively secure while transiting the battlefield. This high level of security, provided by other forces, possibly has led to erosion of CS/CSS combat skills. The depopulated battlefield, with nonlinear fronts and noncontiguous areas, allows threat forces to take advantage of, and/or defeat, units and soldiers with inadequate combat defense skills. Therefore, CS/CSS units should expect an elevated security risk as they transit white space areas and prepare accordingly.

Remote or isolated base camps pose another security threat on depopulated battlefields. Threat forces use their intelligence network to identify these areas. They then analyze defensive capabilities, discover inadequacies, and plan attacks on such locations. Tactics include the use of snipers, commando or special forces raids, indirect fire attacks, air attacks, and Surface to Surface Missile (SSM) attacks.

Infiltration by threat forces is another security and survivability problem on the depopulated battlefield. Dispersed operations in a nonlinear environment facilitate threat infiltration into friendly areas of responsibility. Large gaps exist between units on a depopulated battlefield and an enemy, especially one familiar with the terrain, uses these gaps to penetrate forward defensive positions and subsequently wreak havoc in rear areas.

Problems related to white space control, self-defense while mobile or in base camps, and infiltration by threat forces all contribute to an elevated security threat. Ignoring any one of these problems may turn it into an exploitable weakness, if discovered by an adversary. The IBCT must adequately address all these problems, making security and survivability a particularly important concern for IBCT operations.

Problems Related to Training

In the late 19th Century, du Picq commented on the difficulty and importance of training that counters dispersion related problems.⁶¹ He asserted that the essence of human nature has not changed in centuries of warfare and that most men, in battle, are driven by their instinct for self-preservation. This instinct is the primary cause for their unwillingness to fight, and training must overcome it. Training systems, however, often fall short in preparing soldiers for the fears they will face when under fire.⁶² Once the shooting starts, everyone takes cover, and individual soldiers, and small units, suddenly find themselves alone and isolated. Without the support of others, and without a watchful eye to ensure they perform in a courageous manner, most men will shrink from battle to preserve their own lives.⁶³ As a force disperses, this problem intensifies because the quantity of physical and psychological support available diminishes as units, and their soldiers spread out.

Marshall states that most training systems do not adequately prepare soldiers to fight effectively on the isolated battlefield.⁶⁴ He cites the lack of realistic training programs, ones that mimic combat conditions as closely as peacetime risk controls permit, as the primary training problem. Marshall also points out deficiencies in leadership training that contribute to confusion among troops when they are isolated. These deficiencies cause a loss of control, and the overall level of fear in a unit to rise needlessly.⁶⁵ This in turn tends to reduce combat effectiveness through a decrease in the volume of fire that a unit can deliver.⁶⁶ Lastly, Marshall states that most training programs train soldiers and leaders to act with automatic responses to given situations. He asserts that this is a major error, in that it stifles initiative and limits a leader's cognitive growth. Properly developed, this leader would learn to analyze problems fully, and then apply

⁶¹ Ardant Du Picq, Battle Studies, 124-126.

⁶² *Ibid.*, 67.

⁶³ *Ibid.*, 122.

⁶⁴ Marshall, Men Against Fire, 36-37.

⁶⁵ *Ibid.*, 37.

⁶⁶ *Ibid.*, 39.

the best possible solution, rather than a school house answer.⁶⁷ Training programs, historically, have not developed leaders who develop unique solutions in unique situations. Therefore, until they do, leaders on a depopulated battlefield may lack initiative, and fail to act in the absence of orders.

Training problems associated with the depopulated battlefield are not new. Most programs, however, are deficient in preparing soldiers to conduct successful operations in a depopulation environment. With the recent acceleration of battlefield depopulation, it is imperative for the IBCT to develop and implement training programs that adequately prepare its soldiers for dispersed operations in a nonlinear and/or noncontiguous environment.

Problems Related to Sustainment

Force sustainment on a depopulated battlefield is another challenging mission. Units, spread all over the AO, are difficult to resupply, maintain, and medically care for. The U.S. Civil War, with its widely dispersed operations, over a vast geographical region, proved that the logistical dimensions of strategy were more significant than the operational dimensions.⁶⁸ Any future force conducting dispersed operations over large areas needs a robust sustainment system that provides for its logistical, maintenance, and medical needs.

Logistical resupply of dispersed units is critical to their mission success. Units organically carry only enough supplies to allow them to operate for a limited time-period. Unless resupplied, before that time-period expires, units become combat ineffective. Linear operations, with their contiguous AOs and secure transit routes, facilitate resupply, while nonlinear, dispersed operations complicate supply due to white space security issues and the extended distances CSS units must travel. On a depopulated battlefield, therefore, ensuring that CSS units are able to conduct resupply to dispersed units is a severe challenge.

⁶⁷ Ibid., 40.

⁶⁸ Brian Bond, The Pursuit of Victory (New York: Oxford University Press, 1996), 5-6.

Another logistical problem, intensified by nonlinear operations, brought to the forefront in Somalia and Afghanistan, is the necessity to equip soldiers adequately for sustained operations, regardless of the anticipated intensity or duration of the impending fight.⁶⁹ While this problem applies to all types of combat, its importance is elevated during depopulated operations, due to the inability or difficulty of conducting resupply operations. In both examples above, soldiers deployed into the conflict zone with an inadequate supply of water, food, and night vision goggles (NVGs), and specifically, in Afghanistan, without adequate cold-weather survival gear. Without emergency resupply, at the cost of more casualties, either operation likely would have failed.

As the second element of sustainment, maintenance is another area that is critical to mission success. The U.S. Army consistently operates with technologically sophisticated equipment beyond the repair capabilities of the average soldier. This has led to the number of multiple, distinct specialty skill sets to perform basic necessary repairs. Lacking the force structure to put adequate amounts of these specially trained mechanics, with all its dispersed forces, can cause severe problems for Army. Difficulties with recovery and maintenance procedures also arise. Employing the concept of fixing forward worked well on a linear battlefield. Mechanics simply drove to the disabled vehicle and repaired, or recovered, it to the rear. Security, however, when transiting white space will challenge mechanics, and may prohibit a fix it forward policy on a depopulated battlefield.

Medical evacuation on a dispersed battlefield has always been a very serious problem. In the past, armies used conspicuously dressed individuals, or painted vehicles to signify medical evacuation personnel and equipment. Though not always afforded the protection these symbols were supposed to grant, the symbols did serve to lessen casualties among medical evacuation personnel, and assist them in accomplishing their mission. Nearly 100 years ago, Bloch stated

⁶⁹ Mark Bowden, Black Hawk Down (New York: Penguin Books, 1999), 230-231; CNN Headline News, 10 March 2002, 1408 CST.

that in future wars there would be little to no medical care provided for the wounded.⁷⁰ His rationale behind this statement was that the battlefield would be so lethal that it would be impossible to establish hospital tents, and that it would be impossible for medical personnel to extract wounded comrades without either being killed or wounded themselves.

During the Vietnam War, the Army solved most of the problems associated with medical care and evacuation, by using helicopters to evacuate wounded combatants to rear areas staffed by quality medical personnel and equipment. Today, however, with the proliferation of man portable air defense missile systems (MANPADS) and anti-tank weapons, helicopters are extremely vulnerable to ground based fires during medical evacuation missions.⁷¹ The downing of two Army Blackhawk Helicopters in Somali brought this reality to the attention of Army leaders and the nation as a whole.⁷² Coupled with threat that Tactical Ballistic Missiles (TBM) pose against fixed medical sites, the Army's traditional methods of evacuation and care might not succeed on a depopulated battlefield.

In short, CSS operations on a depopulated battlefield will severely test the ability of the IBCT to supply, maintain, and care for its many dispersed units. Doctrine developers and first line leaders alike must develop new tactics and procedures, concerned with transiting white space, base defense, and CSS combat skills. Sustainment is key to the successful prosecution of operations on the depopulated battlefield. The longer a conflict extends in time, the more critical sustainment becomes. Only by adequately addressing sustainment needs, and then addressing future needs, can a force prevent its culmination during dispersed operations.

⁷⁰ Bloch, The Future of War, xli.

⁷¹ 3d Brigade Combat Team, "I.B.C.T.," 11 July 2001, Internet, <http://www.lewis.army.mil/3bde/transform.htm>, accessed 2 October 2001.

⁷² Bowden, Black Hawk Down, 107-108, 139-141.

Problems Related to Moral Factors

Development and maintenance of courage and esprit de corps on a depopulated battlefield is extremely difficult. Soldiers often feel that they are isolated and alone when in combat. Whether true in reality, or just the product of a terrified imagination, is irrelevant. The end effect is that the soldier is paralyzed and unable to continue fighting. This unique type of paralysis is even more prominent among attackers because they often cannot even see the agent that is delivering death and destruction around them. This is due to rates of fire and concealment provided by breach loaded rifled weapons, rifled weapons with magazines, smokeless powder, prone firing, and extensive use of field fortifications.⁷³ Once the individual soldiers lose their wits, moral deterioration of the entire unit, and possibly force, rapidly follows. Operations on the depopulated battlefield will continue to challenge soldiers severely as they attempt to overcome their basic instincts for self-preservation.

Ardant du Picq devoted a great portion of his studies to the moral factors of war. He saw the desire for self-preservation as the most basic instinct of human beings.⁷⁴ He theorized that this instinct for self-preservation served as the primary motivator for soldiers' cowardice during the heat of battle. To du Picq, the basic moral elements of man are unchanged by time.⁷⁵ Therefore, he concluded that man as an individual entity, could only withstand so much terror before he becomes psychologically overwhelmed.⁷⁶ This statement, he claimed, is applicable, whether put in the context of ancient battle or modern warfare. Prescient in his theorizations, du Picq realized that the increased lethality of the battlefield caused dispersion and subsequent isolation fears to increase. He forecasted that increased lethality and isolation would lead to a general failure among fighting units. When individuals no longer received the mutual physical and psychological support of close order combat, they would seek to preserve their own lives.

⁷³ Schneider, *The Theory of the Empty Battlefield*, 41-43.

⁷⁴ Du Picq, *Battle Studies*, 66, 74.

⁷⁵ *Ibid.*, 66.

⁷⁶ *Ibid.*, 132.

Marshall commented that during the Korean War, knowledge of their own dispersed and isolated conditions resulted in increased fears, and led to a freezing of the trigger finger among many infantrymen. This he saw as the main reason why forty-five percent of infantrymen did not, or would not, fire their weapons when involved in a direct firefight.⁷⁷ This statement is contrary to the popular opinion that men isolated out on the perimeters knew they had to fire their weapons just to survive. Actual, or perceived, isolation from their primary support group causes even more fear and unwillingness to fight among soldiers.⁷⁸ This isolation from the primary group leads to a loss of morale, diminished teamwork, and lower combat efficiency. With its extended distances between supporting units, and soldiers, the depopulated battlefield increases isolation and its associated fears.

Marshall also noted that propaganda designed to diminish, or eliminate, the importance of the infantryman as a primary element in mobile warfare, is seriously injurious to the pride and esprit of light infantry forces, and subsequently reduces their combat efficiency.⁷⁹ This statement applies to all soldiers whose combat responsibilities place them directly in harm's way, even more so on a depopulated battlefield. When soldiers are isolated and out of visual contact with their peers, when radio communications fail, or when they receive no further directions from higher, it is then that high esprit de corps within their unit, or branch, becomes critical to sustain initiative and small unit leadership necessary for mission success during dispersed operations.

This is due to rates of fire and concealment provided by breach loaded rifled weapons, rifled weapons with magazines, smokeless powder, prone firing, and extensive use of field fortifications.⁸⁰ Once the individual soldiers lose their wits, moral deterioration of the entire unit, and possibly force, rapidly follows.

⁷⁷ Marshall, Men Against Fire, 9.

⁷⁸ *Ibid.*, 47-48.

⁷⁹ Marshall, Men Against Fire, 17.

⁸⁰ Schneider, The Theory of the Empty Battlefield, 41-43.

Depopulation of the battlefield presents a whole host of problems for modern armies and their commanders. Any one of the problems considered alone: command and control, security and survivability, training, sustainment, and the moral factors of war; can result in mission failure. One single factor, or another, may not cause failure; however, a combination of factors can synergistically lead to mission failure on the battlefield. Knowing which one to ignore without risking mission failure is impossible, therefore, to ensure mission success, an IBCT must acknowledge and prepare for depopulation problems before committing itself on the battlefield. Like other problems in warfare, a proactive approach to overcome obstacles can achieve success, while even the best reactionary measures only minimize the failure. The proactive approach requires the development of solutions that overcome problems before they occur.

Chapter 4

Measures Required to Counter Depopulation's Problems

Nonlinear and dispersed operations on depopulated battlefields of the future pose serious challenges for, and call under scrutiny, the traditional roles and relationships of the various Army branches and military occupational specialties. The preceding chapter discussed historical depopulation problems, identified by leading authors throughout the last two centuries. This chapter discusses specific strategies, equipment, tactics, techniques, and procedures that, if utilized, limit the negative effects of depopulation on IBCT operations. These compensating measures form the baseline to evaluate the IBCT O&O against, in the next chapter. The following discussion is limited solutions needed, in general, to overcome the negative effects of depopulation.

Command and Control in a Depopulated Environment

Two items needed to build a C2 system capable of overcoming potential C2 shortfalls on the depopulated battlefield are an automated communications system, and a set of leaders who are capable of integrating automation technology with their personal skills.

In order for the IBCT to conduct dispersed operations, while achieving unity of effort, "it must develop advantages from the dynamics of networking among small, dispersed forces, a new doctrine, and related strategies and tactics...developed around swarming, whose full implications may mean that AirLand Battle should be superseded by a BattleSwarm doctrine."⁸¹ The danger in conducting such a method of operation is that an adversary may de-link or disconnect the dispersed, networked units that are operating miles apart. The disconnected units then become blind and susceptible to defeat in detail.⁸² A C2 system that facilitates networking activities,

⁸¹ John Aquilla and David F. Ronfeldt, "Preparing for Information-Age Conflict," in In Athena's Camp, ed. John Arquilla and David F. Ronfeldt, with a foreword by Alvin and Heidi Toffler (Sanat Monica, CA: Rand Corp., 1997), 440.

⁸² Aquilla and Ronfeldt, In Athena's Camp, 477.

similar to the Army Battle Command System (ABCS) can form the basis of a successful C2 system. Unlike ABCS, however, it must be robust and redundant to preempt unit isolation. Redundancy requires a combination of different transmission media for the C2 system. Standard protocols for switching from primary mode to other means, instituted in standard operating procedures and regularly practiced by all units, is a procedural requirement. All echelons must proactively work to maintain multiple connectivity routes to prevent the loss of situational awareness.

The primary tool needed, therefore, to mitigate negative depopulation effects on IBCT C2 operations, is a networked and redundant C2 system. This system must employ multiple means for headquarters to communicate with their dispersed units. Multiple means could include HF, VHF, UHF, DLOS relayed microwave, cellular, satellite, or digital communications. Additional low-density communications and reporting equipment, specific to a particular unit's function, such as the RSTA Squadron employing digital video burst communications devices, would further enhance overall IBCT C2 to increase situational awareness dramatically. This system is ineffective, however, without leaders capable of exploiting the potential knowledge delivered by the tools.

Martin Van Creveld argued for the intensive use of company commanders to mitigate the effects of dispersion on fielded forces.⁸³ Writing in 1985, Creveld's solution must now include platoon and squad leaders, within the IBCT, since depopulation trends indicate that those leaders will operate independently from their parent organizations.

Effective formulation and dissemination of commander's intent becomes more important than ever to facilitate C2 on the depopulated battlefield. The IBCT must inculcate in every single member of its command a thorough understanding of commander's intent. Ultimately, all soldiers must understand the intent of the operation, in order to facilitate initiative and mission

⁸³ Van Creveld, Command in War, 144.

accomplishment, during periods of degraded, or failed, automated C2 systems. Continual updates, in an extremely timely manner, must accompany any changes in the intent. First line supervisors must continually check individual soldiers' awareness and understanding of the intent. Such action also facilitates mission accomplishment among small, dispersed teams if a primary leader becomes a casualty or incapacitated.

Effective C2 permits the massing of effects at the decisive time and place, and the maintenance of information dominance, which provides commanders the freedom of action to engage the adversary at a time, and place, of their choosing. Fielding a robust and redundant C2 system, dissemination of the commander's intent, maintaining skilled leaders, and solving information management, and distribution problems, facilitates greater situational understanding through unity of effort. This leads to mission success on the depopulated battlefield.

Security and Survivability on a Depopulated Battlefield

Security and survivability for IBCT units, operating in a dispersed environment, requires several different methods to counteract the negative effects created by the depopulated battlefield. No single method can solve the problem. Rather, the solution comes from the synergy created by using multiple tactics encompassing intelligence support, ADA, fire support, and individual and small unit combat skills.

The IBCT will need to follow Napoleon and Moltke's lead at conducting dispersed operations. Both of them took dispersion one step further by creating units that could hold out and survive until help from an adjacent unit could arrive.⁸⁴ Similarly, durable units are necessary for the IBCT, but on a much smaller, and more greatly dispersed, scale. The IBCT's units must have enough organic lethality to adequately defend themselves, or hold out, until the C2 system can direct other friendly units to their aid.

⁸⁴ Van Crevelde, Command in War, 146; Chandler, The Campaigns of Napoleon, 154-155.

To compliment their ability to fight, and survive, IBCT units also need enhanced “flight skills,” that is, they need intelligence to avoid unfavorable contact. Intelligence systems that monitor white space, and high threat areas, greatly enhance the survivability of IBCT units. UAV systems, and remote sensors, monitoring white space areas before, and during, crossing by IBCT elements, enhance security and survivability. In addition, intelligence support must provide robust coverage of all intelligence disciplines, and provide for niche collection coverage. Niche collection includes, but is not limited to, collection of information gathered by state of the art sensors on the battlefield. Systems like Comanche, Hornet, BAT, and a collection of unique systems that target cellular communications, digital burst transmissions, fiber optic transmissions, and frequency hopping HF and VHF radios increases flight, capabilities, as well as multiplying fight capabilities. Intelligence support conducted in coordination with indirect, or precision delivered, fires further increases the security of CS and CSS units as they transit white space.

The IBCT must ensure the survivability and successful mission accomplishment of CS and CSS units transiting white space. The easiest method, to ensure transiting CS/CSS unit survival entails a combat arms escort for all CS and CSS units that transit white space areas. This, however, leads to a dilution of the combat arms forces available for decisive, or supporting, operations. A potentially more effective solution is to provide escorts only for critical assets, or for assets performing essential missions. Coupled with the intelligence support noted above, this increases the security and survivability of selected CS and CSS forces. Finally, effective training, under the most realistic conditions possible, and the equipping of all units with adequate defensive firepower and effective communications, would dramatically increase CS and CSS survivability.

The next survivability issue relates to air defense and theater ballistic missile defenses (TBMD). IBCT units must have adequate protection to ensure survivability of critical assets and locations. Air Defense Artillery (ADA) systems, particularly MANPADS, can provide this security for dispersed units, especially units dedicated to collecting intelligence information. Air

Force Combat Air Patrols (CAP), in conjunction with mobile and static ADA and TBMD systems can provide area coverage to ensure survival of critical assets dispersed throughout the battlefield. This mix of area and point coverage systems does not eliminate the aerial threat, but will enable the IBCT to operate in a dispersed AO unconstrained by threat air.

A final security and survivability issue, related to the depopulated battlefield, is the use of, and defense against, Precision Guided Munitions (PGMs). PGMs present a problem not usually associated with historical depopulation problems, thus the last chapter did not include a discussion of PGMs. Nonetheless, PGMs have become a significant feature of warfare since OPERATION DESERT STORM. DESERT STORM to a small extent, and OPERATION ENDURING FREEDOM to a larger degree, demonstrated the importance and lethality of PGMs on a depopulated battlefield, characterized by both contiguous and noncontiguous operations. The ability to deliver PGMs, and other long-range indirect fire support, is critical to a force that operates with multiple CS and CSS units continually crossing white space areas. The ability to defend against PGM attacks is equally important. Isolated units, especially critical nodes and bases, are vulnerable to PGM attack or interdiction. To ensure their survival, they must have an organic system capable of, and dedicated to, defeating PGMs.

Providing for the security and survivability of IBCT units on a depopulated battlefield is a serious challenge. The IBCT can protect its soldiers and units, while simultaneously accomplishing its missions, if provided enhanced intelligence support, responsive employment of indirect fires/PGMs, effective defense against indirect fires/PGMs, widespread ADA/TBM coverage, and individual soldier training that develops excellent combat skills.

Training for the Depopulated Battlefield

Problems associated with the depopulated battlefield present a training challenge for units developing programs to counter dispersion's adverse effects. The last chapter identified three

common deficiencies in training programs: unrealistic conditions that do not mimic combat adequately, lack of initiative development, and inadequate leadership development.

The foremost aspect of training, that the IBCT needs to incorporate to overcome the difficulties posed by the depopulated battlefield, is to train under the most realistic conditions possible. Brigadier General James Simmons asserts that unit training nested around the unit's operations, or contingency, plans mandatory.⁸⁵ In addition, the IBCT must conduct realistic training at homestation, not just at the Combat Training Centers (CTCs). Technically and tactically competent leaders, on site to coach, enforce standards, lead after action reviews, and ensure that risk management is properly performed, are needed during all aspects of training. Furthermore, soldiers and units need to train with the actual equipment, under the actual, or as close to actual as possible, terrain and environmental conditions they will face when executing their wartime missions. By implementing these solutions into its training program, the IBCT will ensure that its soldiers are ready for the realities of combat.

Training programs must also emphasize and develop initiative, primarily on the part of its junior leaders. Creveld's argument for the use of company commanders, to mitigate the effects of limited C2 capabilities on dispersion problems, should drive a training strategy that focuses on developing effective junior leaders.⁸⁶ Once they understand the importance of the commander's intent, leaders must receive training designed to encourage initiative, in compliance with the intent, in the absence of direct orders. On a depopulated battlefield, this ensures operational momentum if the C2 system fails. This type of leader development only occurs when the training program allows for minor mistakes. Rather than defaulting to a zero tolerance attitude for

⁸⁵ BG James Simmons, Commander, U.S. Army Safety Center, interviewed by author, hand-written notes, Fort Leavenworth, 1 March 2002. BG Simmons is currently the Commanding General of the United States Army Safety Center at Fort Rucker, Alabama. He has served in various Armor, Infantry, Aviation and Joint assignments during his twenty-eight years of service.

⁸⁶ Van Creveld, Command in War, 132.

mistakes, the IBCT training program must incorporate a professional observer controller team that facilitates learning and development through positive critiques and reinforcement.

To counteract the impact of depopulation on units, and individual soldiers, realistic training must strive to develop unity and discipline that forms teams, rather than groups of individuals.⁸⁷ In adopting such a strategy, the IBCT can gain the synergistic effect of group dynamics. In addition, the IBCT must implement a training program that focuses on small unit collective skills. On a dispersed battlefield, all soldiers are likely to experience direct contact with threat forces. Effective combat skills training, under realistic conditions, prior to deployment ensures a greater likelihood of mission success.

During the Vietnam War, the bonding that developed after twenty months of tough training ensured that the UH-1 pilots of the 1st Cavalry Division would support their brothers in arms on the ground. Reflecting on his Vietnam experiences, LTC Harold Moore truly felt that without this bond, pilots would have failed to take such terrible chances for the ground units, with the result that his battalion would have been butchered, just like Custer's unit.⁸⁸ Similarly, the IBCT should use peacetime training opportunities to mold effective combined arms teams that provide mutual support, in spite of the risk, to their comrades.

The IBCT cannot single-handedly overcome the Army cultural bias for linear operations executed by heavy armored forces. The Army's Institutional Training Base must help the IBCT to conduct depopulated battlefield training. This training should expose soldiers to the complications of dispersed, nonlinear operations during their Initial Entry Training (IET) period. Training should transition from basic concepts to more challenging scenarios as soldiers advance in rank and experience. Institutional training must also target leader development to conduct depopulated operations. Service schools must implement dedicated blocks of instruction during

⁸⁷ Du Picq, *Battle Studies*, 141-144.

⁸⁸ Moore and Galloway, *We Were Soldiers Once and Young*, 124. A reference to "Custer's last stand" at the Little Big Horn battle.

senior NCO training, basic and advanced officer training, and even at the Command and General Staff College and the Army War College. In addition, a detailed program for all senior officers, with pending assignments to the IBCT, is mandatory. In summation, the institutional training base must train all ranks, especially those pending IBCT assignments, for depopulated operations. Following that initial training, the IBCT must ensure that its organic training programs continue the learning process, begun by the school system, for all soldiers during their assignments.

Lastly, the IBCT must enforce a stringent evaluation program, to ensure that soldiers experience realistic imitations of the depopulated environment they might encounter in the future, and that training programs promote initiative among junior leaders. Particular emphasis on evaluating the IBCT's ability to conduct operations effectively in a fifty-kilometer by fifty-kilometer area of operations is necessary before any contingency operations that might require such operations to become a reality. Furthermore, the Army's Institutional Training Base must support the IBCTs through the development, and implementation, of training programs that expose soldiers to the problems posed by a depopulated battlefield.

Sustaining Forces on the Depopulated Battlefield

The elements of sustainment included in the previous chapter were logistics, maintenance, and medical care, with particular emphasis on medical evacuation. Though the problems identified seem monumental, dedication and a change of mindset facilitate the lessening, or removal, of their adverse effects on IBCT operations. Nonlinear and dispersed operations on the depopulated battlefields of the future pose serious challenges and call under scrutiny the traditional roles and relationships of logisticians to the combat forces they support.⁸⁹ CSS soldiers, defending a supply convoy or setting up secure operations on a key piece of terrain, may

⁸⁹ Steve Lewis, "Che Guevara and Guerilla Warfare: Training for Today's Nonlinear Battlefields," *Military Review* 81:5 (September/October 2001): 98.

become more critical to overall mission success than the combat soldiers attempting to engage a widely dispersed and extremely elusive foe.

This likelihood requires a change in thinking for logistical planners, and the soldiers who conduct service and support operations. They can no longer see themselves as conveniently protected behind a linear front composed of robust combat arms units. New Tactics, Techniques, and Procedures (TTPs) that emphasize survival skills, land navigation abilities, and detailed logistical preparation of the battlefield are required during homestation operations and training. Detailed map reconnaissance using computer automation systems, that provide a route, or area, reconnaissance, by “driving” or “flying” through a three dimensional depiction facilitate the logisticians’ understanding of the battlefield terrain that they are about to deploy to. Once deployed, initial convoy operations need to be robust and provided with heavy security. Support personnel must conduct every unit movement as a combat patrol. CS and CSS personnel must understand that there are no administrative movements through white space on the depopulated battlefield. Strong leadership oversight is necessary to ensure that all convoy personnel quickly master the requisite knowledge of the terrain needed to conduct safe operations. Smaller, and more dispersed, supply convoys will become the norm. As CS/CSS soldiers’ combat skills increase, this facilitates conducting resupply operations during darkness or periods of limited visibility. The likelihood of hostile combatants, and sympathetic noncombatants, in close enough proximity to report on CSS operational specifics necessitates limited visibility operations.⁹⁰

IBCT units must provide the Brigade Support Battalion (BSB) with an extremely accurate and timely CSS status. This requirement currently exists for legacy forces, but not to the standard needed for the IBCT. Experience in recent deployment exercises, whether contingency or training, attests to the high levels of supply wastage that exists within the current CSS system. On a depopulated, nonlinear battlefield, bulk supply ordering causes CSS soldiers to waste time

⁹⁰ Steve Lewis, “Che Guevara and Guerilla Warfare: Training for Today’s Nonlinear Battlefields,” *Military Review* 81:5 (September/October 2001): 98.

and energy, and also places them in unnecessary danger as they traverse areas possibly occupied by enemy forces.⁹¹ To eradicate this shortcoming, the Army must field a comprehensive, automated, user friendly sustainment support system. This system must allow supported units to continually maintain oversight on available quantities of all classes of supply, facilitate timely reporting of shortfalls, and have the ability to request increased on hand levels prior to projected high consumption operations. The CSS system must provide the issuing unit with total force oversight to facilitate, as needed, variably timed supply deliveries rather than the current standardized daily delivery methods. On a dispersed battlefield, this prevents an adversary from discerning any particular operational, or tactical, patterns of action and limits the threat force's ability to target CSS operations.

FM 3-0 states that smaller, lighter, more mobile, and more lethal forces sustained by efficient, distribution based CSS systems lend themselves to simultaneous operations against multiple decisive points.⁹² Therefore, mobility is critical to mission success for CSS elements supporting simultaneous operations on a depopulated battlefield. Mobility for CSS units requires not only highly mobile transportation and adequate weapons to perform self protection; but also top down leadership oversight that ensures that all soldiers are properly trained, equipped with several days supply of food and water, carry supplies to perform vehicle maintenance, and can perform first echelon medical care. Additionally, each element that serves as part of a small mobile convoy must have effective communications and signaling equipment to maintain contact with friendly units.⁹³ Finally, CS and CSS units must have the continual ability to update their intelligence picture as they transit white space. This requires a dedicated and robust intelligence system (i.e., trained personnel, automation equipment, and procedures) that can communicate with all vehicles

⁹¹ Steve Lewis, "Che Guevara and Guerilla Warfare: Training for Today's Nonlinear Battlefields," *Military Review* 81:5 (September/October 2001): 99.

⁹² Department of the Army, *FM 3-0*, 5-11.

⁹³ Steve Lewis, "Che Guevara and Guerilla Warfare: Training for Today's Nonlinear Battlefields," *Military Review* 81:5 (September/October 2001): 98.

conducting dispersed sustainment operations. Implementation of all these measures greatly increases the likelihood of mission success during the conduct of sustainment operations.

Effective maintenance support to IBCT operations requires a significant emphasis on forward maintenance techniques and procedures. It requires the adoption of a simplified maintenance system that reduces diagnostic time requirements, minimizes the volume of unique repair parts (to reduce the size of required inventories), and standardizes components (to reduce special tools requirements). Similar to other CSS personnel, maintenance personnel also need to enhance their defensive skills and land navigation abilities. Adoption of these methods ensures that the IBCT's operational readiness rates remain high and facilitates the generation of maximum combat power.

As shown in Chapter 3, medical evacuation has always been a serious problem on the depopulated battlefield. The mass proliferation of air defense, antitank, and high caliber machineguns may have effectively ended the helicopter's ability to fly into hot landing zones and retrieve wounded soldiers. The IBCT, therefore, needs an extremely survivable, and responsive, medical care and evacuation system to ensure that soldiers, with life threatening injuries, or wounds, do not die unnecessarily. This involves the development of a comprehensive program that places primary emphasis on forward, immediate medical care for wounded, or injured, soldiers, and requires field surgeons, and medics with greater capabilities than they currently possess, deployed forward on the battlefield. Additionally, medical personnel must have a responsive, and survivable, vehicular platform that can get them quickly to casualties, and then evacuate the casualties to medical treatment facilities. Effective evacuation methods must ensure, not only the care of the casualty, but also the survival of the medical care providers and the evacuation vehicles they are using.

Once evacuated, IBCT casualties must have dedicated Level III health support. Effective medical care is extremely important to all soldiers. Though often seen as a benefit to the wounded, it is a greater benefit to the rest of the force. Soldiers fight harder and more audaciously if they know that there is a sound medical system that will retrieve, and care for them

when they are injured. Other psychological benefits come from the comfort soldiers feel knowing that their wounded comrades are receiving exceptional medical care. Therefore, the IBCT must receive the best evacuation and medical care system it possibly can.

The IBCT sustainment system, in summary, must adequately resupply, maintain, and care for its soldiers while conducting dispersed operations on the depopulated battlefield. Extended distances and transiting white space, however, strain the sustainment system. Adoption of the solutions identified in this chapter can permit the IBCT to mitigate, or eliminate, the identified problems associated with sustaining a force on the depopulated battlefield.

Moral Factors Affecting Operations on the Depopulated Battlefield

If not addressed, moral factors, by themselves, have the potential to destroy the IBCT's capability to execute its mission. Soldiers fight for their comrades when cohesion and esprit exists within their units.⁹⁴ When soldiers are isolated from the main group, their performance drops off.⁹⁵ Cohesion serves as a force multiplier that prevents this drop off in performance.⁹⁶ While the aspects of training, mentioned in section three of this chapter, figure prominently in developing and maintaining courage, unity, and esprit de corps among soldiers and units, other factors have an impact.

The IBCTs must develop and maintain the courage, unity, and esprit de corps of its soldiers through a program that focuses on effective team building. Starting first with squad level bonding, and then progressing towards company and higher levels of bonding, the IBCT must serve as a surrogate family for its soldiers. To further counteract depopulation's adverse effects on the moral factors that affect a unit's proficiency, the IBCT must establish and continually refine a program dedicated to raise the morale, pride, and confidence of all its soldiers in their respective branches and combat assignments.

⁹⁴ Nora K. Stewart, Mates and Muchachos (New York: Brassey's, Inc., 1991), 11.

⁹⁵ *Ibdi.*, 14.

⁹⁶ *Ibid.*, page xii.

Du Picq emphasized the human element throughout his writings. He saw the development of unity and mutual supervision as the keys to overcoming man's desire for self-preservation.⁹⁷ By uniting soldiers as part of a team, they transcend their own individuality. They work for the benefit of the team, and less for themselves. In doing so, they overcome their self-absorption, and team synergy becomes a dynamic combat multiplier. By combining team building with an effective training program, that teaches soldiers to overcome their fears and operate effectively on the battlefield, the IBCT can solve the problems related to isolation induced self-preservation fears. Humans remain the essential element in warfare. Strong efforts to strengthen human capabilities within the IBCT generate the greatest boost to IBCT effectiveness.

The problems associated with conducting operations on the depopulated battlefield are significant in scope and quantity because the depopulated battlefield presents a whole host of problems, new or intensified, for future combatants. How well the IBCT addresses these problems, before the start of hostilities, will directly affect the amount of mission success it experiences. The solutions, offered in this chapter, facilitate problem mitigation, or removal, and the IBCT must adopt them, or develop similar solutions, to overcome the adverse effects, of the depopulated battlefield, on dispersed operations. How well the IBCT O&O addresses these problems and solutions is the topic of the next chapter.

⁹⁷ Du Picq, Battle Studies, 126-128.

Chapter 5

IBCT Capabilities versus Depopulation Requirements

As a full spectrum force, the IBCT will perform a variety of missions in a multitude of physical conditions. While mid-intensity stability operations and support operations are the most likely operations anticipated, resulting in a force most suitable for those missions, the IBCT must have the ability to fight and win in all other mission type scenarios--especially high intensity conflict. To operate in and control a fifty-kilometer by fifty-kilometer AO, the IBCT must incorporate solutions identified in Chapter 4. While there is currently little to base a prediction of the IBCT's ability to overcome issues generated by increased depopulation on, but there is one critical document that sheds light on the most likely outcome. That document is the IBCT O&O.

The O&O is the base document for how IBCTs will organize, train, equip, deploy, and fight. Therefore, the IBCT O&O serves as a measurement gauge to determine how well the IBCT has applied the solutions identified in Chapter 4 to the problems identified in Chapter 3. Since the O&O's publication, the IBCT program has undergone some modifications. The O&O Analysis Annex and various Internet documents served to update the O&O, thus adding the latest knowledge to the IBCT O&O itself.

Requirements Fulfilled

The baseline requirement to enable the IBCT to operate successfully on the depopulated battlefield is an acknowledgement that dispersed operations, in a nonlinear environment, are a primary mission set. Direct mental and physical activity, by IBCT leaders, to set conditions for this mission's success, will not occur unless it is an acknowledged mission. The IBCT O&O does this and asserts that advances in information gathering, processing, and dissemination, in conjunction with rapid mobility, will ensure that the IBCT is capable of routinely operating on a

nonlinear, dispersed battlefield.⁹⁸ This acknowledgement and the use of the phrase “routinely operate” clearly indicate that IBCT concept developers are fully cognizant of the likelihood that the IBCT will conduct operations on a depopulated battlefield.

The IBCT has a robust and redundant command and control system that should adequately allow it to maintain contact with, and direct, its many small and dispersed units.⁹⁹ The Army Battle Command System is the primary command and control system for the IBCT. FM communications are the secondary means of control. Other means of C2 include digital radios, cellular/satellite telephones, published orders, and ground couriers.

The IBCT O&O Analysis Annex states that IBCT security and survivability depends upon advanced situational awareness and understanding. As a medium weight force, it is imperative, that the IBCT fight in a different manner than Army heavy forces.¹⁰⁰ Achieving advanced situational understanding facilitates the IBCT’s ability to focus combat power at the decisive time and place of the Commander’s choosing. The O&O also recognizes situational understanding as the critical component that enables all IBCT units to conduct operations while mitigating risk. The utilization of a force wide internetted C4ISR system facilitates the precise application of fires onto specific targets to decrease the vulnerability of dispersed units. This should also limit collateral damage to noncombatants, infrastructure, and terrain.¹⁰¹

A unique integration of combined arms provides the mutual support necessary for the survival of the IBCT’s widely dispersed small units on the depopulated battlefield.

The IBCT design includes embedded unit-based capabilities – military intelligence, signal, engineer, anti-tank, artillery, and CSS elements that have been tailored specifically to the unique requirements of the unit’s mission set. This approach also provides the organizational basis and organic relationships necessary for the Brigade to achieve a higher level of training readiness for its mission set. The organic structure further maximizes the human potential within the Brigade, strengthening unit cohesion and providing an organizational basis for developing soldiers, leaders, and staffs that can perform multiple functions. ...Operational analysis for the IBCT indicates that, within the environment of complex/urban terrain, force effectiveness is best

⁹⁸ IBCT O&O, 24.

⁹⁹ Ibid., 50.

¹⁰⁰ IBCT O&O Analysis Annex, 3.

¹⁰¹ IBCT O&O, 14-15.

enhanced and the requirement for mutual support is best satisfied through the internetted combined arms to company team level. ...The Interim Brigade Combat Team achieves tactical decision by means of combined arms at the company level focused on dismounted assault.¹⁰²

The IBCT's dismounted assaults receive support from vehicular fires, indirect fires, and mobility platforms. This combination of assault and support increases the survivability of both the soldiers conducting the attack and the firing platforms that remain out of range of most anti-tank weapons. On a depopulated battlefield, this depends on the judicious selection of terrain for supporting fires to use, and the ability to prevent infiltrators from closing with the vehicles. The O&O acknowledges this possibility, and offers, as a solution that the commander must quickly finish separate actions to regain the synergy between assaulting and supporting fires.¹⁰³

The IBCT, and the institutional school system, have combined to develop several training programs that uniquely support IBCT operations. Soldiers designated for assignment to an IBCT encounter IBCT specific training while assigned, temporary duty, to their branch schools. TRADOC established a training program at each branch school to support IBCT manning during fiscal year 2000. Soldiers exposed to the IBCT concept then receive basic education covering IBCT equipment and operations.

After departing the training base, soldiers receive additional training on the IBCT when they first arrive at their designated units. The gaining unit provides unique programs tailored for soldiers, NCOs, and Officers. In addition, the IBCT has developed a senior leaders' course that is not only presented to all newly arrived senior leaders, but is also presented at the Pre-Command Course for other senior Army leaders. This course discusses tactical, as well as conceptual, components of IBCT operations.¹⁰⁴

The IBCT is fully capable of expansion through force augmentation. It has the ability to accept, and subsequently command and control, units that can compensate for security and

¹⁰² IBCT O&O, 13-14.

¹⁰³ Ibid., 34.

¹⁰⁴ "IBCT Senior Leader Course," 26 April 01, Internet, <http://www.almc.army.mil/TLLDD/ALMC-SO/IBCT%20SLC1/ibctslc1.htm> accessed 10 October 2001.

survivability shortfalls.¹⁰⁵ For example, the IBCT significantly increases its likelihood of mission success, in an environment with a heavy threat of aviation and infiltration attacks, through military police and air defense augmentation.

The IBCT has exceptional tactical mobility. The O&O asserts this will “enable it to conduct essential RSTA operations, secure lines of communications in unsecured or uncertain conditions, and to conduct non-contiguous platoon, company, and battalion fights in urban and complex terrain.”¹⁰⁶ Exceptional mobility by itself will not guarantee success. Nevertheless, mobility is an essential component for the IBCT’s success on the depopulated battlefield. The O&O also addresses the importance of mobility to facilitate extrication from a fight.¹⁰⁷ This capability is important to the IBCT if its C4ISR system fails to provide adequate situational knowledge and dispersed units of the brigade find themselves in a firepower overmatch with an adversary. The IBCT appears to have more than an adequate amount, whether advancing or withdrawing, of mobility.

The RSTA Squadron organic to the IBCT greatly facilitates its ability to gain situational understanding. As the core component of the IBCT’s ISR system, the RSTA squadron has the ability to perform reconnaissance along nine different routes simultaneously, or conduct detailed surveillance of eighteen different areas on a continual basis. This robust intelligence gathering capability provides the IBCT with visual coverage of multiple areas throughout its AO. In addition to its Interim Armored Vehicles (IAV) and scouts, the RSTA Squadron also incorporates a ground sensor platoon, an NBC Reconnaissance Platoon, a HUMINT/CI soldier on every scout vehicle, and UAVs.¹⁰⁸ This added capability, compared to Legacy Forces, facilitates greater coverage of white space, and provides a HUMINT interface with the local populace. Significant future enhancements include a more robust sensor suite. Nonetheless, as it currently exists, the

¹⁰⁵ IBCT O&O, 8.

¹⁰⁶ Ibid., 14.

¹⁰⁷ Ibid., 34.

¹⁰⁸ Ibid., 21.

RSTA Squadron provides extraordinary capability. The RSTA capability greatly enhances the IBCT's situational understanding, which enables it to effectively command and control subordinate units and provide for their security and survivability on a dispersed battlefield.

The IBCT O&O also successfully addresses a variety of maintenance and logistics requirements needed to support operations on a depopulated battlefield. One important concept is to employ a common vehicle platform to reduce maintenance and sustainment requirements.¹⁰⁹ Although the vehicular systems themselves do not employ entire modular replacement maintenance procedures, the use of a common chassis should greatly decrease maintenance requirements. This, in turn, reduces the requirement for specialized mechanics, and facilitates a more aggressive forward repair maintenance program. In addition, the use of smaller combat systems, such as the IAV, facilitates rapid recovery of damaged, destroyed, or inoperable vehicle systems from the battlefield. The use of common vehicle platforms also facilitates a reduction in the logistical footprint needed to sustain the force. This reduction leads to a diminishment in the number of vulnerable CS and CSS targets. Through the use of centralized management, and a fix it forward policy, the IBCT can adequately maintain its vehicular systems, throughout a dispersed battlefield, as long as it receives timely resupply.

Resupply operations use an execution focused, throughput distribution based system.¹¹⁰ Contrary to the system used by most other Army units, supply distribution occurs on an as needed basis rather than through a daily push package. There are no designated customers under the IBCT concept of support. Rather, the Support Operations Officer (SPO) prioritizes unit sustainment requirements.¹¹¹ This minimizes the frequency that CSS units face the hazards of

¹⁰⁹ IBCT O&O, 8.

¹¹⁰ Ibid., 31.

¹¹¹ John R. Bretthorst, "Interim Brigade Combat Team (IBCT) and Force XXI Concepts of Support," 25 October 2001, Internet, <http://www.quartermaster.army.mil/ltd/clc3%20papers%202/ibctforcexxi.html>, accessed 29 November 2001.

transiting white space areas, and significantly addresses, though not totally, problems related to CSS security and survivability noted in Chapters 3 and 4.

The IBCT manages its logistical requirements with automation technology, human interface, and human oversight. Total asset visibility, achieved using diagnostic and prognostic systems, anticipates needs, and streamlines distribution.¹¹² The IBCT BSB, using CSS C2 systems to continuously plan and maintain CSS situational understanding, employs intra-theater airlift and locally available resources and contractors to support operations across the distributed battlefield.¹¹³ The ultimate goal, ensuring that the logistical and battle rhythms stay synchronized, is achieved through the use of distribution based, centrally managed CSS support.

The IBCT O&O also successfully addresses the moral issues generated by depopulation, specifically, unit cohesion, esprit de corps, and battlefield isolation. To increase cohesion and esprit de corps, the IBCT employs team-building programs. Most of these programs center on the habitual relationships established through the IBCT's unique unit based capabilities structure discussed previously. An example is the integration of combat arms soldiers and Counter-Intelligence (CI) and Human-Intelligence (HUMINT) soldiers in the RSTA Squadron.¹¹⁴ The IBCT not only reaps the benefits of dramatically increased, in this case, CI/HUMINT support, but it also establishes close personal ties between its combat arms soldiers and its non-combat arms soldiers.

The IBCT uses intra-squad radios to combat the fears of isolation and to provide mutual support, both physical and psychological, to its soldiers.¹¹⁵ These radios ensure that isolated units and soldiers remain in contact with friendly units. This may appear insignificant to the casual

¹¹² IBCT O&O, 51.

¹¹³ Ibid., 31.

¹¹⁴ Ibid., 38.

¹¹⁵ Ibid., 35.

observer, but as du Picq and Marshall note, such contact reaps huge benefits among soldiers on a depopulated battlefield, and helps reduce isolation induced self-preservation fears.¹¹⁶

Potential Shortfalls

While the IBCT has adequately addressed many of the problems associated with the depopulated battlefield, other areas represent potential shortfalls. These shortfalls range in their ability to impact IBCT operations from minor inconveniences that will degrade efficiency, to major shortcomings, that may lead to mission failure. Army leadership involved with the IBCT must address these issues before the IBCT's first operational deployment.

The IBCT is dependent upon its higher Headquarters' ability to serve as a C2 connectivity link. When the IBCT deploys, a higher headquarters must also deploy in support of IBCT operations.¹¹⁷ This is required because the IBCT does not have reach capability within its organic force structure.¹¹⁸ This is potentially the greatest IBCT shortfall because it directly affects the IBCT's ability to acquire and maintain situational understanding.

The IBCT O&O Annex states that the IBCT compensates for its lack of lethality and armor protection through the application of advanced situational understanding. A robust C4ISR architecture gathers, and processes, information to develop this understanding. The architecture provides the risk mitigation necessary for IBCT mission success.¹¹⁹ The IBCT can not develop its high level of situational understanding until dispersed in its AO. If the higher headquarters is unable to deploy and establish its own C4I network prior to the IBCT's arrival, then the IBCT's initial deployment and employment options are severely limited since its situational awareness lacks complete AO coverage. This may cause the IBCT to revert to linear, contiguous operations,

¹¹⁶ Du Picq, Battle Studies, 66, 74; Marshall, Men Against Fire, 47-48.

¹¹⁷ IBCT O&O, 8.

¹¹⁸ Ibid., 12.

¹¹⁹ IBCT O&O Analysis Annex, J2.

thus negating the IBCT's strengths such as speed and ability to synchronize actions over a dispersed battlefield.

Lack of adequate artillery support is the next most severe shortfall for the IBCT. Numerous analytical studies have identified this as a major weakness.¹²⁰ Of particular concern is the IBCT's vulnerability to indirect fires. A counter fire unit, composed of tube and rocket artillery mounted on an IAV carrier, a capability not currently available for IBCT operations, is the optimal solution to address this weakness. Currently, the IBCT relies on towed 155mm howitzers. These systems' low rate of fire, limited range, and limited mobility severely challenge the IBCT's ability to deliver effective counter fires throughout its fifty kilometer by fifty kilometer AO.

The IBCT has no organic ADA units. Instead, it relies on organic small arms fire, short-range crew served weapons, and Air Force CAP.¹²¹ If the Air Force is unable to provide air superiority above the IBCT's dispersed units, threat forces may exploit this vulnerability. In such an event, it is unlikely that the IBCT's small arms and crew served weapons fire can adequately defend the brigade.

The IBCT lacks two organizations that routinely demonstrate an ability to conduct independent operations over dispersed distances, military police and aviation units.¹²² This omission limits the IBCT's ability to conduct route security and white space coverage on a dispersed battlefield. The RSTA Squadron must compensate for this shortfall, and this may degrade its mission to provide situational understanding in critical areas of the battlefield. The requirement to provide strategic responsiveness led to the decision to exclude these forces. Given the great utility that helicopters and military police have demonstrated in the past, especially during stability operations and support operations, their non-inclusion in the IBCT's organization is questionable. Currently, the plan is to augment the IBCT as required by the operational

¹²⁰ IBCT O&O, 22.

¹²¹ Ibid., 16.

¹²² IBCT O&O, 23.

environment. Unfortunately, a complete understanding of that environment will likely not occur until after initial deployments. If the environment changes to indicate a need for those units, post-deployment, it will be an immediate need.

There are no intelligence units in the IBCT specifically dedicated to unique gap, niche collection on a depopulated battlefield.¹²³ The IBCT concept development team did not tie together the new ubiquitous signals intelligence grid. New systems such as Comanche, the Hornet Minefield, and BAT will provide a plethora of information and intelligence that is valuable to the commander in making decisions. The IBCT, however, does not have the capability to collect and then analyze this unique intelligence. In addition, intelligence forces of the IBCT tend to focus in one direction, to the “front,” versus looking in the 360-degree manner indicative of nonlinear, noncontiguous operations. This is obviously a cultural, and organizational, byproduct of the Cold War era, in which U.S. forces planned to fight in a linear manner against a massive, conventional force, which also operated in a linear manner.

Reliance on aerial delivered PGMs can overcome the artillery shortfall; however, the IBCT has an extremely limited ability to employ PGMs. Due to the proliferation of inexpensive, easy to hide, and hard to target anti-aircraft weaponry; close air support (CAS) and battlefield air interdiction (BAI) missions will not routinely fly within the effective coverage of the threat’s low to medium altitude air defense weapons. Acquisition of targets from higher altitudes requires good coordination between aircrews and the soldiers that initially identified the targets. The Army trains very few soldiers to perform this mission. Fewer still are in the IBCT since the O&O does not call for soldiers trained to coordinate CAS. Without augmentation from specially trained Army personnel, or attachment of Air Force CCT personnel, it is unlikely that the IBCT will achieve the required effects from CAS to enable mission success.

¹²³ IBCT O&O, 50.

The O&O asserts that the IBCT can sustain itself for 180 days.¹²⁴ This statement misleads the reader to assume that the IBCT accomplishes this mission by itself. Sustainment for 180 days, in fact, requires significant assistance from higher headquarters and its associated support elements. This assistance requires reach capability provided through the higher headquarters.¹²⁵ The IBCT cannot sustain its operations without this capability. The 180-day benchmark is stated early in the O&O, but it later states that the IBCT can sustain itself for a maximum of seventy-two hours of combat operations.¹²⁶ The bottom line is that the IBCT is unable to sustain itself for longer than three days of combat. During deployments that commit the IBCT to combat operations immediately after arriving in the AO, a large quantity of sustainment stocks must accompany the deploying brigade. In addition, the BSB is not capable of long term sustainment during extended operations and, therefore, requires augmentation from the Combat Service Support Company (CSSC) or contractors. These additional stocks and augmentation forces not only increase the logistical footprint of the IBCT, but they also require more lift assets and may extend deployment beyond the IBCT's ninety-six hour window.

In conjunction with the seventy-two hour limit on supply, a ninety-six hour requirement exists for maintenance repair parts.¹²⁷ This further limits the Brigade's ability to conduct dispersed operations after three or four days. Extended IBCT operations are totally dependent on resupply; logistics failures seriously degrade the likelihood of mission success.

The IBCT O&O hardly addresses another element of sustainment, medical care. The O&O contains less than sixty words dealing with medical support and combat evacuation.¹²⁸ This indicates a lack of priority in this area. Safe transit of white space areas for medical personnel, as well as all CSS personnel, requires detailed planning, adequate defensive fires, and CSS soldiers

¹²⁴ Ibid., 8.

¹²⁵ IBCT O&O, 9.

¹²⁶ Ibid., 51.

¹²⁷ Ibid., 53.

¹²⁸ Ibid., 54.

with effective combat skills. The IBCT must address these complex issues, related to care and evacuation of casualties, and force sustainment, on the depopulated battlefield, if it expects to meet with mission success.

Summary

The IBCT is an extremely capable force designed to conduct a variety of missions. Operating in a low threat environment, the IBCT will achieve mission success employing its organic capabilities. The IBCT, however, must receive augmentation as the threat level rises. The threat may be specific in nature, such as an indirect artillery threat or a rear area security risk, or nonspecific, such as an MTW. This augmentation will increase the IBCT's capabilities but will place greater demands on its C2 and sustainment systems. It will also increase the unit's footprint in theater. Balancing these requirements and risks on the depopulated battlefield will severely test the IBCT's feasibility as a rapid reaction force.

When deployed as part of a larger organization (division or corps) in an MTW, the IBCT may experience "shortfalls in its capabilities for fires/effects, aviation operations, counter-mobility, command and control, communications, and force protection."¹²⁹ The IBCT will not perform adequately as part of the overall force without significant force augmentation. While the IBCT has the capability to command and control augmented forces, the augmenting forces bring sustainment problems with them, and violate the IBCT's maintenance program principles that call for common vehicular platforms throughout the brigade.¹³⁰ This causes the number of CS and CSS units, personnel, and base camps to rise in quantity. Subsequently, this creates an increase in the security and survivability vulnerabilities of the IBCT.

¹²⁹ IBCT O&O, 12.

¹³⁰ Ibid., 13.

Chapter 6

Conclusions and Recommendations

Conclusions

The Interim Brigade Combat Team (IBCT) is truly a unique organization. The U.S. Army has never before created such a unit that balances advanced C4ISR, exceptional mobility, lethality, survivability, and sustainment capabilities against rapid strategic deployment considerations. In spite of all its unit-based capabilities, the IBCT still encounters problems magnified in importance by operating on a depopulated battlefield. The principle problems relate to the lack of initial situational understanding, less than optimal supporting fires, and an austere logistics system. Security, especially while transiting white space, poses additional problems.

Though the IBCT still has numerous problems to address, it has solved or adequately addressed most of the major problems identified in Chapter 3. The IBCT's employment of ABCS and other C2 systems in an integrated, networked manner provides the situational understanding necessary to facilitate the commander's decision making process. The redundancy of the proposed network should ensure continued command and control if any one system fails. This C2 system allows the brigade to control its organic units dispersed throughout its fifty-kilometer by fifty-kilometer AO. The RSTA Squadron provides the necessary input of information and intelligence to maintain the commander and staff's situational understanding, and the internettted network then facilitates the transmission of this understanding and any mission changes to all the IBCT's units. The C2 system ensures unity of effort and achieves synergistic results during noncontiguous operations.

Training and organizational structure address moral issues. The training program for soldiers and officers ensures initiative in the absence of orders, as long as all echelons receive the commander's intent. Habitual relationships among the IBCT's organic units facilitates the

strengthening of morale, cohesion, and esprit de corps necessary to counterbalance the adverse moral factors of war on the depopulated battlefield.

The IBCT is optimized for medium intensity stability operations and support operations. High intensity combat, or an environment in which an adversary employs specific threat systems beyond the IBCT's organic capability to effectively counter, requires augmentation of the IBCT. In a widely dispersed AO, these augmentation forces will strain, or possibly overwhelm, the IBCT's C2 and logistical systems. They also increase the IBCT's logistical footprint and present themselves as potential targets to an adversary. In addition, the lack of a habitual relationship may degrade the effectiveness and synergy of IBCT operations that are highly dependent on gaining and maintaining advanced situational awareness across the force.¹³¹

With only three days sustainment capability, the IBCT is unable to conduct dispersed operations without resupply from higher CSS units. Though its execution focused, throughput distribution based system ensures the efficient delivery of on hand supplies, transiting white space is a challenge. CSS soldiers, and units, must provide for their base and route security on a nonlinear battlefield. This requires the IBCT to place greater emphasis on developing and sustaining the combat survival skills of its CSS forces.

Security and survivability against indirect artillery and aviation fires presents a serious dilemma for the IBCT. As part of its balancing requirement, the necessity of rapid deployment took precedence over the inclusion of air defense and mobile, long-range artillery units. Currently, the IBCT will receive augmentation if called on to operate in a more threatening environment than it can organically handle.

In summation, the IBCT O&O has adequately addressed the depopulation problems associated with command and control, unity of effort, the maintenance and distribution of

¹³¹ For example, augmentation with a Legacy Force Armor Company provides the IBCT with greatly enhanced lethality, but problems arise when the IBCT is unable to keep the tankers up to date on changes to orders and the battlefield environment.

situational awareness, and training. Problems associated with the moral factors of war, and security and survivability for CS and CSS forces, call for minor modifications of the O&O. Long-term force sustainment and protection from indirect artillery and aviation fires also require improvement. The IBCT as it is currently organized can accomplish most of its mission sets. Several courses of action (COA) exist that can correct these problems and optimize the IBCT's performance.

Options to Overcome Identified Problems

The easiest solution, and the most dangerous, is to accept risk for the IBCT by maintaining its current force structure and missions, requesting and accepting augmentation on a mission by mission basis. This is also the most convenient solution to implement because it is the currently planned COA. It requires no changes in personnel or equipment levels, and no increase in resource expenditure. There are two significant, potentially negative, aspects to this COA. First, the intelligence community supporting the IBCT could incorrectly assess the threat situation. It would not be the first, or last, time this has ever happened to U.S. forces. The possibility of an incomplete intelligence assessment is likely. Second, information about the IBCT is widely available through open source media, the Internet in particular. A wise adversary may have years to study the IBCT's organization and capabilities in order to design a specific force and strategy to defeat it in detail. In either case, the IBCT could find itself in a firepower overmatch with the result that part, or all, of its force could sustain serious casualties, and possibly defeat. Risk associated with this COA is high.

A second COA requires a modification of the IBCT's strategic deployment standard of ninety-six hours. This permits the IBCT to get a more robust organic force structure. Additional forces include those identified as likely augmentation forces by the O&O. The addition of ADA, MP, counter fire artillery, and attack aviation units significantly enhances IBCT capabilities and compensates for identified shortfalls. The negative side of adding forces is that the deployment

timeline is extended, possibly allowing an adversary to accomplish his initial actions and present his “victory” as a fait accompli to the world body. Another drawback is that any increase in combat or CS forces requires a corresponding increase in CSS forces, subsequently increasing the logistical footprint and CSS security vulnerabilities. This COA presents moderate risk to IBCT operations.

A third COA requires dedicated Army support to IBCT augmentation. The Army would create deployable, digitized units with the mission to augment the IBCT. Habitual relationships are therefore established and exercised during peacetime training. This facilitates synergistic operations during an augmented IBCT deployment. It also pre-identifies additional IBCT CSS requirements. The biggest drawback to this COA is that it requires a large Army resource investment. Given the current atmosphere towards Army Transformation, however, there may be no better time than the present to implement this COA. Risk for this COA, therefore, is low.

Recommendations

The Army should select and implement COA 3 to overcome shortfalls identified in this monograph. Of three COAs discussed, COA 3 has the minimal risk while offering the maximum gain. In addition, due to the proliferation of high technology weapon systems and man portable air defense and anti-tank weapons, the IBCT frequently will need augmentation during deployments. Given the current threat environment around the world, it is highly probable that augmentation will be the rule; IBCT operations with solely organic assets will be the exception.

To succeed, the IBCT depends on its ability to acquire, maintain, and distribute situational understanding across the brigade. This is its primary method of ensuring the survival of its lightly armed and armored force. This requires the networking of all IBCT units into a robust and automated C4ISR system. Augmentation forces must have the same digital capability in order to plug in, thus ensuring common understanding across the IBCT.

Units identified as IBCT augmentation forces can focus their training efforts on supporting IBCT mission sets. The development of a training program that incorporates frequent training with IBCT units develops the habitual relationships necessary to counterbalance some of the adverse impacts of moral factors on the depopulated battlefield. Without this prior training, and the establishment of these habitual relationships, the IBCT may find itself more occupied with trying to adapt its organizational structure to integrate and control newly added assets, than employing them. This leads to further friction and an overall reduction in combat effectiveness. To counter this likely outcome, each IBCT must routinely train, and deploy, with the same clearly identified force multipliers.

Sustainment issues generated by augmentation forces, surfaced during mutual training, are solvable before deployment. This ensures that the commander and staff can focus on fighting the fight, rather than on fixing CSS problems. Specific units, or capabilities, to designate as IBCT augmentation forces, include ground-to-air PGM coordination elements and an enhanced Short Range Air Defense (SHORAD) capability.

Lacking adequate direct and indirect fire systems to provide it with standoff capability, the IBCT is even more reliant on air delivered fires than current legacy forces. The IBCT needs a much greater internal PGM delivery capability. A training program that emphasizes CCT cooperation to coordinate and control the delivery of Air Force delivered PGMs is necessary. Instead of trained and equipped Army personnel, Air Force habitual augmentation is then required.

With so many small units dispersed all over the battlefield, the Air Force Combat Air Patrol may prove inadequate to protect all IBCT units from single sortie, low-flying threat aircraft, especially helicopters. Lacking organic air defense units, the IBCT is unable to provide its own air defense umbrella. Therefore, all units must have at least a MANPADS self-defense capability to counter the air threat, especially against attack helicopters. This includes not only the fielding of stinger missile systems, but also the integrated training of these teams in IBCT operations.

Other equipment related to future acquisition efforts for the IBCT include enhanced individual armor/mission support gear and unmanned robotic support systems. All new technology must support the soldier, not the other way around. S.L.A. Marshall reported that at the beginning of WWII, it was a common practice of the United States military, government, and defense industry to focus on the machines of war, at the expense of the individual soldier. Fortunately, common sense triumphed, and man and machine received an equal balance of emphasis before disastrous results could occur.¹³² Like pre-WWII America, the Army and the IBCT generally have an over fascination with technology and see it as the panacea for all woes. The IBCT, however, must insist on a balance that emphasizes the soldier and technology in a complimentary and synergistic manner. As Christopher Bellamy says, “Technology must match the man, man is the measure.”¹³³ Therefore, the IBCT must place more emphasis on ensuring that technology supports human factors, versus humans supporting the technology.

Another recommendation is that the IBCT consider the use of exoskeleton suits for its dismounted infantrymen and RSTA scouts. While this idea may sound far fetched, like something out of a Robert Heinlein book,¹³⁴ current technology can produce limited use suits that will support greater weight loads, allow soldiers to move faster, provide greater individual protection, and allow soldiers to arrive at the objective in a physically fresh state.¹³⁵

Lastly, the IBCT should make much greater use of remote, automated, and robotic systems. These systems could support various missions including intelligence collection, resupply operations, point defense operations, indirect fire support, ambush activities, and C3 support.¹³⁶ The battlefields of the future are likely to keep dispersing further and further. As units receive

¹³² Marshall, *Men Against Fire*, 15.

¹³³ Christopher Bellamy, *Evolution of Land Warfare* (New York: Routledge, 1990), 36.

¹³⁴ Robert A. Heinlein, *Starship Troopers* (New York: Ace Books, 1987 reprint), 81-84. Heinlein’s book is a futuristic, science fiction fantasy in which space marines battle against an intelligent race of bugs. The marines employ exoskeleton suits that enable them to dramatically increase their physical abilities.

¹³⁵ Matthew Cox, “Robo-Soldiers.” 6 August 2001, Internet, <http://ebird.dtic.mil/Aug20001/s20010801robo.htm> accessed 10 August 2001.

¹³⁶ William McCall, “Uncle Sam is Looking for a Few Good Robots,” 15 July 2001, Internet, <http://www.ebird.dtic.mil/jul2001/e20010717uncle.htm>, accessed 16 July 2001.

greater areas of responsibility to cover, remote, automated, and robotic systems are likely tools to support human operatives and facilitate mission accomplishment.

The problems associated with depopulation, identified in Chapter 3, apply to the future battlefield on which the IBCT will conduct operations. To ensure its own mission success, and simultaneously facilitate the Army's transformation to the Objective Force, the IBCT must address and solve several problems associated with depopulation. As a force specifically designed to ensure that the Army maintains its relevancy in the 21st Century, the IBCT must ensure it maintains its own relevancy in relation to supporting Army operations worldwide. Getting to the fight is only half the relevancy battle. The other half is to accomplish the mission successfully. The IBCT must ensure that it has the ability to accomplish all potential missions, in all operating environments, including the depopulated battlefield. The optimum solution, at this time, is to designate various units, which possess critical capabilities missing from the IBCT, as designated augmentation forces.

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