Is the Stryker Brigade Combat Team Still Relevant?

A Monograph

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Since its inception in 1999, the Stryker Brigade Combat Team (Stryker BCT) structure has been under continuous revision. These changes have the potential to move the Stryker BCT away from its initial concept as defined in the Interim Brigade Organizational and Operational (O&O) Concept. When the O&O is compared to the Army Operating Concept, five gaps are identified: Double-V hull protection, which decreases strategic mobility, loss of the combined arms concept at company level, limited anti-armor capability in the Stryker BCT, inability to organically self-recover, and increase of logistics personnel and equipment. By addressing these gaps and keeping true to the O&O and AOC, the Stryker BCT would stay relevant to the Army in both the near and mid-term future.

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Abstract

Is the Stryker Brigade Combat Team Still Relevant?, by LTC Reed A. Burggrabe, 51 pages.

Since its inception in 1999, the Stryker Brigade Combat Team (Stryker BCT) structure has been under continuous revision. These changes have the potential to move the Stryker BCT away from its initial concept as defined in the Interim Brigade Organizational and Operational (O&O) Concept. When the O&O is compared to the Army Operating Concept, five gaps are identified: Double-V hull protection, which decreases strategic mobility, loss of the combined arms concept at company level, limited anti-armor capability in the Stryker BCT, inability to organically self-recover, and increase of logistics personnel and equipment. By addressing these gaps and keeping true to the O&O and AOC, the Stryker BCT would stay relevant to the Army in both the near and mid-term future.

Contents

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I would like to thank LTC Theodore Kleisner for inspiring this project years ago when he sent me an old *Infantry* magazine article by Colonel Huba Wass de Czege. I had no idea at the time that it would form the basis of my monograph at SAMS. Mostly, I would like to thank my wife and child for tolerating my absences to work on this paper. I appreciate it and will be home soon.

Acronyms

Armor BCT	Armor Brigade Combat Team
AOC	Army Operating Concept
ATGM	Anti-Tank Guided Missile
BCT	Brigade Combat Team
BFT	Blue Force Tracker
DVH	Double-V Hull
FBCB2	Force XXI Battle Command Brigade and Below
FSC	Forward Support Company
HEMTT	Heavy Expanded Mobility Tactical Truck
HMMWV	Highly Mobile Multipurpose Wheeled Vehicle
IED	Improvised Explosive Device
MGS	Mobile Gun System
MNC-I	Multi-National Corps – Iraq
MRAP	Mine-Resistant Ambush Protected
NATO	North Atlantic Treaty Organization
O&O	Organizational and Operational Statement
RSTA	Reconnaissance, Surveillance, and Target Acquisition
SAMS	School of Advanced Military Studies
SCR	Stryker Cavalry Regiment
TRAC	TRADOC Analysis Center
TRADOC	Training and Doctrine Command
UAV	Unmanned Aerial Vehicle
WMD	Weapons of Mass Destruction

Figures

Introduction

> No matter how clearly one thinks, it is impossible to anticipate precisely the character of future conflict. The key is not to be so far off the mark that it becomes impossible to adjust once that character is revealed.
>
> —Sir Michael Howard, noted British military historian

In 1999, three months after assuming the job of Chief of Staff of the Army, General Eric Shinseki laid out his priorities during a speech to the Association of the United States Army, better known as AUSA. Transforming the US Army to the Objective Force - the future version of the US Army - was his top priority.[1] He acknowledged that this change was not going to be easy. Shinseki's experience in Bosnia informed his views on transforming the force. During that operation he saw heavily armored vehicles destroy critical and fragile road infrastructure. Simultaneously he observed soldiers deploy in unarmored Highly Mobile Multipurpose Wheeled Vehicles (HMMWVs). The US Army was a force of extremes. It possessed only light, unarmored formations or massive heavy units ill-suited for operations short of major combat.[2]

Shinseki's speech led to the creation of an Organizational and Operational (O&O) Statement, which provided the framework for a new US Army organization – the Interim Brigade Combat Team (Interim BCT). The O&O was published in June 2000 and established the parameters required of the Interim BCT. Army planners were already familiar with the concept; they had been working on something close to it for twenty years, and were able to quickly produce the document. The planners who wrote the document only had a broad conceptualization of the end product. Given the numerous requirements in the O&O, they were unsure if every parameter could be met, but these lofty goals established conditions that would guide the development of the organization.

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[1] John Sloan Brown, *Kevlar Legions: The Transformation of the U.S. Army, 1989-2005* (Washington DC: Center of Military History, 2011), 195.

[2] Ibid., 193.

In the sixteen years since the O&O was published, the Interim BCT transformed into the Stryker Brigade Combat Team (Stryker BCT). The brigade would be based on the Stryker family of vehicles. A combination of budgeting, threats, projections of the future environment, and soldier feedback have driven the evolution of the Stryker BCT. These changes were captured in US Army doctrine and other related official documents. Currently, several key changes are pending or are in progress, which may move the Stryker BCT away from the original intent of the O&O.

In October 2014, the US Army published The Army's Operating Concept (AOC). This capstone document established how the Army sees the future and provided guidance to the force on the required capabilities necessary for future success. Prior to the AOC, the O&O, had been the guiding document for the Stryker BCT. In order to determine if it remains true to the original intent of the O&O, a review of changes over the last sixteen years is required. If the O&O made incorrect projections, the changes that are happening in the Stryker BCTs may be necessary. However, if the changes are being made as a result of parochial needs or the biases of Army leaders, this could hurt the effectiveness and relevance of the Stryker BCT. By comparing the O&O and the AOC with the current organization and structure of the Stryker BCT, it can be determined whether the Stryker BCT is meeting its original intent, if it is adapting correctly for the future, or evolving into something different.

Literature Review

In the mid-1980s, the US Army focused on the Soviet military threat, especially the threat posed to Western Europe. Meanwhile, a handful of US Army leaders and planners were concerned with threats beyond the Warsaw Pact. The Army's force structure at the time included two extremes, a light infantry force that was easily deployable but provided limited firepower and mobility, and an armored force that took large amounts of time to deploy but once in place, provided heavy firepower and maneuver on the battlefield.

The disparity between the light and heavy forces was highlighted in 1990 when Iraq invaded Kuwait. The US Army quickly deployed elements of the 82nd (Airborne) Infantry Division to Saudi Arabia to deter further Iraqi aggression. The deployment of a light infantry force posed only a symbolic threat to the Iraqi armored forces. Thankfully, Iraqi armored forces did not attack, and the US-led coalition had six-months to build up armored combat power before beginning major ground combat operations.[3] As a result of the slow deployment of heavy forces, the US Army recognized the need for a blended organization that balanced deployability, mobility, protection, and firepower. The contemporary operating environment required a strategically mobile force that could deploy quickly to a theater with the necessary lethality and mobility to defeat any opponent.

Six years before Iraq's invasion of Kuwait, Colonel Huba Wass de Czege, the founder and first director of the School of Advanced Military Study (SAMS), wrote in *Infantry* magazine of the need for "Three Types of Infantry." The three types were armored infantry to support the armored formations' movement, light strategic infantry to secure key terrain, and regular infantry that either defended key terrain or reduced strong points that armored forces were unable to reduce.[4] For the regular infantry to accomplish their mission, he wrote that they must have a vehicle to ride into battle, which he described as a "stretch" M113 Armored Personnel Carrier which is referred to as the predecessor of the eight-wheeled Stryker.[5]

With the fall of the Soviet Union in 1991, the US Army no longer had a singular threat to focus on. General Gordan Sullivan, the Chief of Staff of the Army, realized that the force would

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[3] "82nd Airborne Division History," *Global Security*, accessed February 29, 2016, http://www.globalsecurity.org/military/agency/army/82abn-history.htm

[4] Huba Wass de Czege, "Three Types of Infantry," *Infantry* 75, no. 4 (July – August 1985): 11.

[5] David Baker, *M1126 Stryker, Fighting Forces on Land* (Vera Beach, FL: Rourke Publishing, 2006), 4.

need to change to address future threats. He created a new strategic vision called Force XXI. This vision sought to produce an "agile, sustainable force capable of meeting any challenge that emerged in an as-yet-undefined future."[6]

In 1995, General Dennis Reimer succeeded General Sullivan as Chief of Staff of the Army. He adopted Force XXI, and expanded it with the Army After Next project. This project used a "Strike Force" organized along the lines of the 2nd Armored Cavalry Regiment. The Strike Force had three objectives: "to develop and field an adaptable, rapidly deployable force to meet the needs of combatant commanders, to act as a lab for leader development, and to be a prototype for the Army After Next."[7] Concurrently, Lieutenant Colonel Douglas A. Macgregor described, how the US Army needed to reorganize in his 1997 book, *Breaking the Phalanx.* Macgregor argued that the basic warfighting unit of the US Army needed to move from divisions (the traditional unit the Army deployed) to brigades (like the Strike Force). Furthermore, these new brigades needed "new capabilities in their own organization and operational culture. . . new organizations – not just technology – [to] revolutionize warfighting."[8]

During Operation Allied Force in Kosovo, the lack of strategic responsiveness again hindered effectiveness. In June 1999, Russian motorized forces surprised North Atlantic Treaty Organization (NATO) forces and moved to seize the Pristina airport, potentially splitting the country in half. General Wesley Clark, NATO Commander, had very few options. Fearing an armed confrontation, the British refused to fly a light infantry force to seize the airport in front of the advancing Russian forces, and US armored forces were unable to move as rapidly as the Russians. US forces were too heavy to use many of the bridges in the area, limiting the speed and

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[6] Mark J. Reardon and Jeffery A. Charlston, *From Transformation to Combat, The First Stryker Brigade at War* (Washington, DC: Center of Military History, 2007), 1.

[7] Ibid., 2.

[8] Douglas Macgregor, *Breaking the Phalanx, A New Design for Landpower in the 21st Century* (Westport, CT: Praeger, 1997), 227.

mobility of the force.[9] The lack of options for coalition leaders resulted in Russian forces seizing the airport. General Eric Shinseki, the Chief of Staff of the Army, witnessed this inability to respond strategically and announced the concept for the Interim BCT a few months later.[10]

The Interim BCT had two purposes. The first was to serve as an immediate solution to the capability gap between lethal, survivable, but slow-to deploy forces, and a rapidly deployable light-force that lacked protection, lethality, and tactical mobility.[11] Secondly, it would ultimately serve as the unit to spearhead the US Army's transformation to the Objective Force.[12] Shinseki wanted to field it as quickly as possible and was ready to use off-the-shelf technology to create this brigade, an unusual concept for US Army acquisition specialists. The then current "legacy forces" of infantry and armor brigades would maintain their organizational structure in the short term, but would eventually transform into the Objective Force.

[9] Michael Dobbs, "NATO Occupies Tense Kosovo Capital" *Washington Post*, June 13, 1999.

[10] Brown, *Kevlar Legions*, 197.

[11] General Eric Shinseki and Thomas E. White, "A Statement on the Posture of the United States Army 2003" (Washington DC: Office of the Chief of Staff, US Army, 2003), 32.

[12] Ibid.

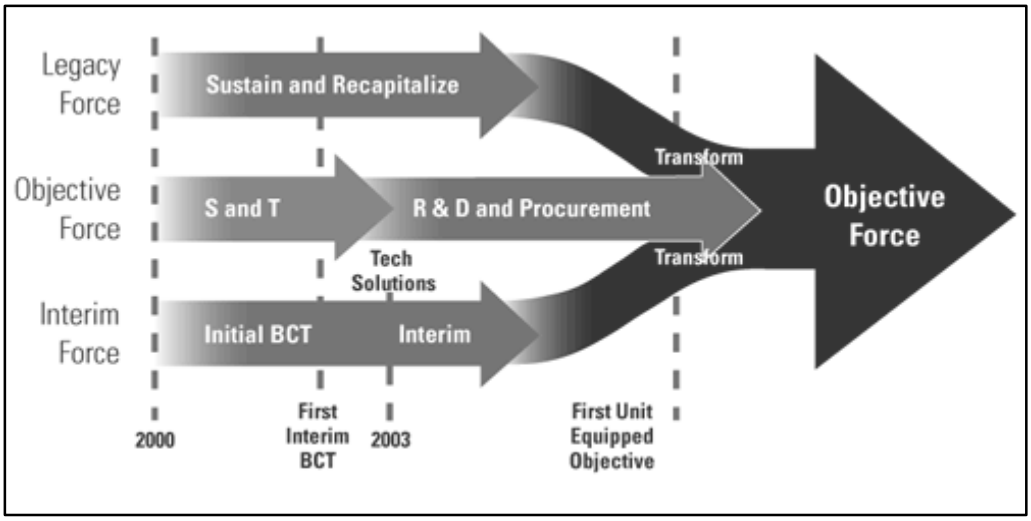

Figure 1: Army Transformation Briefing Slide

Source: Hans Binnendijk, *Transforming America's Military* (Washington DC: National Defense University Press, 2001), 109.

General Shinseki saw the Objective Force as one "that will be organized, manned, equipped and trained to be more strategically responsive, deployable, agile, versatile, lethal, survivable and sustainable than we are today – across the full spectrum of military operations as an integral member of a cohesive joint team."[13] Army planners were now equipped with General Shinseki's guidance and a deadline of 2010 by which to field the new organization.[14] General Shinseki's lead agency for the Objective Force was the Training and Doctrine Command's (TRADOC) Analysis Center (TRAC). TRAC created the Interim BCT O&O statement to explain conceptually how the Army envisioned it would achieve its mission by describing the concept of employment and delineating the functions, roles, and responsibilities of the organization.[15] In essence, its purpose was to create, "a new Army Organization intended to improve the Army's

[13] Shinseki and White, 26.

[14] Ibid., 2.

[15] Department of the Army, "Army Vision – Force 2025 White Paper" (Washington DC: White Paper, January 2014), 7.

capability for strategic responsiveness and to function as the Army's first step toward the Objective Force."[16]

The O&O provided a detailed description of future challenges for the US Army. It also listed the necessary capabilities to be successful in this future environment. There were several key elements that separated the Interim BCT from other BCTs. One critical capability was the ability to deploy the entire brigade anywhere in the world within ninety-six hours. To accomplish this would require all of the brigade's vehicles to be transportable by C-130 transport aircraft. Additionally, using a common vehicular platform would reduce logistical requirements. This commonality would reduce logistical requirements for both materiel and support personnel. In order to meet the deployability requirements, the number of soldiers in the brigade would have to be limited. In order to deploy the largest number of warfighters, the brigade needed to minimize the number of logistical personnel and the logistical footprint of the brigade. Company level combined arms formations were also identified as a requirement for the new organization. Company-level units were normally organized in "pure" formations of a single specialty (such as armor or infantry). To maximize the potential of the Stryker BCT, company-level organizations needed to integrate earlier, work as a team from the beginning, and have access to common digital products through a secure internet. Lastly, the new organization would require enhanced situational understanding, enabling all leaders to reduce the "fog of war."

Army planners realized that some of these goals, such as the entire brigade deploying anywhere in the world in ninety-six hours, were impossible with the technology and airlift available at the time.[17] In cases such as this, when the desired capability was currently

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[16] Department of the Army, TRADOC Analysis Center, *The Interim Brigade Combat Team (IBCT) Organizational and Operational (O&O) Concept* (Technical Report TRAC-TR-0200), (Fort Leavenworth, Kansas, February 2000), 1.

[17] William R. Ward, "Strategic Airlift and the Interim Brigade Combat Team" (Monograph, School of Advanced Military Studies, 2001), 37.

unattainable, the requirement would become a well-defined goal for the Objective Force to work towards.[18] Although not all of the original goals were attained, planners were able to create a brigade that could deploy almost as fast as a light infantry brigade, with the ability to fight almost like an armored formation.

After a multi-year review process, the Army decided to use the Stryker Combat Vehicle as the common platform for the Interim BCT. Once the Stryker was selected, the Army renamed the Interim BCT the Stryker BCT. Critics such as Don Loughlin, a former Marine tanker who had a long second career in ordnance development, immediately criticized the Army for taking short cuts and having biases which led them to choose the Stryker vehicle platform over the M113 Armored Personnel Carrier. Loughlin argued that the M113 was a better alternative.[19]

The first Stryker BCT deployed to Iraq in the fall of 2003. It was the first unit to deploy following the cessation of major combat operations in Iraq. The environment there corresponded very closely to the threat described in the O&O. US military leaders quickly learned how to use this new organization to its fullest potential. It performed above expectations in Samarra and eventually, with some attachments, replaced the entire 101st Airborne Division (Air Assault) in Northern Iraq; a force two and a half times its size. This highlighted its ability to operate across and throughout an extended area of operations.[20]

The effectiveness of the Stryker BCT drew the attention of the Multi-National Corps – Iraq (MNC-I) Headquarters. MNC-I selected a Stryker infantry battalion to fulfill the critical corps reserve mission. In this capacity, it conducted missions across Iraq, interdicting forces

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[18] United States General Accounting Office, "Military Transformation, Realistic Deployment Timelines needed for Army Stryker Brigades" (United States General Accounting Office report to Congressional Committees, June 2003), 3.

[19] Don Loughlin, "Army Leadership and the Stryker Armored Car Program Have Failed 'Army Transformation'" (October, 2002), accessed September 25, 2015, http://www.combatreform.org/gg-021006xxx.doc, 28.

[20] Reardon and Charlston, 30.

along lines of communication, enabling the movement of sustainment, and clearing enemy formations in high threat areas.[21] The demand for Strykers and their associated technology, equipment, and leaders not only proved the concept, but also demonstrated how the formation excelled in this type of threat environment. Colonel Robert Brown (now Lieutenant General Brown, current Commander of the US Army Combined Arms Center) who commanded 1st Brigade, 25th Infantry Division, the second Stryker BCT to deploy, wrote an article for *Military Review* describing the capabilities of the organization. He described how a single Stryker infantry company, after a deliberate raid, quickly exploited intelligence from that raid and passed it on to other Stryker units. Those units then planned and executed four additional raids that removed an entire enemy improvised explosive device (IED) cell from Mosul. All of this occurred in one night.[22] The ability of multiple units to collect, process, plan, and execute operations quickly across Mosul, was possible because of the equipment, technology, and soldiers resident in the Stryker BCT organization. "Legacy forces," with their lack of situational understanding equipment, such as Force XXI Battle Command Brigade and Below (FBCB2) or Blue Force Tracker (BFT), could not share information as quickly and then execute the operations process to accomplish the number of raids that quickly. While the first two Stryker brigades were proving the relevance of the new organization in Iraq, the rest of the US military debated the merits of it. Articles came out both in support and against this new formation. Interviews with the soldiers involved showed their affinity for the concept, the equipment, and the effective leadership that enabled the potential of the new organization.[23] Supporters, such as Major Adam Rocke (a future

[21] Reardon and Charlston, 35.

[22] Robert B. Brown, "The Agile-Leader Mind-Set: Leveraging the Power of Modularity in Iraq," *Military Review* 87, no. 4 (July-August 2007): 32-44.

[23] Matthew Cox, "Stryker Wins Praise from Skeptical Troops: Soldiers Still Say There's Room for Improvement," *Army Times*, November 1, 2004; Jean Grace, "Stryker Unit Wins over

Stryker Battalion commander) wrote a monograph while at the US Army's Command and General Staff College which evaluated the Stryker BCT versus light infantry and mechanized forces. He effectively validated the Stryker BCT concept.[24] Lieutenant Colonel Stephen Townsend also evaluated the organization (future Stryker BCT commander, and current XVIII (Airborne) Corps commander) while at the US Army War College. He praised the Stryker BCT organization, and offered potential modifications to the formation in order to prepare it for different mission sets.[25]

Other commentators focused on certain capability requirements in the O&O. Major William Ward, in a monograph while at SAMS, argued that the Interim BCT could not deploy in ninety-six hours. While the limitation of insufficient lift could be overcome, local and destination Aerial Port of Debarkation restrictions were fixed aspects of the environment that could not process the required airframes in under ninety-six hours.[26] Lieutenant Colonel Jonathan Brockman, in his SAMS monograph, used the Joint Flow Analysis System simulation to test the concept of the brigade deploying in ninety-six hours. He found several constraining factors that made this timeline unrealistic. Brockman concluded that the Stryker BCT should focus on deployment by combining air and sealift.[27] Lieutenant Commander Preston Gill, while at the Naval Post Graduate School, described how, with additional pre-positioned forces, the US Army

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Skeptics: Army's 'Ghost Riders'," *National Defense*, October 2005, accessed on September 3, 2015, http://www.nationaldefensemagazine.org/archive/2005/October/Pages/stryker_units3099.aspx.

[24] Adam L. Rocke, "Is the Stryker Brigade Combat Team a Viable Concept?" (Monograph, United States Army Command and General Staff College, 2000), 58.

[25] Stephen J. Townsend, "Alternative Organizations for Interim/Stryker Brigade Combat Teams" (Monograph, US Army War College, 2003), 26.

[26] Ward, 37.

[27] Jonathan B. Brockman, "The Deployability of the IBCT in 96 Hours: Fact or Myth?" (Monograph, School of Advanced Military Studies, 2002), 36.

could meet the ninety-six hour timeline.[28] These critical reviews led the US Army to soften their stance on the ninety-six hour deployment requirement.

The Stryker BCT and the vehicle itself, had many critics. One of the best-known critics was Colonel (Retired) Douglas Macgregor. In his book, *Transformation Under Fire,* he lists several reasons why the Stryker BCT and the Stryker vehicle would not do well in the future. His major assertion was that the lethality of modern weapon systems would necessitate fewer soldiers deployed on smaller and more survivable vehicles as opposed to a large target like the Stryker, which carries eleven soldiers.[29]

Current brigade commanders have expressed opinions similar to Macgregor's. Colonel John Meyer, Brigade Commander of 2nd Stryker Cavalry Regiment (2 SCR), voiced his concerns about a lack of firepower during Operation Dragoon Ride.[30] One year after Russia invaded Ukraine to annex Crimea, 2 SCR road-marched a squadron (a battalion equivalent) of Strykers and their supporting equipment through six Eastern European countries to reassure them and confirm US support to NATO allies.[31] During the exercise, Colonel Meyer noted that similar Russian vehicles were equipped with larger caliber weapons systems that could destroy Strykers. Conversely, the Stryker lacked the firepower to destroy the lightly armored Russian vehicles. Colonel Meyer argued for a larger caliber weapon system to counter the capability of his potential adversary.

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[28] Preston Gill, "Analysis of Stryker Brigade Combat Team Strategic Sealift Deployment Options" (Monograph, Naval Post Graduate School, December 2003), 33.

[29] Douglas A Macgregor, *Transformation Under Fire, Revolutionizing How America Fights* (Westport, CT: Praeger Publishing, 2003), 19.

[30] Joe Gould, "US Army: Strykers Need Bigger Gun to Fight Russia," *Defense News* (24 JUL 2015) accessed November 30, 2015, http://www.defensenews.com/story/defense/international/europe/2015/07/23/us-army-strykers--europe-need-30mm--russia/30551987/.

[31] John Van Diver, "Dragoon Ride Will Send US Troops Through Eastern Europe in Show of Support," *Stars and Stripes,* (12 March 2015) accessed December 1, 2015, http://www.stripes.com/news/dragoon-ride-will-send-us-troops-through-eastern-europe-in-show-of-support-1.334021.

The Interim BCT was viewed as a quick fix that was to last only until the fielding of the Objective Force. However, with the terrorist attacks of September 11, 2001, the original concept for the Interim BCT quickly changed. The US Army found itself fighting two simultaneous wars in Afghanistan and in Iraq. The cornerstone of the Objective Force was the Future Combat System, a vehicle designed with future technologies that would become the common vehicle in all but light infantry formations. With changing priorities and increased costs, the Future Combat System was delayed and eventually cancelled, derailing the Objective Force concept.[32] With no Objective Force on the horizon, planners decided to increase the fielding of Stryker BCTs from six to eight.[33] With the addition of the two Stryker BCTs, now representing almost a third of US Army brigade combat teams, this was no longer a temporary measure. The Stryker BCT had become a permanent part of the Army.[34]

Since the initial surge of articles about the Stryker BCT, the number of reports have slowed considerably and now simply focus on overall effectiveness. While articles on the subject have decreased, changes to the Stryker BCT have not. These include changes to the structure, equipment, manning, and organization. If these changes remove capabilities that the O&O had demanded, the original purpose of the Stryker BCT is in jeopardy. Understanding the context of how the Stryker BCT was created, can only truly be done by reviewing the O&O that created it.

The Organizational and Operational Statement

The O&O is what planners in TRAC created to explain how the Army envisioned the Interim BCT would achieve its mission. It described the concept of employment and delineated

[32] "Future Combat Systems (FCS)," *Global Security*, accessed March 14, 2016, http://www.globalsecurity.org/military/systems/ground/fcs.htm.

[33] John A. Bonin, "Army Organization and Employment Data" (Carlisle, Pennsylvania: Center for Strategic leadership and Development, September 2013), 17.

[34] Christopher R. Willis, "Stryker Brigade Combat Team Formation Assessment '4th update'" (Fort Benning, Georgia: Maneuver Center of Excellence. March 2014), 9.

the specific functions, roles, and responsibilities of the organization. This document projected the future environment and the necessary capabilities for this new formation to be successful.

The document started by describing the current and future operational environment. It defined this time period as the year 2000 and beyond. The report assumed that the United States would remain globally engaged and maintain its status as a world leader, advocating democratic principles, free markets, and human rights. The threats to the United States would mainly come from failed and failing states, regional or state-centered threats, transnational criminal threats, and possibly from the rise of a major military competitor.[35] The Army missions could include anything across the spectrum of conflict, from humanitarian assistance to large conventional wars, and included concurrent smaller-scale contingencies. To counter these threats, two concepts emerged: strategic agility and power projection.[36]

Strategic agility was defined as the ability to quickly change strategic goals and to resource those changes. Power projection was defined as, the ability to build combat power quickly anywhere in the world. These two concepts arose in reaction to the range of potential conflicts requiring US Army forces. According to the O&O, potential threats determined that once US military forces were on the ground in sufficient strength, the probability of their own success in a conventional fight were low. O&O authors reasoned that, adversaries would focus on preventing the US military's ability to deploy into an area of conflict. Armored forces are highly vulnerable during strategic movement. Additionally, they are exposed for long periods of time while they build deployed strength sufficiently to develop combat power. On the lower intensity end of the spectrum, small-scale contingencies have the potential for escalation as both regional and global actors become involved. Because these operations have the potential for quick escalation, require a large troop presence, and are limited in military capability to small arms, US

[35] O&O, 2-1.

[36] Ibid., 2-2.

"Army light forces are [currently] optimized to perform these missions."[37] Light infantry forces can quickly find themselves overwhelmed if the conflict escalates, demonstrating the need for the Interim BCT.

The O&O describes eighteen general characteristics of military operations for current and future conflicts. Many of these characteristics apply to all combat formations. An example is the characteristic that the enemy will study US forces' rules of engagement and work to find ways to exploit them.[38] The characteristics listed below highlight the gaps in the force structure as determined by the O&O and assist in explaining the rationale behind the design of the Stryker BCT.

Future military operations will take place on complex/urban terrain as the world population increasingly urbanizes. The O&O determined that in the year 2000, forty-five percent of the world's population would reside in urban settings. This was expected to increase to sixty percent by 2010. Urbanization would benefit future adversaries who would take advantage of the limiting effect of complex/urban terrain on US standoff weapons. Adversaries understand the intensive manpower and logistical requirements required to sustain urban combat. Additionally, urban terrain adds complexity to the operation by increasing the risk of collateral damage and non-combatant injuries.[39]

In the past, potential enemies focused on the US military's lines of communication, both in the air and across the sea. In the future, they will focus on the military's points of departure and embarkation, as well. Therefore, the "Army will be forced to structure forces in the future to enable rapid deployment of troops with enhanced lethality. These deployments must be feasible

[37] O&O, 2-2.

[38] Ibid.

[39] Ibid., 2-3.

independent of deployment infrastructure or pre-positioned equipment to any location in the world without lengthy staging periods."[40]

Authors of the O&O assert that conflicts in the future will escalate very quickly across all three levels of warfare: the tactical, operational, and strategic levels. Enemies of the United States realize that it takes time for the United States to get involved, and once involved, it takes even more time to build military capacity and capability in the area of conflict. But once military capacity is built, no force is equal to US conventional military forces. Therefore, potential enemies will focus on attacking the strategic deployability of the US military. This would prevent the US from building the required military capacity in the area of operations.[41]

The O&O goes into further detail on the characteristics of small-scale contingencies. The majority of recent conflicts have been small-scale contingencies. The Interim BCT is best suited for these small-scale contingencies. US military operations in Panama, Haiti, and Kosovo are provided as examples of these types of contingencies in the O&O. Weak infrastructure (roads, rails, bridges), complex terrain, including large urban areas, and diverse weather patterns, comprise the environment projected by the O&O. Small-scale contingencies would be further complicated by issues such as "overpopulation, resource shortages, natural disasters, and inadequate local, regional, and global response capabilities."[42] The threats in small scale contingencies are "characterized by limited heavy forces, mostly equipped with small numbers of . . . tanks, and some mechanized but mostly motorized infantry. There is a pervasive presence of guerilla, terrorist, paramilitary, special purpose forces, special police and militia organizations."[43]

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[40] O&O, 2-3.

[41] Ibid., 2-5.

[42] Ibid., 2-6.

[43] Ibid.

These forces would most likely be equipped with small arms up to and including mortars, anti-tank guided missiles (ATGM), limited aviation assets, and robust communication capabilities.

By framing the likely environment and threat that the organization will encounter, the O&O describes what the Interim BCT would need to do to defeat or overcome these challenges. Planners highlighted that a quick response to a military problem with military force, has a deterring effect. This would reduce the risk to the mission, constrain threat options, expand the variety of favorable outcomes, and assist in rapid decisions. Therefore, US Army forces will need to "rapidly deploy to prevent, contain, stabilize, or terminate a conflict in its early stages."[44] Neither light units, which can deploy quickly, but lack lethality, mobility, and staying power, nor armored forces, which possess lethality and staying power, but take more time to deploy, can meet the identified requirement. To have the best of both formations, the Interim BCT needed to be able to conduct a "rapid deployment of highly-integrated, combined arms forces possessing overmatch capabilities, exploiting the power of information and human potential, and combining the advantages of both light and mechanized forces across the full range of military options."[45] By creating two Interim BCTs very quickly, these brigades would allow for the US Army to vastly increase its strategic responsiveness. This was especially important since the Army is frequently called upon to quickly conduct small-scale contingencies. This rapid development allowed for the initial lessons learned to be implemented into the remaining Stryker BCTs.[46]

While the Army was building the Interim BCT, the ultimate goal was to transform the Army into the Objective Force. The Interim BCT was to serve as the "bridging force and ***vanguard*** until science and technology could allow the Army to achieve Objective Force

[44] O&O, 3-4.

[45] Ibid., 3-5.

[46] Ibid.

capabilities."[47] The Interim BCT would also generate immediate progress on the Army Transformation Strategy while not compromising the Army' ability to succeed in current conflicts.[48] Because of the accelerated developmental timeline, some of the equipment represented "*threshold capabilities*, that in some areas will fall short of the requirements specified within [the] O&O."[49]

The finalized mission of the Interim BCT was:

> [A] full spectrum, combat force . . . designed and optimized primarily for employment in small scale contingencies in complex and urban terrain, confronting low-end and mid-range threats that may employ both conventional and asymmetrical capabilities. . . The [Interim BCT] 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.[50]

The organizational structure was optimized to maximize effectiveness in lethality, mobility, and survivability along with the capabilities for responsiveness, deployability, and sustainability. This included high mobility at the strategic, operational, and tactical levels of war and a focus on its "ability to achieve decisive action through dismounted infantry assault, supported by organic direct and indirect fire platforms, and enabled by situational understanding"[51]

The concept for the Interim BCT was based on an existing conceptual framework. It traces its roots back to the experiments and operational experience gained in the early 1990s. TRAC used an analytical process to determine or confirm a number of organizational parameters. This process used several different methodologies, including a literature review, combat modeling within multiple environments, augmentation analysis, deployment and sustainment

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[47] O&O, 3-6.

[48] Ibid.

[49] Ibid.

[50] Ibid, 3-7.

[51] Ibid.

analysis, system comparison, general officer to junior leader level seminars, and a wide range of simulations. These methodologies helped determine the most effective organizational design.[52]

The analytical process determined the key organizational parameters that guided the development of the Interim BCT. The most important principle was the need to "achieve balance between capabilities for strategic responsiveness and requirements for battlespace dominance."[53] This principle shows how the sacrifice of either responsiveness or dominance over the other would immediately compromise both the Interim BCT's utility and relevance and quickly turn it into just another BCT. This principle caused the planners to balance deployability, sustainability, and the Interim BCT's in-theater personnel footprint against the combat requirements for survivability, lethality, and mobility.[54]

The second key principle was that the Interim BCT had to provide a "balanced full spectrum utility."[55] Simply stated, the Interim BCT had to be able "to do it all." It had to be capable of deploying as a force for peacekeeping and stability operations, while at the same time being able to seamlessly integrate into and operate as part of a division or corps in a major theater of war.

To achieve these two key principles, TRAC determined that the Interim BCT had to reduce its sustainment requirements well below that of a heavy force, that it had to have a commonality of platforms in the brigade, that all vehicles had to be capable of deployment by a C-130 aircraft, and that it had to minimize its personnel and logistical footprint in theater. Any function that could be accomplished out of theater was not included in the formation. An increased reach-back capability would allow for the Interim BCT to use those stay behind assets

[52] O&O, 3-10.

[53] Ibid., 3-11.

[54] Ibid.

[55] Ibid.

and limit its operational footprint. Traditionally, deployed US military forces received a small task force that possessed additional required capabilities to augment the deployed force. This task force generally came from their higher division and was task organized upon deployment. Since the Interim BCT was to operate as a self-sustaining organization, there was a need for the formation to have all of the required assets within the unit itself. In contrast, a traditional combined arms organization occurred only at the battalion level or higher. To operate effectively in the contemporary environment, force effectiveness would be enhanced through the use of integrated combined arms down to the company team level.[56] By having integrated combined arms capability at the company level, it would facilitate the use of precision fires, and enhance command and control, which in turn would reduce collateral damage and non-combatant casualties which follows the Joint military principle of restraint.[57]

Finally, with the guiding principles determined, planners developed the following operational capabilities and characteristics required for the organizational design of the unit. Mobility and dismounted assault-centric close combat were the first two distinctive and core capabilities. These fundamental capabilities defined the Interim BCT. They were intended to be balanced against the requirements of survivability and lethality.[58] The focus on dismounted assault required that the company be capable of supporting dismounted elements with "direct fires from organic weapons on the Infantry Carrier Vehicle and Mobile Gun System (MGS) and the integration of mortars, artillery, and mobility support."[59] Dismounted infantry would also

[56] O&O, 3-13.

[57] Ibid., 3-14.

[58] Ibid., 3-13.

[59] Ibid., 3-14.

have a higher level of survivability if they could achieve standoff and avoid being engaged with anti-tank weapon systems.[60]

Under the characteristic of mobility, TRAC planners determined that the brigade had to be "organized, equipped, and configured to meet its ninety-six hour deployment standard."[61] At the operational level it needed to be capable of deployment by ground, sea, or C-130 air transport.[62] It was designed as an early entry force in contrast to a forcible entry force. Forcible Entry is defined in Joint Publication 1-02, as the "seizing and holding of a military lodgment in the face of armed opposition."[63] This usually occurs through a vertical envelopment (airborne or air assault operation) that seizes an airport or seaport to enable the flow of additional forces. Early entry forces immediately follow a forcible entry force after the lodgment is seized, and is susceptible to attack by armored forces. Due to their limited logistical requirements, elements of the Interim BCT would be able to arrive in the semi-secure lodgment area in platoon to company-size packages, become operational, and provide mobility, firepower, and protection. This would greatly reduce the risk from an enemy attack against the lodgment and provide the needed mobility to begin enlarging and securing the area.

At the tactical level, the Interim BCT needed "overmatching mobility" to be successful.[64] This would require the Interim BCT to be one hundred percent mobile. Being mobile would enable it to "conduct essential reconnaissance, surveillance, and target acquisition (RSTA) operations, to strike the enemy in depth; reposition its reserves rapidly; secure lines of

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[60] O&O, 3-15.

[61] Ibid., 3-14.

[62] Ibid.

[63] Joint Publication (JP) 1-02, *Department of Defense Dictionary of Military and Associated Terms* (Washington DC: Government Press, November 8, 2010, amended through June 15, 2015), 91.

[64] O&O, 3-14.

communications in unsecured or uncertain conditions; and to conduct noncontiguous (also known as nonlinear) platoon, company, and battalion fights in urban and complex terrain."[65]

The lethality of the Interim BCT would serve as an effective deterrent. Additionally, if deterrence were to fail it would provide a foundation for successful combat operations. Due to the ability to operate non-contiguously and distributed, it was determined that mortars were needed at the company level in order to enhance the responsiveness of indirect fires. The high angle trajectory of mortars provides effective fires in urban and complex terrain that low angle indirect fires are incapable of providing. Additionally, the Interim BCT required an anti-tank capability to deal with enemy mechanized forces. This would provide the brigade with greater lethality than light brigades.[66]

The Interim BCT would require increased situational understanding of the enemy and friendly forces. Situational understanding would serve as the foundation of risk mitigation for the Interim BCT to allay fears about the lack of armor protection. An enlarged RSTA formation would be necessary along with robust military intelligence assets. These assets included a robust human collection capability, organic unmanned aerial vehicles (UAVs), and the ability to integrate information and intelligence from a variety of intel sources. For the companies, the appropriate internetted systems would be equipped all the way down to the individual vehicle. This would provide all personnel, not just commanders, with situational understanding. Increased situational understanding would enable the Interim BCT to operate differently from the then current doctrine. Previously, maneuver forces would "make contact with the enemy, develop the situation further while in contact, then conduct maneuver for decisive action."[67] With increased situational understanding, the Interim BCT would "develop the situation out of contact, maneuver

[65] O&O, 3-14.

[66] Ibid., 3-16.

[67] Ibid., 3-33.

rapidly to positions of advantage, and then initiate contact at the time and place of the commander's choice to achieve decision."[68]

With the Interim BCT employing a new doctrinal approach to combat, the need for protection and survivability would be different. It would have no organic air defense elements and instead would rely on crew served weapons and on US Air Force capabilities. The Interim BCT was to be equipped with a light armored vehicle that is vulnerable to artillery fire. This identified the need for an organic, proactive counter-fire capability enabled by the robust RSTA capability. Engineer assets would be focused on mobility support (the ability to reduce and remove obstacles). Engineers would also have few assets for counter-mobility (emplacing obstacles) and limited assets for survivability (building defensive fortifications), both of which could be utilized as mobility assets of the Interim BCT.

Finally, for logistics, the Interim BCT would be focused on a "distribution-based, centrally managed, execution-focused concept of support."[69] This would ensure that the support packages would be "streamlined, strategically mobile, and focused on the sustainment demands dictated by the contingency, with the twin goals of optimizing the use of [logistical] resources . . . and minimizing the operational [logistical] footprint in the area of operations."[70] To do this, the Interim BCT would need to be capable of conducting self-sustained operations for at least seventy-two hours.

With these principles laid out, Army planners began to determine the manning, equipment requirements, technological needs, and organization of the Interim BCT. The task of the planners was to take this conceptual framework and make it into a tangible organization. They

[68] O&O, 3-33.

[69] Ibid., 3-51.

[70] Ibid.

combined revolutionary ideas with multiple conceptual integrations to determine the correct mix of capabilities.

Stryker Brigade Combat Team Composition

Using the lessons learned in the O&O, planners developed the Interim BCT as an integrated team that focused on mobility and dismounted operations. They used organic enablers to assist in mission accomplishment. The initial structure of the Interim BCT included: three motorized infantry battalions, composed of three combined arms rifle companies. Each combined arms rifle company was built on the foundation of a light infantry company. Additions included a sniper team, a 120mm mortar section, a MGS platoon, and enough Stryker vehicles with additional associated drivers and vehicle commanders to move the entire company at one time. This made it the largest and most robust combined arms company in the US Army. Other organic units included a headquarters company; a RSTA squadron; an artillery battalion; a brigade support battalion; an anti-tank company; an engineer company; a military intelligence company; a signal company; and the brigade headquarters and headquarters company.[71]

Since its initial fielding in 2003, the Interim BCT has come to be called the Stryker BCT given the Stryker is the primary vehicle with which it is equipped. It has continued to evolve. While the combat capabilities have remained the same, the separate companies: anti-tank, engineer, military intelligence, signal, and brigade headquarters and headquarters company were incorporated into a provisional Brigade Troops Battalion. In 2015 the Brigade Troops Battalion changed into the Brigade Engineer Battalion, which added an additional engineer company and made the provisional unit permanent.[72] In addition, the Brigade Support Battalion received an

[71] O&O, 3-19

[72] Willis, 5.

additional six Forward Support Companies (FSC), which attached to the battalions in the brigade to increase their logistical capabilities.[73]

Since 2003, the other combat brigades in the US Army experienced a change as well. When the Stryker BCT was fielded, both the Infantry BCT and the Armor BCT had three infantry or armor battalions, a brigade reconnaissance troop, a field artillery battalion, and a brigade support battalion, which had included forward support companies.[74] To create additional brigade combat teams within the authorized personnel strength allowed by Congress, the US Army changed the structure of the organization. By 2005, Infantry BCTs and Armor BCTs changed to a formation with either two combined arms battalions, a mix of infantry and armor, or light infantry battalions. The brigade reconnaissance troop grew into a RSTA squadron and the BCTs now included a field artillery battalion and a brigade support battalion. The loss of a combat maneuver battalion limited the options for brigade commanders. This loss was supposed to be mitigated by the additional reconnaissance assets.[75] In 2015, with the drawdown of forces from Operations Iraqi and Enduring Freedom, and the cancellation of the Objective Force, the US Army again changed the structure of a brigade to increase is size and capabilities while decreasing the number of brigades.

Infantry BCTs and Armor BCTs now look similar to a Stryker BCT. Each now has either three light infantry or combined arms battalions; a RSTA squadron, a field artillery battalion, a brigade engineer battalion, and a brigade support battalion.[76] It is no coincidence that all BCTs

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[73] Willis, 5.

[74] "US Army Table of Organization and Equipment, updated March 8, 2000" accessed April 1, 2016, http://fas.org/man/dod-101/army/unit/toe/index.html.

[75] Andrew Feickert, "U.S. Army's Modular Redesign: Issues for Congress" (Washington DC: Congressional Research Service, May 5, 2006), 4.

[76] Field Manual (FM) 3-96, *Brigade Combat Team* (Washington DC: Government Printing Office, October 2015), 1-3.

are now similar to a Stryker BCT. One of the Stryker BCT's mandates was to serve as a test organization for the rest of the US Army with the results incorporated into the Objective Force. With the cancellation of the Objective Force it became necessary to incorporate lessons learned in the Stryker BCT into the Legacy Force as soon as feasible. The possession of three maneuver battalions along with a robust reconnaissance package was a lesson the Stryker BCT proved was a better option for brigade commanders.

While there have been many changes in the past thirteen years, the US Army is once again looking to the future and trying to determine how to create the most effective force. The Army Operating Concept (AOC) provides the framework for the development of the future force and the capabilities it will require. A review of the AOC provides the reasoning and rationale of any additional changes that may be required of a Stryker BCT.

The Army Operating Concept

The comparison of the Stryker BCT as it evolved from the Interim BCT as defined within the O&O, against the AOC can identify gaps and test the relevancy of the Stryker BCT. The AOC "describes how Army forces in the future will prevent conflict, shape security environments, and win wars while operating as part of our Joint Force and working with multiple partners."[77] It "identifies first order capabilities that the Army needs to support US policy objectives [and] provides the intellectual foundation and framework for learning and for applying what we learn to future force development under Force 2025 and beyond."[78] This capstone document drives all others for matters of future developments or requirements for the US Army.

The AOC is formatted similarly to the O&O that served as the basis for the creation of the Stryker BCT. Written in October 2014, the AOC describes what planners think the future

[77] TRADOC Pamphlet 525-3-1, *The U.S. Army Operating Concept: Win in a Complex World, 2020-2040* (Washington, DC: Government Printing Office, October 31, 2014), i.

[78] AOC, i.

world will look like and how threats to the United States will organize, equip, and potentially respond to US military power. With the environment and the threat described, Army planners proceeded to describe, in very broad terms, the tenets and core competencies the US Army will need to use to be successful in the "near- (2014-2020), mid- (2020-2030), and far- (2030-2040) terms."[79]

In the future, threats will come from a diverse group of agents, employing a variety of strategies to threaten the security of the United States and its vital interests. Threats can come from both state and non-state actors such as terrorists, insurgents, or criminal organizations. These threats will seek to avoid US military strengths as new military technologies are developed. They will try to emulate US military capabilities to counter US power projection while placing limits on its freedom of action. Threat actions will be focused on reducing the United States' ability to achieve dominance in the land, air, maritime, space and cyberspace domains.[80]

Characteristics of the Future Operational Environment

The AOC identified five characteristics of the future operational environment that are likely to have a significant impact on US Army operations. These are, increased velocity of human interaction, the potential for overmatch, proliferation of weapons of mass destruction, the spread of advanced cyberspace and counter-space capabilities, and operations among populations in urban terrain.[81] For the Stryker BCT to stay relevant and effective, Army planners must understand the environment it will be working in and determine the capabilities required. The five characteristics are defined in further detail below.

Increased velocity and momentum of human interaction and events refers to the speed at which information diffuses globally through multiple means and accelerates interaction between

[79] AOC, 34.

[80] Ibid., 10.

[81] Ibid., 12.

people, governments, militaries, and threats. The use of the internet will allow for organizations to mobilize people and resources, while also spreading disinformation and propaganda to drive violence in support of their political objectives. The compression of events in time will require forces "capable of responding rapidly in the right package to seize the initiative, control the narrative, and consolidate order."[82]

Overmatch is the use of capabilities or tactics that render an adversary unable to respond effectively. Potential enemies will invest in technology to gain an advantage and prevent US forces from gaining overmatch. Anti-access and area denial technologies will challenge the joint force's ability for air and sea dominance that will impact its ability to project land power from the air and sea domains. To prevent overmatch, the Army must continue to develop new capabilities while anticipating enemy efforts to affect those capabilities. To retain current overmatch, the US Army will have to "combine technologies and integrate efforts across multiple domains to present enemies with multiple dilemmas."[83]

There is risk of a nation losing control over nuclear or chemical assets, especially if extremist organizations incite civil wars and establish control of territories, populations, and weapons. Weapons of mass destruction (WMD) proliferation to state and non-state actors pose an increased threat to the United States and international security. This requires specially trained, equipped, and organized US Army forces. These forces must have the ability to operate in inhospitable conditions, conduct reconnaissance to confirm or deny the presence of WMDs, destroy enemy forces that possess those weapons, and secure territory until trained chemical, biological, radiological, nuclear, and high-yield explosive units reduce or neutralize the WMD.[84]

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[82] AOC, 11.

[83] Ibid.

[84] Ibid.

Cyberspace and space domains grow in importance as global and non-state actors invest in capabilities to protect their assets and deny access for others. For example, an enemy actor could have a device which jams the signal from US global positioning satellites. This would affect the US military's ability to use precision guided munitions accurately and would decrease the US military's ability to track friendly forces. The Army must protect its own systems while disrupting the enemy's. Army forces support joint operations through the use of reconnaissance and offensive operations such as raids to destroy land-based enemy space and cyberspace capabilities.[85]

The authors of the AOC assess that by 2030, sixty percent of the world's population will reside in urban areas, and adversaries are expected to operate among those people in urban areas to avoid US military advantages.[86] These urban areas are locations where armed groups will exploit dissatisfaction and weak governance to develop safe havens and support bases for their terrorist, insurgent, or criminal activities. Because these threats are located in dense urban areas, it will be difficult to defeat threats with long-ranged strikes without causing significant collateral damage and civilian casualties. This will require land based forces to operate in the urban environment as decentralized combined arms teams employing joint capabilities.[87]

In the future, Army forces will be used to build regional partner capability, assure allies, and deter adversaries. Army forces must retain the ability to overmatch their opponents, which will allow them to deter conflict because of the ability to compel outcomes without the cooperation of the enemy. To compel sustainable outcomes, Army forces must defeat enemy

[85] AOC, 12.

[86] Ibid.

[87] Ibid.

organizations, establish security, and consolidate gains. Lastly, Army forces must deploy in credible and reliable combined arms teams across the spectrum of military operations.[88]

The Stryker BCT has a balanced capacity to respond to the described characteristics. The Stryker BCT was designed to deploy rapidly to deter and defeat enemy forces. It has limited anti-tank capabilities which makes overmatch difficult against an armored force. It is not currently trained for WMD elimination operations, but like the other BCTs, with sufficient time it could retrain for that mission. It can conduct reconnaissance and raids of enemy sites to assist in the cyber mission. It was designed and optimized to operate in combined arms teams in urban environments, so it is especially well suited for this mission compared to other formations.[89] Lastly, the Stryker BCT can deploy capable combined arms teams ready for any military option. If the AOC is accurate in projecting the future, the Stryker BCT appears to have an advantage over the other BCTs in terms of capabilities.

Tenets and Core Competencies

The AOC identifies eight tenets that the US Army believes it must perform in the future to "achieve operational overmatch and seize, retain, and exploit the initiative."[90] The tenets are, initiative, simultaneity, depth, adaptability, endurance, lethality, mobility, and innovation.[91] If the Stryker BCT does not possess these tenets, it must adapt and change, or a new formation needs to be developed. The tenets are further defined below.

Initiative is the ability to assess a tactical or operational situation and act to dictate the terms of operations to the enemy. A force that possesses the initiative renders hostile forces and other key actors incapable of responding effectively or organizing counter efforts. To do this

[88] AOC, 17.

[89] O&O, 1-7.

[90] AOC, 20.

[91] Ibid., 21.

effectively and retain the initiative, Army commanders must decentralize their operations as described in the philosophy of mission command (how the US Army commands and controls its formations) by using a focused commander's intent and clear concept of the operation. Commanders will need to encourage subordinates to seize upon small windows of opportunity and think ahead in time and space so they can retain and exploit the series of temporary conditions which are military operations.[92]

Simultaneity is the execution of a wide variety of related and mutually supporting tasks at the same time across multiple locations and domains. By executing operations simultaneously with combined arms capabilities, the US Army seeks to overwhelm the enemy physically and psychologically. This includes not only the physical battlefield, but other contested spaces such as public perception, political subversion, illicit financing, and criminality.[93]

Depth is the expansion of operations in space and time to prevent enemy forces from recovering from simultaneous efforts. Commanders will need to think ahead in time to connect tactical and operational objectives to strategic goals, which will allow their forces to retain and exploit the initiative. Army forces may be required to project power from land, across the air or sea domain, to ensure joint force freedom of maneuver.[94]

Adaptability is the ability to respond to new needs or changes without a loss of functionality. This ability will come from adaptive leaders. Adaptive leaders possess a wide variety of skill that will allow the Army to retain the initiative. Army leaders, "think critically, are comfortable with ambiguity, accept prudent risk, assess the situation continuously, develop

[92] AOC, 21.

[93] Ibid.

[94] Ibid.

innovative solutions to problems, and remain mentally and physically agile to capitalize on opportunities."[95]

Endurance is the ability to sustain efforts for sufficient duration with the capacity necessary to accomplish the mission and requires the ability to generate, protect, and sustain forces in high tempo operations in austere environments and across wide areas for as long as the commander requires. As part of this, resiliency, the ability to cope with adversity and loss, plays a key role. Army forces must have the ability to sustain their efforts for the duration needed to accomplish their mission.[96]

Lethality is the ability to kill or cause physical destruction. Lethality is essential to fighting and winning in any battle. Army forces defeat or destroy opponents quickly with combinations of skilled soldiers, well-trained teams, and superior weapons. Army leaders will always seek to overmatch their opponents in close combat. By employing precision firepower, effective training, and Army values, soldiers can destroy the enemy while minimizing the risk to non-combatants.[97]

Mobility is the ability that permits military forces to gain positions of relative advantage, concentrate combat power against decisive points, and conduct high tempo operations while operating dispersed across wide areas. Army forces must possess mobility at all three levels of warfare: strategic, operational, and tactical. At the strategic and operational level this is how the Army deploys through the air and sea domain. At the tactical level, when combined with firepower and protection, mobility allows Army units to gain and maintain positions of relative advantage to overmatch the enemy.[98]

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[95] AOC, 21.

[96] Ibid.

[97] Ibid., 22.

[98] Ibid.

Innovation is the result of creative and critical thinking and the conversion of new ideas into valued outcomes for the US Army. Innovation allows for Army forces to stay ahead of determined enemies and accomplish the mission. This tenet ties in with adaptability, enabling units to quickly develop the capabilities needed to accomplish the mission.[99]

Of these key tenets, the Stryker BCT is focused on mobility, simultaneity, and depth. Mobility is one of the required capabilities identified in the O&O. With large reconnaissance assets and the ability to command and control over a large distance, the Stryker BCT is able to conduct operations simultaneously and in depth. What it currently lacks is lethality and endurance. The limited anti-armor capability and limited organic logistical support are both weaknesses in the formation.

The AOC also identified seven core competencies that are the Army's strengths, strategic advantages, and essential contributions to the joint force. These core competencies are, shape the security environment, set the theater, project national power, combined arms maneuver, wide area security, cyberspace operations, and special operations. These core competencies provide focus for leader development, force design, and unit training.[100] The Stryker BCT may not provide all of these competencies, but with those it does possess, it creates options for national decision-makers in employing force. The competencies are explained in further detail below.

Army forces provide unique capabilities to combatant commanders in their ability to shape the security environment. The Army provides a wide variety of forces to include regionally aligned forces (forces that are focused on a given geographical region in the world), which strengthen partner land forces, share intelligence, increase cultural awareness, and conduct bilateral and multilateral military exercises. Most of these efforts are designed to prevent conflict, but when necessary they can win wars. Though shaping the environment is important through the

[99] AOC, 22.

[100] Ibid.

threat of punitive action, Army forces must also conduct positive action such as reassuring allies, influencing neutrals, and dissuading adversaries.[101]

Setting the theater includes a wide variety of actions to establish and maintain conditions for joint forces to retain freedom of action. The Army's ability to set the theater and provide essential capabilities such as logistics, communications, intelligence, long-range fires, air and missile defense, power projection into any domain, and establishment and maintenance of vital infrastructure and lines of communication. Ideally, the Army's ability to rapidly set the theater deters conflict, but if deterrence fails, it allows the joint force to seize the initiative while both protecting the force and restricting the enemy's options.[102]

When responding to crises, addressing the drivers of conflict, and achieving sustainable political outcomes requires the application of all the elements of national power. The AOC defines the elements of national power as diplomatic, information, military, economic, financial, intelligence, and law enforcement. Army forces can provide the foundation to integrate the efforts of multiple partners and allow combatant commanders the ability to scale-up and sustain land forces. The Army is the only joint force element with the ability to integrate national power and conduct sustained, campaign-quality land operations.[103]

Combined arms maneuver is when combat power is applied in time and space to defeat enemy forces, seize, occupy, and defend land areas, and achieve physical, temporal, and psychological advantages over the enemy. All of these are designed to seize, retain, and exploit the initiative while maintaining a position of relative advantage. The ability to conduct combined arms maneuver across all domains is the epitome of military proficiency.[104]

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[101] AOC, 22.

[102] Ibid., 23.

[103] Ibid.

[104] Ibid.

Wide area security applies combat power to protect populations, forces, infrastructure, and activities to deny the enemy positions of advantage and to consolidate gains to retain the initiative. Army forces conducting wide area security provide the joint force commander with both reaction time and maneuver space. Wide area security includes tasks such as: establish civil security, security force assistance, establish civil control, restore essential services, support governance, and support infrastructure development. To accomplish this, Army forces must conduct continuous reconnaissance and maintain contact with the enemy to either defeat or preempt enemy actions and retain the initiative.[105]

Cyber operations are actions taking place in and through the cyberspace domain that generate and exert combat power and enable freedom of action and maneuver. The Army integrates with the joint force for offensive and defensive cyberspace operations. The Army integrates maneuver in cyberspace along with maneuver in other domains to deny the enemy's ability to conduct operations in cyberspace while retaining the ability to maneuver freely in all domains.[106]

Special operations are operations that require unique modes of employment, tactical techniques, equipment, and training. Army special operations forces are uniquely assessed, organized, trained, and equipped with distinct capabilities and authorities. They provide the combatant commander with enhanced chances of success throughout the range of military operations during all phases of a campaign.[107]

For these designated required competencies, the Stryker BCT does not provide an advantage or disadvantage to the core competencies as compared to any other BCT. Special and

[105] AOC, 24.

[106] Ibid.

[107] Ibid.

cyberspace operations are exclusive functions that reside in elite units. The Stryker BCT can adequately accomplish the remaining competencies.

The AOC does not provide descriptive and definitive answers to the capabilities the Army needs to possess. However, it does describe twenty capabilities that will be required in the future. Of those twenty, eighteen are applicable to either an Infantry, Armored, or Stryker BCT such as the requirement to deliver fires to defeat the enemy and preserve freedom of maneuver across the range of military actions.[108] Four of the capabilities highlighted provide uniqueness to the Stryker BCT. First, develop and sustain situational understanding while operating in complex environments against enemy organizations. Second, project forces, both forcible and early entry operations, and transition rapidly to offensive operations to ensure access and to seize the initiative. Third, set the theater by providing strategic agility to the joint force while maintaining freedom of movement and action during sustained and rapid operations at the end of extended lines of communications all while in an austere environment. Finally, have Army formations capable of deploying rapidly and operating to achieve missions across the range of military operations.[109] The Infantry BCT provides the early entry capability, strategic responsiveness, and rapid deployment, but due to its limited size and mobility it has difficulty developing the situation beyond what it can physically observe. The Armor BCT can maneuver about the area of operations and provide increased situational understanding, but struggles to rapidly deploy and provide strategic agility. The Stryker BCT provides all four capabilities which creates additional options for combatant commanders.

To assist in the prioritizing of resources, Army planners developed a three-phase process. This process is time-phased, and organized as near-term (2014-2020), mid-term (2020-2030) and far-term (2030-2040). In the near-term, Army leaders want to adapt "to respond to new needs or

[108] AOC, 33.

[109] Ibid.

changes without loss of functionality."[110] For the Army to adapt, it will modify existing capabilities and decisions that adjust the balance between force structure, readiness and modernization. For the mid-term, the Army will evolve "the gradual development of something into a more complex or better form."[111] The Army will use a wide variety of resourcing processes to ensure material solutions are developed and integrated fully with existing capabilities. Finally, in the far-term, the Army needs to innovate which it defines as the "act or process of trying something new, or creating new uses for existing designs."[112] For the Army, this applies to research. Ultimately the Army will need to balance near-term requirements with future development.

The AOC concludes that the Army must invest in and deliver future force capabilities to maintain a competitive advantage against increasingly capable and determined adversaries. The nature of war as well as the environment will evolve as technology, strategic guidance, joint concepts, and global and regional security challenges continue to change over time. That is why the core competencies and tenets are descriptive and provide guidelines for Army leaders to succeed while guiding leader development, force design, and unit training. The AOC assists the Army in framing the tensions between current readiness and investment of future capabilities, leaving the final decision up to Army leaders. The Army will continue to adapt and innovate, and it will provide the foundational capabilities for the joint force to prevent conflict, shape security environments, and win in a complex world.[113]

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[110] AOC, 34.

[111] Ibid.

[112] Ibid., 35.

[113] Ibid., 25.

Comparison of Organizational & Operational Statement and Army Operating Concept

The Interim BCT O&O statement was published in 2000. In the sixteen years since, the Army has found itself in a different position than what the document predicted. The terrorist attack of September 2001 changed the environment. The US military found itself fighting two wars simultaneously. In Afghanistan, the United States and coalition partners fought a non-state actor in a failed state. In Iraq, they fought against a regional military power that had developed a large conventional army. After the defeat of the conventional army, remnants of the Iraqi Army occupied the urban centers, and began an insurgent campaign that employed asymmetrical means to fight US and coalition forces. The requirements of the two conflicts forced the US Army to increase its size. With the requirements for those two conflicts receding, the Army now finds itself in a drawdown that is forcing it to choose which and how much of a variety of capabilities it must maintain.

The AOC was published in October, 2014. In the eighteen months since its publication not much has changed. Ideas and concepts introduced as examples in the AOC: the Russian invasion of Crimea, the Islamic State in Iraq and Levant, better known as ISIL, continue to exist. While the O&O went into detail on both the environment and the requirements the Interim BCT would require, the AOC has kept both the description of the environment and the Army requirements vague for Army leaders to interpret as they see fit based on the constantly changing conditions.

The AOC is not so much a new document to counter what was stated in the O&O, as it is a chance for the Army to ensure it is adapting correctly to the changing world. Sixteen years is a long time for assumptions about the future to go unchecked. For example, the O&O stated that by 2009, sixty percent of the world's population would reside in urban centers.[114] The AOC refined

[114] O&O, 2-3.

that to the year 2030.[115] The trend for urbanization and the need for US forces to operate in an urban environment is still there and both documents address it. The AOC is able to provide refined analysis, especially since it was written five years after the O&O projection was supposed to have happened.

The O&O was fairly accurate in its prediction of the future. The AOC continues many of those projections which serve as common themes across both documents. Both highlight the need for power projection across the air and sea domains. With only two neighboring countries, and bodies of water separating the United States from the rest of the world, the US military realizes that it requires expeditionary capabilities to get forces to the most likely areas of conflict. Because of the expeditionary nature of the US military, threat forces will remain focused on countering the capability to project force around the world. Both documents state that conflicts will happen quickly and the more rapidly that US forces can build combat power to potentially deter threat action, the better positioned they will be to defeat threat forces. Enemies will attempt to attack the US asymmetricaly since they do not have the conventional means to resist. The requirement for overmatch still applies, and is necessary, for the US military to maintain its advantage in lethality. The requirement for the correct force mix to respond in an expeditious manner remains a necessity. Deploying a light infantry battalion quickly to prevent an attack from an armored division is not the correct maneuver force. While symbolic of US commitment to the area of conflict, it does not provide adequate protection to those soldiers under threat. The balance between strategic responsiveness and battlespace dominance or simply put, the ability to get the right unit to the right place in the right time, is critical to future operations. Getting the right unit to the fight is only part of the problem. Once there they require the mobility to maneuver with superior firepower and protection to defeat the enemy. Many situations are very fluid and can change rapidly, the requirement for situational awareness will only increase as commanders strive

[115] AOC, 12.

to maintain the initiative. To assist in situational awareness, they require robust reconnaissance packages to help understand the operational environment. The most pronounced difference between the two documents is that the AOC describes a greater cyber threat, articulates requirements for the whole force, develops a way ahead for the entire US Army, and speaks in descriptive and qualitative tones. These specifics will assist leaders in making decisions on where to commit limited resources. In contrast, the O&O focused solely on requirements for the Interim BCT.

Gaps

Since the initial fielding of the Stryker BCT in 2003, it continues to evolve based on actual or perceived threats, an effort to improve efficiency, or an effort to address soldier concerns. Some of the changes have been small, like installing an exhaust shield deflector on the Stryker vehicle to keep exhaust out of the faces of soldiers crewing it, or improving horsepower to make the vehicle more responsive and more reliable under heavy loads. Change is one of the few constants in the Stryker BCT. There is no point in addressing every gap since there is always something to improve. The gaps listed below are the ones that can refute or confirm assumptions from the Interim BCT O&O and have a large impact on the organization, implementation, and employment of the Stryker BCT.

The wars in Afghanistan and Iraq led the Army to redesign the Stryker. The new version has a "double-V" hull (DVH) – a hull designed to mitigate the effects of buried IEDs.[116] To fund this new upgraded Stryker, the Army stopped the procurement of the MGS at 142 vehicles. This would provide on average only ten MGS to each Stryker BCT instead of the required twenty-seven.[117] The stoppage of production also meant that for any MGS destroyed, there would be no

[116] Willis, 11.

MGS to replace it. This reduction in vehicle numbers left trained armor crewmen, meant to crew the MGS, without an armored vehicle. This forced them into roles they were not trained for.

To mitigate the impact of the reduction in MGS, the Army issued the Infantry Carrier Variant, one of ten different versions of the Stryker, to the armor crewmen. This increased the number of infantry carriers in the company. Planners thought this was an adequate solution since it provided the armor crewmen a vehicle to operate. However, there are several reasons why this is not a good solution. First, the Infantry Carrier Variant requires a larger crew. Second, the O&O describes the requirement for combined arms at the company level. The removal of the MGS has an impact on that principle capability since the company is no longer a mix of armor and infantry forces. Third, it removes an anti-armor capability, which was already limited in a Stryker BCT, and does not provide any additional anti-armor assets in return for the loss of the MGS. There has been no increase in the numbers of ATGMs issued to other units in the formation nor have ATGM Strykers been allocated as replacements for the missing MGSs. Another possible option is to remove the soldiers and equipment of the MGS platoon, which consists of three MGS vehicles and twelve soldiers, and is organic to each infantry company, to create a variety of hybrid organizations with them. By doing this, the infantry companies will no longer be natural combined arms teams, one of the key points in the O&O, and several senior armor leaders will no longer have a job. By placing like vehicles and soldiers together to provide some sort of anti-armor capability for the brigade, and will allow the Stryker BCT to create some efficiencies in training and employment.

The lack of anti-armor capability strengthens the argument for more lethality on Strykers. This runs contrary to the O&O that wanted to focus capabilities on dismounted infantry. There are concerns that increased lethality on the Stryker will turn them into light tanks. Thinking you

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[117] David Axe, "The Wheeled Cannon That Everyone Hates," *War is Boring,* (June 28, 2014), accessed November 28, 2015, https://medium.com/war-is-boring/the-wheeled-cannon-that-everyone-hates-d5e6d22bdfcc#.r0j3vo84y.

have a light tank instead of an armored carrier for bringing the dismounted infantry to the fight changes how the organization fights. The vehicle would no longer be an enabler but a capability, similar to a tank. Currently, the Stryker BCT stationed in Germany has been approved as a test unit to upgrade the vehicle weapon system from the 12.7mm machine gun or 40mm grenade launcher equipped variants, neither of which can destroy light armored vehicles, to a 30mm cannon capable of destroying light armored vehicles.[118]

The DVH creates a dilemma for Army planners. The upgraded hull offers better protection from IEDs and mines, but decreases the strategic mobility of the Stryker. A normal flat bottom hull variant, less its add-on armor package, can be moved via a C-130. The DVH Strykers cannot be lifted by a C-130, and instead must be deployed by either C-17 or C-5 – far reducing the speed of delivery to a theater of operations. By deploying via a C-17 or C-5, the Stryker can retain its various add on armor packages.[119] Not all of the family of Stryker vehicles received the DVH. The Reconnaissance variant; the Nuclear, Biological, and Chemical variant; and the MGS were not selected for upgrade to the DVH.[120] Increased tactical protection for decreased strategic and operational movement, begs the question: Is the trade-off worth it?

Another area of concern is the logistical requirement for the Stryker BCT. The Stryker BCT requirement for logistic personnel is thirty-seven percent less than an Armored BCT.[121] Commonality of platforms within the Stryker BCT reduced the amount of support personnel required to sustain operational tempo. This in turn reduced the number of short tons requiring

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[118] Daniel Wasserbly, "US Strykers in Europe to Get Lethality Boost with 30mm Cannon," *IHS Jane's 360*, accessed March 15, 2016, http://www.janes.com/article/53160/us-strykers-in-europe-to-get-lethality-boost-with-30-mm-cannon.

[119] Willis, 10.

[120] Defense Industry Daily Staff, "US Army Moves Ahead with V-Hull Strykers," *Defense Industry Daily* (March 4, 2016), accessed April 3, 2016, http://www.defenseindustrydaily.com/us-army-moves-ahead-with-stryker-hull-modification-06308/.

[121] Shinseki and White, 32.

strategic lift. This made it easier and quicker for the Stryker BCT to deploy around the world. The compromise did, however; lead to a requirement for the attachment of an outside logistical unit to augment the Stryker BCT whenever it deploys.[122] In 2015, the personnel limit for the Stryker BCT was changed, and the formation gained additional logistical personnel.[123] The Army used these additional personnel to create FSCs in the Stryker BCT, which are similar to the support companies in an Armored BCT. Sustainment for the Stryker BCT was supposed to change the way the Army conducts logistics. However, the addition of the FSCs has reversed that process, and made the Stryker BCTs just like the others.

The Stryker BCT lacks the capacity to recover catastrophically damaged Strykers. The organic Heavy Expanded Mobility Tactical Truck (HEMTT) wrecker is unable to tow a disabled Stryker, forcing units to conduct like-vehicle recovery, consisting of a Stryker towing a Stryker. Or they must wait for a M88 Recovery Vehicle, which is an armored track vehicle that has trouble keeping up with the quicker Strykers and is not as reliable as the Stryker itself. If the M88, which is not organic to the Stryker BCT, has not been task organized to the formation for the deployment, then the Stryker BCT must wait for a nearby unit to provide their M88, and that unit must go without a recovery asset.

Proposed Resolution of Gaps

There are five gaps identified between the O&O and the AOC: DVH hull protection decreases strategic mobility, loss of the combined arms concept at company level, limited anti-armor capability in the Stryker BCT, inability to organically self-recover, and increase of logistics personnel and equipment. Each creates its own set of positive and negative impacts. How the US Army addresses these gaps could cause the Stryker BCT to become a completely different

[122] Willis, 8.

[123] Ibid., 5.

organization than it was originally intended to be. Or the fixes could ensure that it stays relevant to the US Army as an effective military force that creates options for combatant commanders.

The DVH hull, while providing improved protection, comes at the cost of reduced operational mobility. Since a DVH Stryker is not transportable by C-130, it can no longer perform a capability required by the O&O. But, just because it is no longer transportable by C-130, does not mean that it is not transportable at all. The range of the C-130 limits its ability to be used as a strategic deployment aircraft, and it is mainly used to transport equipment and personnel inside a theater of operation.[124] The most likely scenario for employment of a Stryker element in early entry operations is for the Strykers to be loaded onto either C-17 or C-5 aircraft (both of which are capable of carrying the DVH) at an airfield near their home station and deploy directly to the seized airhead. Therefore, the decrease of mobility would be for operational movement inside a theater of operations. With the loss of air mobility, Strykers would have to move by ground. The decrease in operational mobility can be addressed by the Stryker's own ground mobility. Meanwhile the additional armor protection for the Strykers is invaluable in preventing soldier casualties. While the action initially appears to violate the O&O, the decreased mobility is not as drastic as it initially appears since the Stryker vehicle is highly mobile once in a theater which supports both the O&O and the AOC concepts of mobility. The requirement of deploying by C-130 should turn into a goal for future vehicles.

The loss of combined arms teams at the company level goes against one of the core tenets listed in the O&O. Since the decision was made due to loss of funding, the critical question is how best to mitigate the loss of MGSs in the Stryker BCT? Doctrinal changes have moved the remaining MGSs to the anti-armor company and created a heavy weapons company.[125] This

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[124] United States Air Force, "C-130 Hercules," *United States Air Force Fact Sheet* published on September 1, 2003, accessed March 16, 2016, http://www.af.mil/AboutUs/FactSheets/Display/tabid/224/Article/104517/c-130-hercules.aspx.

[125] Willis, 22.

company can be task organized as necessary inside the Stryker BCT as required. The extra personnel freed by this new organization are to be redistributed in the RSTA squadron, which will allow the Army to standardize all RSTA squadrons at six vehicles and thirty-six soldiers per platoon. The only differences between RSTA squadrons in the various BCTs would be the vehicle platform. The tradeoff of combined arms company teams goes against one of the major tenets of the O&O. This change improves the reconnaissance capacity of the Stryker BCT and allows all MGS soldiers to train in one place under a leader who is focused solely on them. However, it reduces the infantry company's organic anti-armor capability and creates a layer of oversight to the use of MGSs. Previously, an infantry company commander had control of his organic MGS platoon which meant that he knew the MGS leadership and they knew him, and the MGS platoon was familiar with how his company operated. Under the new construct, the company commander must coordinate and get prioritized the use of MGS assets and then take time to learn the personalities of the MGS platoon and ensure they understand how his company operates. This is not an acceptable solution since it violates tenets of both the O&O and AOC by removing the capability to operate as a combined arms team at the company level. In essence, the ability to fight combined is elevated to the brigade level in the Stryker BCT. This is currently worse than Armor and Infantry BCTs who are combined arms teams at the battalion level.

With the decrease in the amount of MGSs, the Stryker BCT was reduced in its offensive anti-armor capability. Both the ATGM Variant of the Stryker and the Javelin ATGM system need to be stationary to fire, which facilitates defensive operations but slows down offensive operations. Changing the weapon system on the Stryker from a 12.7mm machine gun or a 40mm grenade launcher to a 30mm cannon, would vastly increase the lethality and provide a more offensive anti-armor capability to the Stryker BCT since it would enable the vehicles to shoot-on-the-move. But several questions remain. What effects will this new weapon system have on its deployability? How would it change the inside of the vehicle? What is the usefulness of the system in urban terrain? As discussed earlier, anything increasing the dimensions of the Stryker,

especially height and weight, would make it harder to deploy. However, with a greater lift capacity in both space and weight on C-17s and C-5s, the cannon may not pose any additional strategic deployment issues.

A larger caliber weapon requires a longer barrel to assist in accuracy and heavier components to withstand the rigors of combat. The larger weapon system would require additional room to store ammunition either on the inside, which takes away space from the soldiers, or on the outside, where it is difficult to reach and limits the ability to reload the weapon under enemy fire. The physical roof structure could potentially require reinforcement to support the heavier weapon, which could take away space on the inside. Lastly, upgrades to the internal electronic system to provide the proper power and support systems to the upgraded weapon could result in restructuring of the inside of the vehicle which could potentially decrease space. Decreasing the amount of dismounted infantrymen or making the vehicle less safe to operate for increased lethality would move the Stryker BCT away from the O&O intent. On the other hand, if the new weapon system changes little to the overall structure of the vehicle, the improved weapon could provide increased support to the dismounted infantry by providing a weapon capable of destroying light armored vehicles and therefore mitigating the impact of the reduction of MGSs to a fair degree.

Another concern is that in urban terrain, the heavier weapon system with its longer barrel, may not provide 360-degree coverage in close urban terrain due to its length. Until the details are published on how the US Army plans to upgrade the weapon system shows, it is difficult to determine the exact impacts on a Stryker. Both the O&O and AOC call for lethality and overmatch. But the O&O is clear that it does not want to increase lethality at the expense of the number of dismounts.

Another identified gap is that the Stryker BCT cannot recover catastrophically destroyed vehicles without additional resources. Those resources currently do not have the speed or reliability to keep up in fast-paced offensive operations. This liability makes the Stryker BCT

dependent on outside assets to support it and slows down operations while awaiting recovery. In turn, this requires additional offensive assets to spend time securing the damaged vehicle, which takes combat power away from ongoing offensive operations. The development of a recovery vehicle that is rapidly deployable and able to keep pace with the Stryker BCT, yet strong enough to lift and tow a catastrophically destroyed Stryker, is a tough engineering problem. A possible course of action is to design a recovery platform based on a Mine-Resistant Ambush Protected (MRAP) vehicle chassis. The wheeled vehicle could keep pace with the Stryker and even though the vehicle would not be common to the Stryker BCT, it would be common to a vehicle in the Army's inventory and may have a higher chance of actually getting produced. The lack of internal recovery assets violates the O&O's requirement for a sustainment capability that is responsive. This also violates the AOC concept of endurance since it limits the Stryker's ability to regenerate combat power. The creation of a new recovery vehicle would support the AOC's tenet of innovation.

The Stryker BCT's increase in both logistic personnel and equipment has two major impacts to the Stryker BCT. The brigade now has a more robust means of providing logistics over long distances, especially since the Stryker BCT can find itself operating in an area of operations that is two-and-a-half times larger than what was planned for in the O&O.[126] Besides the increased stress on communications that large distance creates, logistical units must work harder. Any small disruption in the "just-in-time" logistics can have a large impact to the units at the end of a long logistical line. The increase in logistical capability comes with a price. The additional personnel and additional equipment to move them means that the Stryker BCT needs even more strategic lift capacity to deploy, adding time to deploy the entire brigade. The Stryker BCT, when deploying, does not deploy in discreet packages - all the infantry companies, then all the artillery batteries, and then the logistic companies, etc. The Stryker BCT deploys in combat ready

[126] Willis, 9.

packages with a variety of assets from the brigade that are semi-sustaining and can quickly attach onto any other organization until the rest of the Stryker BCT arrives. The additional logistical elements, while delaying the time it takes to deploy the entire brigade, will provide an increased early logistical capability. The O&O realizes that there is a trade-off between deployability and the elements of lethality, protection, and sustainability. While there is no perfect answer to balance these elements, the increased logistical package seems to be closer to the mark for self-sustainability. Until technological improvements are made to both the demand and supply side of logistical requirements, the increased logistical robustness seems to be a better solution. The AOC tenet of endurance is supported by the increased logistical capability.

Conclusion

The Stryker BCT is not a perfect creation. Army leaders, each with their own set of experiences, have varying opinions on how to improve the organization and balance the key requirements of strategic deployment against lethality, protection, and sustainment. Some issues, such as restarting the MGS program, requires Congressional approval to appropriate funds. This means some of the original ideas for the Stryker BCT need to be modified to meet the same intent. By describing how and why the Stryker BCT was created, what it currently looks like, and where it needs to go, it shows that it will be relevant for the near and mid-term as it continues to adapt and evolve until a new organization with new equipment is created.

While the focus has been on what the Stryker BCT cannot do, it has had several successes which have been implemented across the Army, just as General Shinseki intended. The enhanced situational awareness provided in a Stryker BCT by either a FBCB2 or a BFT have been installed throughout the rest of the Army to assist in their situational awareness. FBCB2 and BFT both look the same to the user, a map with a set of icons to show friendly locations and either confirmed or suspected enemy contact. These digital systems can also can be used to communicate by sending digital transmissions between vehicles and conducting digital calls for

fire. The difference lies in how it is accomplished. The FBCB2 was the initial system developed for the Stryker BCT and relied on radio waves to convey information between vehicles. This requires line-of-sight between the vehicles. Meanwhile, the BFT is a refined product that uses satellites to transmit information anywhere in the world for any vehicle with the proper equipment and correct communication equipment. The BFT would not have been possible without the Stryker BCT having used commercial technology that has since been refined given the experience gained from its use.

Another capability the Stryker BCT created for the rest of the Army was the increased use of RSTA assets and an enhanced military intelligence company, which are now resident in all legacy formations. The updated doctrine of "develop the situation out of contact, maneuver rapidly to positions of advantage, and then initiate contact at the time and place of the commander's choice to achieve decision" requires a robust RSTA capability and the requirement for the Brigade to quickly synthesize intelligence from a variety of sources. The RSTA squadron, with its ground assets and organic UAVs, provides a robust organic intelligence collection capability and the enhanced capabilities of the military intelligence company provide an organic ability to analyze intelligence quickly and turn it into actionable intelligence.

While the future cannot be predicted, Army leaders must make decisions today that will impact the force for years to come. If the wrong decision is made about which capabilities to keep and which to remove, or even how much of a capability to maintain, these decisions can place the US Army in a position from which it can never recover. By keeping the Stryker BCT as a flexible force that continues to adapt and evolve as the operating environment and available technology changes, it provides options to Army leadership in both the near and mid-term future.

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