# U.S. ARMY TRANSFORMATION TOWARDS A BRIGADE-CENTRIC MODEL: LESSONS LEARNED FOR THE SPANISH ARMY

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This study presents several conclusions from the U.S. transformational experience to a brigade-centric army, and lessons learned from the evolution and operational commitments of the SBCT, presented in a warfighting functions approach. The final result is ten recommendations, derived from an analyis of the concepts and practical experiences of the U.S. Army, that might be applicable for the Spanish Army transformation

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

ABSTRACT

U.S. ARMY TRANSFORMATION TOWARDS A BRIGADE-CENTRIC MODEL: LESSONS LEARNED FOR THE SPANISH ARMY, by Maj. Luis Fco. Cepeda Lucas, 154 pages.

The current U.S. Army Transformation process has experienced several changes due to operational commitments in the Global War on Terror (GWOT) and different perceptions about required military capabilities among political and military authorities. Nonetheless, the change from a division-centric Army to a brigade-centric one has remained an essential tenet of the Future Force. This change is being implemented amidst ongoing operations in the GWOT. The Stryker Brigade Combat Team (SBCT), derived from the initial concept of an Interim Force, has been employed both as a stop-gap measure to fill immediate operational needs, and as a prototype to test the design of the Future Force's brigade. An analysis of the evolution and implementation of both, the brigade-centric construct, and the SBCT's organization and capabilities, yields valuable lessons learned from these parallel processes. The Spanish Armed Forces are also involved in a transformational process, which includes conversion of its brigades as an essential milestone. Consequently, insights derived from U.S. Army experiences may prove valuable for the ongoing Spanish Army transformation—as well as for other armies attempting to implement similar changes.

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Lastly, to my caring family, I do apologize for all the time we could not enjoy ourselves together . . . To my wife Ludivina and my sons Lucas and Luis, I owe you the most, and this work is yours. Thanks a lot.

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# ACRONYMS

| | |
|---|---|
| AC | Active Component |
| AOR | Area of Responsibility |
| ARNG | Army National Guard |
| AUSA | Association of the United States Army |
| BCT | Brigade Combat Team |
| Bn. | Battalion |
| CALL | Center for Army Lessons Learned |
| CAB | Combined Arms Battalion |
| CENTCOM | U.S. Central Command |
| CHOD | Chief of Defense Staff |
| Co. | Company |
| COIN | Counterinsurgency |
| CS | Combat Support |
| CSS | Combat Service Support |
| DA | Department of the Army |
| DOD | Department of Defense |
| DOTMLPF | Doctrine, Organizations, Training, Materiel, Leadership and Education, Personnel, and Facilities |
| FBCB2 | Force XXI Battle Command Brigade and Below |
| FCS | Future Combat System |
| FLCS | Future Land Combat System |
| FM | Field Manual |
| Gen. | General |

| | |
|---|---|
| GWOT | Global War on Terrorism |
| HBCT | Heavy Brigade Combat Team |
| HUMINT | Human Intelligence |
| HQ | Headquarters |
| IAV | Interim Armored Vehicle |
| IBCT | Infantry Brigade Combat Team |
| IED | Improvised Explosive Device |
| MGS | Mobile Gun System |
| MRAP | Mine-Resistant Ambush Protected Vehicle |
| NCO | Network-Centric Operations |
| OEF | Operation Enduring Freedom |
| OIF | Operation Iraqi Freedom |
| QDR | Quadrennial Defense Review |
| Recce | Reconnaissance |
| RMA | Revolution in Military Affairs |
| RSTA | Reconnaissance, Surveillance, and Target Acquisition |
| SAF | Spanish Armed Forces |
| SBCT | Stryker Brigade Combat Team |
| SecDef | Secretary of Defense |
| SLIB | Spanish Legion Infantry Brigade |
| THT | Tactical HUMINT Team |
| TRADOC | Training and Doctrine Command |
| UA | Unit of Action |
| UAV | Unmanned Aerial Vehicle |
| UE | Unit of Employment |

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# CHAPTER 1

# INTRODUCTION

> We were fortunate during Desert Storm that our enemy afforded us a six-month delay that allowed repositioning that Cold War force and re-equipping it for a decisive win. . . . In today's strategic environment, we must possess force characteristics that enable us to initiate combat on our terms, to retain the initiative, to build momentum quickly, and to win decisively. The Army must transform in order to develop and field a force that possesses these characteristics more fully today and into the future.
>
> General Eric Shinseki, U.S. Army Chiefs of Staff
> *Statement at Committee on Armed Services*
> *United States Senate, 2000*

Since its conception in the 1990s, the current U.S. Armed Forces Transformation has undergone several changes due to external realities. While some of these changes were originated by the protracted Global War on Terrorism (GWOT), others were a consequence of different political perceptions about military power within the Department of Defense (DOD) and Department of the Army (DA). Nevertheless, the evolution from a division-centric Army to a brigade-centric one has endured as the main transformational issue from an organizational standpoint for the U.S. Army. The brigade was conceived as the basic operational block, but with some specific features that made it different from the existing brigades. The Future Force brigade was to be the result of an evolution from the current brigade, with a brand-new interim unit as the primary transformational asset: the Stryker Brigade Combat Team (SBCT).

Presently, the Spanish Armed Forces (SAF) are involved in a transformational process, with key implications for the Spanish Army. With a focus on deployability and operational readiness, the final structure is to be based on the brigade as the main operational structure, which includes organically all basic warfighting capabilities.

Restructuring the Spanish Army according to this model is concurrent with recent decisions on materiel acquisition to field brigades with all the desired capabilities. Consequently, the identification of lessons learned from the U.S Army transformation process towards the brigade-centric structure, and insight from the SBCT lessons learned and modifications, can be valuable for the current Spanish Army Transformation process.

The purpose of this research work is twofold: first, to identify major issues related to the modifications on the U.S. Army transformational process with implications in the brigade-based construct; and second, to identify possible lessons learned from the U.S. Army process that may be applicable to the Spanish Army transformational process towards the future brigade, with recommendations for the Spanish Army Transformation. The results of this research work might also be valuable to other armies involved in a similar process.

## Background

The current U.S. Armed Forces Transformation process was conceived during the 1990s, once the collapse of the Soviet Union put an end to the two-block paradigm that had driven U.S. security policy for more than 40 years. The U.S. Army had to evolve in order to effectively face a vast array of new threats that challenged United States power beyond the mass of Warsaw Pact tanks and other Cold War era menaces. Moreover, the U.S. Army required *"a change"* to maintain relevance as an effective security tool capable of a flexible and timely response wherever the national interest would demand its employment. "If you don't like change, you are going to like irrelevance even less" was the slogan of General Shinseki, former Army Chief of Staff, to overcome reluctance to change within senior Army leaders (Boyer 2002).

The aim was to reach an Objective Force that would provide an adequate response to envisaged threats and operational challenges in the coming decades. The Transition from a division-centric to a brigade-centric Army, which adequately balanced "combat power" *versus* "rapid projection" capabilities, formed the basis for the Army transformational process from an organizational standpoint. This led to the definition of the Army Modular concept, with a brand-new Brigade Combat Team (BCT) as the centerpiece of this model.

The SBCT concept was envisaged by Army Chief of Staff General Eric Shinseki as a rapidly deployable, medium-weight combat force that could operate throughout the full spectrum of conflict (Krepinevich 2008, 14). This unique BCT was called after the Army's name for the family of wheeled armored vehicles which will constitute most of the brigade's combat and combat support vehicles, the *Stryker*. The creation of the SBCT as the interim prototype for the future BCT was an essential milestone in this process. In addition, an outstanding acquisition and research project was conceived to field the Army units with all the capabilities required for this new design. The so-called Future Combat System (FCS) program aims at providing all these capabilities through the integration of up to 14 new systems to create an integrated "system of systems," resulting in the FCS BCT as the desired end state of the U.S. Army Transformation for all combat units.

Thus, the BCT became the basic block for this new modular construct, with only three types of maneuver combat Brigades: Heavy (HBCT), Infantry (IBCT) and Stryker (SBCT). In essence, each BCT is composed of two Combined Arms Battalions (CAB), one Fires Battalion, one Brigade Support Battalion, one Reconnaissance, Surveillance, and Target Acquisition (RSTA) Squadron, one Brigade Special Troops Battalion, and one

Headquarters Company. SBCT includes three CABs., and some other variations. The main innovation was that former division-level enablers (fires, logistics, intelligence, engineers) became organic within the new BCTs. Consequently, in 2003 the U.S. Army started an extensive reorganization process to transform all former divisional brigades into the new BCT structure, while setting up others. All these transformations would be accomplished by 2015. The final number of BCTs in the Active Component (AC) will be 47, plus one Armored Cavalry Regiment (ACR), distributed as follows: 18 HBCT, 23 IBCT, and 6 BCT. In addition, the Reserve Component will include 7 HBCT, 20 IBCT and 1 SBCT, a total of 28 BCTs, all belonging to the Army National Guard (ARNG). This transformation of all Infantry units into BCTs runs in parallel with the creation of five different types of supporting brigades (Battlefield Surveillance Brigade, Combat Aviation Brigade, Sustainment Brigade, Maneuver Enhancement Brigade, and Fires Brigade), as well as several functional brigades with other military capabilities not included in the brigade level (e.g. Air and Missile, Military Police, Civil Affairs, etc).

This represents the major organizational issue within the U.S. Army Transformation. Nevertheless, it is scheduled that the Future Force will consist of just one type of BCT, which will be fielded with the FCS. One of the main consequences of the current operational commitments is the debate on the wisdom of whether to evolve towards this unique and single FCS BCT-type unit, which implies that current heavy units based on platforms such as M-1 Abrams and M-2 Bradley be withdrawn, or to maintain HBCTs and IBCTs within the Army inventory. Moreover, Army ongoing operational commitments in the GWOT demand an upgrading of these legacy platforms,

with different criteria between the Army and the DOD on the convenience or not for these investments[1].

Nevertheless, ongoing operations in the GWOT as well as different views at the DOD and DA levels have apparently modified the initial path of this transformational road. Modifications in the Army Modular concept are some of the consequences of the new "tempo" imposed by both the GWOT requirements and the political inputs from DOD level. Secretary of Defense (SecDef) Donald Rumsfeld's personal views on the military power also had a great influence on these modifications. Furthermore, internal Army dynamics also remodeled this path towards the Objective Force as conceived in the 1990s, reflecting Army Chief of Staff's different views, as was the case of General Shinseki and General Schoomaker's diverging visions. Related to this argument, the 9/11 terrorist attacks represented a tragic shock not only for the U.S. but also for the entire world. In the wake of this unexpected massive aggression within the U.S. homeland, the Bush administration took eventful decisions in order to promptly respond to the new threat. A GWOT was declared, with Operation "Enduring Freedom" (OEF) and Operation "Iraqi Freedom" (OIF) as major commitments for the U.S. Army.

The Spanish Minister of Defense is involved in a challenging transformation to redesign both organization and capabilities of the SAF according to the new operational environment and redefined political objectives. Within the Spanish Army, recent decisions on materiel acquisition are occurring concurrently with a new design of the Army Force with the brigade as the centerpiece for operational employment of landpower. A new 8x8 vehicle is to equip the Spanish Army units in the close future, as well as other weapons systems in order to increase operational capabilities in the

brigades. To this respect, the SBCT would be a valid model to implement a new medium-type brigade for the Spanish Army, whose structure would capitalize both recent materiel acquisitions and U.S. experiences in the GWOT. When considering organizational issues, it can be inferred that both U.S Army and Spanish Army transformational models have some similarities, whose analysis is of value for potential readjustments in the desired end state.

## Research Questions

The hypothesis of this work is that, although the scope and level of ambition of the U.S. Armed Forces Transformation is far beyond those of the SAF due to U.S. specific operational requirements, certain lessons learned related to the evolution towards a brigade-based construct are applicable to the Spanish process. Some issues and dynamics of the U.S. case are also noticeable in the Spanish one, which can help defining the way ahead towards the Spanish Army transformational path.

The primary research question of this work links both the U.S and Spanish Armies' organizational transformations: Are there lessons learned from the experiences of the U.S. Army in transforming divisional brigades to modular brigades that could be applicable to the Spanish Army case? The present study will both answer this question and obtain conclusions on several issues of interest for the Spanish transformational process, with emphasis on modifications due to ongoing operations in the GWOT. SBCT performance will be a case study to conclude recommendations for the Spanish brigade based on modular U.S. experiences.

For the purpose of addressing the primary question, two secondary questions are defined, with some tertiary questions each:

1. What major conditions influenced the decision within the U.S. Army for the transformation from a division-centric to a brigade-centric Army?

a. How have personal views on land military power at DOD/DA level and OEF/ OIF campaigns influenced the U.S. Army transformational design?

b. To what extent has the SBCT performance influenced the desired end state towards the Future Force based on the BCT?

2. What similarities and differences are there between the U.S. and Spanish Army BCT organizational design?

a. What main determining factors are influencing the design of the Spanish Army around the BCT?

b. What lessons learned from the U.S. process are applicable to the Spanish Army?

## Assumptions

The first assumption of the author is that some aspects of the U.S. Transformation process are imputed to personal views that are independent from pure operational requirements, with significant influences by both political and military leaders. It is also assumed that the GWOT has imposed essential modifications to the Army Modular concept, as the demand for infantry brigade-type units increased. Another assumption is that the SBCT is used as the testing ground for the Future Force BCT, and has evolved from its initial conception due to useful exploitation of valuable lessons learned from its commitments in OEF and OIF. And a final major assumption is that the current Spanish Army Transformation can benefit from the U.S. process, with similarities that permit an analysis of valuable lessons learned leading to recommendations for the Spanish case.

## Concepts

The term *Transformation* must be defined to provide an adequate focus to the research project. There are plentiful documents and literature on this topic, with definitions provided by both official papers and unofficial sources. For the purposes of this work, the author defines *Armed Forces Transformation* as "a comprehensive redesign of one nation's Armed Forces towards a clearly defined end state, with fundamental changes in main aspects: institutional, doctrinal, organizational, materiel, leadership and training." Thus, its scope is far beyond other modernization or upgrading processes experienced by some Armed Forces. The focus is on a clear definition of the "ends," which makes it different from other reengineering and rightsizing processes that "fall short of true Transformation" (Kem 2006, 88). The key remains in a well-defined purpose for this change, which must be ultimately the driving factor for a comprehensive redefinition of all constituent elements of a nation's Armed Forces.

*Revolution in Military Affairs (RMA)* is another concept requiring clarification. The RMA concept was devised in 1993 by Andrew Marshall, director of the Office of Net Assessment, referring to a new conceptual approach to warfare that requires "the assembly of a complex mix of tactical, organizational, doctrinal, and technological innovations" (Knox and Murray 2001, 12). Thus, the RMA refers not only to the use of new technologies but also to essential changes in the field of doctrine and organization, which is clearly similar to the Transformation concept. Some authors consider that the Transformation superseded the RMA in the end of the 1990s as the centerpiece for the international debate on defense issues (Colom 2008, 20). For the purposes of this work, the concept RMA is to be considered as the antecedent of the concept Transformation,

which is the term accepted worldwide to refer to the RMA presently. For other authors, the term Military Revolution has a wider scope than the RMA, considering the former as "an earthquake that recasts society and the state as well as military organizations" (Knox and Murray 2001, 7), with an impact far beyond that of a RMA. This statement provides the basis for discussion on to what extent the U.S. Armed Force's Transformation could also be considered as a Military Revolution.

The *Objective Force* was the desired end-state for U.S. Army units once transformation completed. It was conceived as the result of three convergent major transformational efforts (see Figure 1): the "Current Force" (Legacy Force); the Research & Development project (focused on the FCS); and the "Interim Force" (SBCT). The Objective Force is currently known as the *Future Force*, with both terms considered as synonyms in this research project. Nevertheless, both terms refer to different concepts, as *Objective Force* was defined in 1999 and *Future Force* is utilized from 2005 on. Consequently, when considering the *desired end-state of Army's Transformation*, both are to be used in this research project as synonyms.

The *Future Combat System (FCS)* is another concept discussed in this study. From an U.S. Army standpoint, it represents both the biggest modernization effort and the most expensive investment project ever, as it has been conceived to serve as the "materiel solution" for the Future Force. Basically, the FCS consists of a networked array of brand-new materiel and equipment that is to work as a "system of systems" to conduct full-spectrum operations. All these systems, fourteen in total (plus the Soldier and the Network itself), represent a re-equipment of Army units in an innovative fashion never

experienced before. Completely new doctrine and organizational procedures are required to fully implement this FCS within Army units.

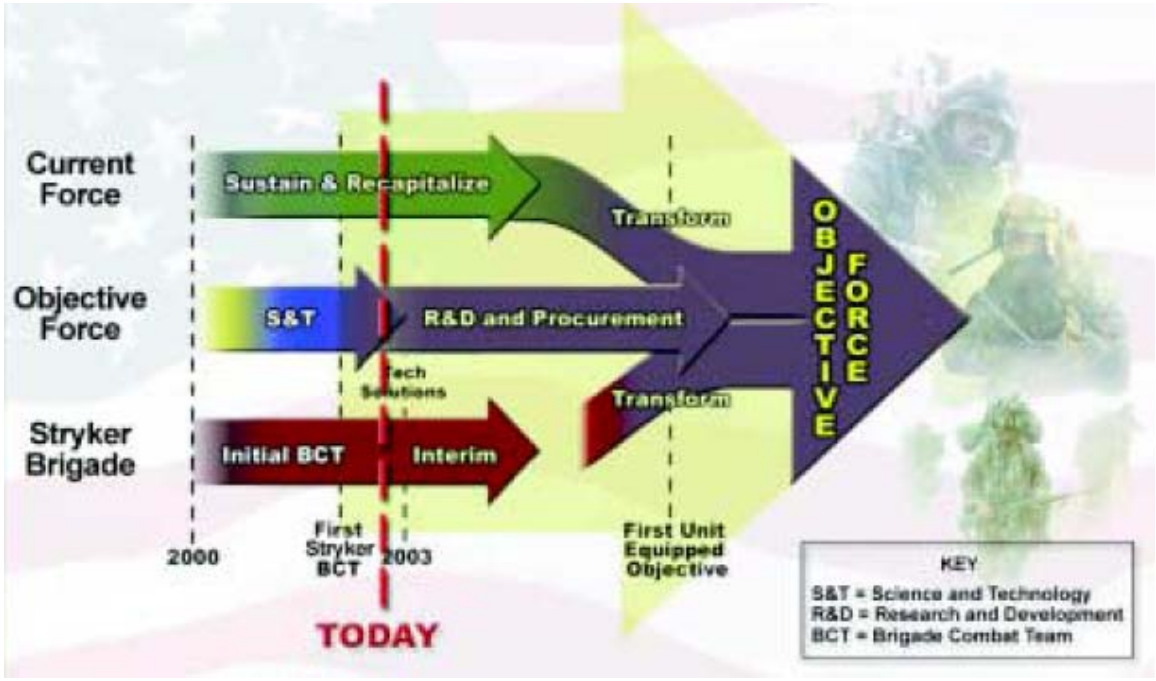


Figure 1. Army Transformation Process
*Source.* Association of the United States Army (AUSA), *How "Transformational" is Army Transformation?* (2003), 7, http://www.ausa.org/PDFdocs/ tbtransformation.pdf (accessed October 15, 2008).

Another term that is to be defined is *Lesson learned.* The Center for Army Lessons Learned (CALL) defines it as "Knowledge gained through experience, which if shared, would benefit the work of others." From this perspective, experiences of the U.S. transformational process are "lessons learned" for the purposes of this work, as they are useful for the Spanish Army case.

## Limitations

The Army Transformation process comprehends essential implications on doctrine, organizations, training, materiel, leadership and education, personnel, and facilities, the so-called DOTMLPF domain. Army doctrine considers DOTMLPF as a "problem-solving construct for assessing current capabilities and managing change" (DA 2005, 4-4). This model suits with a comprehensive stance for transformation. Nevertheless, the study on possible changes to the transformational process will be essentially centered on *organizational aspects,* for the evolution towards a brigade-centric Army is considered as the main transformational issue from an organizational standpoint.

The impact of personal perspectives at DOD level will be limited to those occurred of SecDef Rumsfeld's. From an Army perspective, the study will center on different views of Gen. Shinseki and Gen. Schoomaker, as Army Chiefs of Staff during referred period. Consequences of the GWOT will be considered between 2001 and 2006.

Transformation in the SAF and in the Spanish Army will refer to information available up to January 2009. It will be understood that recent changes in both the DOD and the highest military leadership at Armed Forces and Army levels could modify some aspects of the ongoing transformation process. The rest of research will focus on available data as of January 15, 2009, due to MMAS program schedule requirements.

This work will consider only unclassified official documents and open sources. Nevertheless, potential future research could exploit classified sources in order to provide more in depth on some aspects derived of this research study.

The current U.S. Armed Forces Transformation involves a myriad of issues beyond those included in this study. The comprehensive scope of this concept

encompasses all facets of the Army, as it is driven to change in order to fulfill operational requirements for the 21st century. New approaches to Leadership, upgrading of the Legacy Force, innovative training procedures, impact of the FCS in the Commander's visualization of the battlefield, implications of the Army transformation on Corps HQs and above, are just some examples of potential further field of research which are not the subject of this study. Other transformational lessons learned related to material, doctrinal and training issues would also be of value as subject for future works.

## Thesis Structure

This work is articulated in five chapters. Chapter 1 establishes the essential background and research framework. Chapter 2 provides a brief overview of the main sources used for this thesis in order to focus research and initial analysis of different sources. There is a vast quantity of literature on the U.S. Armed Forces and Army Transformation. Initially, this Chapter will address official sources to research the Army redesign towards a brigade-centric construct. Some antecedent documents at DOD, Joint Chiefs of Staff (JCS) and DA levels are included to provide an adequate background to the Army Modular concept. Other unofficial works and articles published by defense analysts, journalists, or degree applicants also referring to the land forces redesign on the BCT model and the role of the SBCT are of interest for this research. Books and articles revealing influences from policy and military decision makers will also be included to research on their influence on this process.

With regard to the SAF Transformation, the literature is by far much limited as this issue is still under development. There are also a number of official sources dealing with Spanish transformational issues referring to organizational and equipment aspects,

with room for improving a comprehensive approach to this concept. Some Spanish defense analysts whose publications are included also address this issue. Public statements by top military and political leaders are also another reference for this research.

Chapter 3 describes the methodology used to confirm the hypothesis, with a rationale on selecting a qualitative methodology due to the lack of substantive quantitative data for such research. A descriptive study with a cross-reference of multiple sources helped identify common themes and details to clarify the evolution in the U.S. Transformation and influencing factors. One comparative case study based on the SBCT experiences in OIF is used to obtain conclusions on the U.S. and Spanish approaches to the BCT, based in a warfighting functions analysis[2].

Chapter 4, articulated in three blocks, focuses on answering secondary and tertiary questions. First, this work addresses major issues regarding the evolution towards a BCT structure from a divisional one. Army Transformation is a comprehensive endeavor that involves much more than just new materiel acquisition, as it implies profound changes on all the fields included in the DOTMLPF domain. The Army Modular concept can be considered as the main product of the organizational aspects within the DOTMLPF transformational domain. Nevertheless, this construct has suffered modifications due to different views on the employment of U.S. military power by DOD and DA decision makers, as well as due to the 9/11 attacks and subsequent outbreak of the GWOT. Conclusions on the role of SecDef Rumsfeld and his particular view on the employment of the military power are of interest as a way of identifying to what extent one person's stance can influence operational transformational requirements.

Another block in Chapter 4 analyses the role of the SBCT as the mainstream transformational tool for the way ahead towards the Future Force BCT. At the end of the 1990s, the SBCT was envisaged by General Shinseki to fill an essential gap within the U.S Army, in both transformational and operational aspects. Initially named as Interim Brigade Combat Team, it represented the bridge between the current force (or Legacy Force) and the Future Force, as it was to become the transformational prototype for the forthcoming BCTs. As a main testing ground for major innovations in the DOTMLPF domain, the SBCT incorporated unique aspects that characterize future BCTs. It also encompassed those related to Network-Centric Operations (NCO), including a new operational concept, organizational structure, and networking capabilities (Gonzales et al. 2005, xiii). But at the same time, the SBCT also filled an operational gap while addressing an important Army capability shortfall, which was to rapidly deploy a unit with enough combat power to face contingencies all over the globe. On November 2003, the 2nd Infantry Division's 3rd Brigade was the first SBCT deployed to Iraq, followed by others, which yielded essential lessons learned to reassess the new BCT construct.

The SAF is also involved in a transformation process, with important implications for the Spanish Army across the DOTMLPF field. The last block of Chapter 4 will analyze lessons learned from the U.S. case in their evolution towards the brigade-centric model, as well as SBCT performance, which are applicable to the Spanish process or even to other armies also involved in a similar one. Different capabilities and potential gaps will be identified through studying implementation of warfighting functions. Finally, Chapter 5 will include a series of recommendations for the Spanish Army's Transformation, taking advantage of the U.S. experiences.

Once the indispensable research framework and a basic background on the transformational process in both the U.S. Army and the Spanish Army are outlined, as well as provided essential concepts of recurrent use in this work, Chapter 2 will examine the literature available on this issue. As the Armed Forces transformation is a topical issue nowadays that attracts the attention of a large number of defense analysts and specialized writers, an accurate literature review is a key step to research on this subject.

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[1]In September 2008, the U.S. Army attempted to reallocate up to $ 1 billion from upgrading hundreds of M-1 Abrams in favor of the FCS program, as additional $ 2 billion would be required in 2010 and 2011 for the FCS. But the DOD comptroller's office opposed to cutting Abrams funds. "There is something about having a 72-ton tank that can take hits and absorb all kinds of punishment. It has a place in irregular warfare," a senior Pentagon official said (Osborn 2008, 56).

[2]A *warfighting function* is a group of tasks and systems (people, organizations, information, and processes) united by a common purpose that commanders use to accomplish missions and training objectives (FM 3-0 2008, 4-3). The warfighting functions are: movement and maneuver, intelligence, fires, sustainment, command and control, and protection.

# CHAPTER 2

# LITERATURE REVIEW

> Some believe that with the United States in the midst of a dangerous war on terrorism, now is not the time to transform our armed forces. I believe that the opposite is true. Now is precisely the time to make changes. *The war on terrorism is a transformational event* that cries out for us to rethink our activities, and to put that new thinking into action.
>
> Donald Rumsfeld, Secretary of Defense
> *Transformation Planning Guidance*
> *Department of Defense, April 2003*

As stated in Chapter 1, the primary research question of this work links both the U.S and Spanish Army transformations from an organizational standpoint. Are there lessons learned from the experiences of the U.S. Army in transforming divisional brigades to modular brigades that could be applicable to the Spanish Army case? This work will not only answer this question but also will reach conclusions on several issues of interest for the Spanish transformational process, with potential value for other armies that might be interested in this process.

Chapter 2 provides insight on different sources available to research on the hypothesis for this work. Essential primary sources for this research project are official documents and doctrinal publications. In this respect, U.S. sources are more abundant than Spanish ones, as this is still a new process within the Spanish Army. Other primary sources to consider are public statements of senior political and military leaders of both countries, and personal interviews with military authorities in both the U.S. and Spanish Armies directly involved in the process of transforming their military.

There is a vast amount of unofficial literature on U.S. defense transformation and quite a lot on the U.S. Army path towards the Future Force. Numerous defense analysts and

specialized writers on military issues have published their works, providing numerous valuable documents for this research. Nevertheless, the Spanish literature is less ample as this is a more recent process.

## The Path Towards the Brigade-Centric Army: Influences on the Process

The basis for the present U.S. Army Transformation was outlined by Army Chief of Staff, General Eric Shinseki, in a speech before the 45th Association of the United States Army (AUSA) annual meeting, on October 12, 1999. His particular vision was presented before the Committee on Armed Services on March, 2000, and stated in the *Army Transformation Campaign Plan* in April, 2001. Considered as the cornerstone of the Army transformational process, his strategy was to go forward along three major paths: the Legacy Force, the Objective Force and the Interim Force (Shinseki 2000, 7).

Other official DA documents permitting to track the development of this concept and eventual modifications are *The Army Modernization Strategy; The Army Transformation Roadmap; The Army Transformation & The Army Campaign Plan;* and *U.S. Army White Paper: Concepts for the Objective Force.* Annual *Army Posture Statement* also permits to follow the evolution of the transformation process.

*Public statements* of top-level military and civilian leaders before the House Armed Services Committee, as well as documents on congressional oversight through the General Accounting Office (GAO) and Congressional Research Service (CRS) Reports for Congress, constitute other important research sources. GAO report *Military Transformation: Army Has a Comprehensive Plan for Managing Its Transformation but Faces Major Challenges* (2001) portraits the major challenges faced by the recently

developed Army Transformation Campaign Plan, with a serious setback: “the lack of an overall Department of Defense (DOD) transformation strategy has led the Army to proceed with its transformation plans solely on the basis of broad departmental guidance rather than a clear understanding of how its efforts fit into an overall scheme for military transformation” (GAO 2001a, 2).

The *Quadrennial Defense Review Report* (QDR) *2001*, published right after the 9/11 attacks, can be considered as “the QDR of the Transformation,” as it outlined the SecDef Rumsfeld’s vision to implement the announced DOD Transformation. In April 2003, with the *Transformation Planning Guidance,* the DOD defined its vision and objectives for defense transformation. This document stated a “Strategy for transformation,” with four transformation pillars: strengthening joint operations, exploiting U.S. intelligence advantages, concept development and experimentation, and developing transformational capabilities. It assigned senior leader specific roles and responsibilities to ensure its implementation, as for example the submission of a service “Transformation Roadmap,” which was to be updated annually. Thus, annual publication *Army Transformation Roadmap* is a result of this DOD requirement and another important primary source to research the process.

Doctrinal publications are another essential primary research source. The *Army Comprehensive Guide to Modularity* (2004), from the U.S. Army Training and Doctrine Command (TRADOC), provides a detailed account on the modular concept. This approach, although encompassing a new organizational redesign, focus on the BCT as “the centerpiece of the modular Army,” with Part III (Chapters 6 to 10) dedicated to describe its

capabilities and organization. Other key doctrinal reference is the Field Manual (FM) 3-0.1 *The Modular Force* (2008), an indispensable source to assess changes in the model.

Periodical CRS report series on *U.S. Army's Modular Redesign*, submitted by Feickert in May 2005, May 2006, and January 2007, are important to identify the evolution of the Army Modular force concept. Moreover, CRS reports in the series *Defense Transformation*, submitted by Ronald O'Rourke in April 2005, February 2006, August 2006, November 2006, and January 2007, represent excellent research sources to investigate the evolution and modifications of the transformational process at DOD level and their implications for the Army. Other CRS reports *The Army's Future Combat System (FCS)*, submitted by Andrew Feickert in April 2005, January 2007, October 2007, and May 2008, represent a valuable source to investigate the evolution and modifications from a materiel standpoint, with references to the organizational aspects.

Previous Master of Military Art and Science theses are likewise another important source, as well as those research projects conducted in the U.S. Army War College. Moreover, articles published in magazines *Parameters* and *Military Review*, and opinion articles published by defense analysts, are also of value as secondary research sources.

When considering all agents and factors influencing this transformational process, an ample literature is available. The Transformation is one of the main topics of the defense debate nowadays. Published books and official unclassified documents are an important source to frame the rationale for the Army Transformation path, with official DOD and DA documents as essential reference. The work of Mark D. Mandeles *Military Transformation Past and Present: Historic Lessons for the 21st Century* (2007) represents an excellent reference to understand the general framework and organizational implications of this

process. Max Boot, in *War Made New: Technology, Warfare, and the Course of History, 1500 to Today* (2006), portraits a splendid account on how past advances in technology have influenced Armed Forces procedures and performance. These studies allow us to obtain conclusions on the significance of technology for such a transformational process.

The work *Entre Ares y Atenea: el Debate sobre la Revolución en los Asuntos Militares* (Between Ares and Athenea: the Debate on the Revolution in Military Affairs, Colom 2008) represents an essential analysis on the significance of the RMA concept for the evolution of warfare, and the relationship between RMA and the term "Military revolution." According to this author, Transformation replaced the RMA at the end of the 1990s, while assuming basic principles of the RMA. Other published books that permit to research on the Transformation meaning and implications are those of Bill Phillips *Transformation: How to Change Everything* (Phillips 2007), Geoffrey Parker *The Cambridge History of Warfare* (Parker 2005) and, MacGregor Knox and Williamson Murray *The Dynamics of Military Revolution 1300-2050* (Knox 2001).

Political decisions at presidential and DOD level regarding utilization and conception of military power are also researchable from numerous books published. Transforming the DOD was the initial major endeavor for the SecDef Rumsfeld when he took office in January 2001. The best account on Bush's plans to transform the U.S. military was pronounced in September 1999, at The Citadel, when the Republican candidate announced his view on the security and defense policies to be implemented during his tenure:

> As President, I will begin an immediate, comprehensive review of our military--the structure of its forces, the state of its strategy, the priorities of its procurement--conducted by a leadership team under the Secretary of Defense. I will give the Secretary a broad mandate--to challenge the status quo and envision a new

> architecture of American defense for decades to come. We will modernize some existing weapons and equipment, necessary for current tasks. But our relative peace allows us to do this selectively. The real goal is to move beyond marginal improvements--to replace existing programs with new technologies and strategies. To use this window of opportunity to skip a generation of technology. This will require spending more--and spending more wisely. (Bush 1999)

The work of James Kitfield *War & Destiny: How the Bush Revolution in Foreign and Military Affairs Redefined American Power* (2005) provides an accurate picture on the Bush administration's ideal on military power employment and transformational goals, with insight on the efforts of SecDef Rumsfeld to overcome reluctance to "revolutionary change" by senior military leaders, who favored "Army heavy divisions, Navy aircraft carriers, and Air Force tactical fighters." It also describes to what extent the so-called "Rumsfeld doctrine of Transformational Warfare" and SecDef personal interferences influenced U.S. Central Command (CENTCOM) military planning for OIF.

The work of Harlan K. Ullman *Shock and Awe: Achieving Rapid Dominance* (Ullman 1996) was inspirational for the Rumsfeld's way of conceiving warfare.

> The basis for Rapid Dominance rests in the ability to affect the will, perception, and understanding of the adversary through imposing sufficient Shock and Awe to achieve the necessary political, strategic, and operational goals of the conflict or crisis that led to the use of force. (Ullman 1996, Chapter 2)

Thus, Ullman stated a new way of conducting warfare. "Rapid dominance" over the enemy would be achieved with high altitude, precision, air strikes combined with employment of small- size light ground units, preferably Special Forces, while maximizing the capabilities of new information technologies. The campaign objectives were to be achieved with a minimum footprint on the ground, which was on the basis of OEF to eliminate Al- Qaeda's presence in Afghanistan, in 2001. The political guidance for planning OEF was also based on the same principles.

The performance of SecDef Rumsfeld and his influence on the transformational decisions is described in an abundant literature. Andrew Cockburn, in *Rumsfeld: His Rise, Fall, and Catastrophic Legacy* (2007), describes how Rumsfeld favored armament corporations. During his first tenure as SecDef with the Ford administration, the Army was in favor of equipping the new tank, M-1, with a 105 millimeter gun and a diesel engine. Rumsfeld decided to equip the M-1 with a 120 millimeter gun and a turbine engine, favoring Chrysler Corporation, which was at that moment in a difficult financial situation (Cockburn 2007, 49).[1] This work gives an account of Rumsfeld's devotion for Andrew Marshall's theories, the father of the term RMA and director for the Office of Net Assessment (Cockburn 2007, 99), with close similarities with Ullman's postulates on "Rapid Dominance" and "Shock and Awe." Initially, to an outside observer, Rumsfeld's designation as SecDef seemed a wise choice to undertake the defense transformation, for his credentials as efficient manager and CEO in the corporate world (Cockburn 2007, 109). Eventually, for many analysts, his performance in the following years felt far beyond these initial expectations.

Another perspective on Rumsfeld's personality and values is provided by Jeffrey A. Krames in *The Rumsfeld Way: Leadership Wisdom of a Battle-hardened Maverick* (2002). Published before the Iraqi war, it portraits a positive image of Rumsfeld as an efficient SecDef during the Ford administration, as well as his accomplishments in the corporate world in the 1980s and 1990s, highlighting his leadership abilities.

Douglas J. Feith, Under Secretary of Defense for Policy from 2001 to 2005, with *War and Decision: Inside the Pentagon at the Dawn of the War on Terrorism* (2008), gives a well-documented account on how the 9/11 and ensuing GWOT modified DOD priorities

and policies. Influences of the GWOT on the Transformation process and some interesting remarks on the meaning of the Transformation for the U.S. military are found in the work of Thomas P. M. Barnett *Blueprint for Action. A Future Worth Creating* (2005). Another essential work to identify modifications in the concept of Transformation due to the ongoing GWOT is that of Douglas A. Macgregor *Transformation under Fire: Revolutionizing How America Fights* (2003).

Frederick W. Kagan, in *Finding the Target: The Transformation of American Military Policy* (2006), offers an exceptional vision on the antecedents and way ahead of the transformational efforts in the U.S. Armed Forces. Starting in the aftermath of the Vietnam War, it covers the Reagan modernization endeavor, the emergence of the RMA and transformational studies conducted in the 1990s. Chapter 6 describes the influence of the Army's lack of responsiveness during the NATO campaign in Kosovo for accelerating Army transformation. Problems associated with the deployment of Task Force Hawk in Albania, "a catastrophe for the Army" (Kagan 2006, 241), were the trigger event for the current transformation. Moreover, Chapters 8 and 9 refer to what extent the OEF and OIF have conditioned this process, with chapter 10 providing a prospective vision on the way ahead for the next decades. This book also extensively describes Rumsfeld's views on transformational issues, attributing to him an "extreme introversion of NCW thinking," which would impede an appropriate focus on defining a clear end state for this process:

> Because of his roots in the business world, NCW focused on changing the way the military did business rather than on changing the business the military did. (Kagan 2006, 317).

In *The Military We Need: the Defense Requirements of the Bush Doctrine* (2005), Thomas Donnelly, a reputed defense analyst, analyzes the implications of the so-called

"Bush doctrine" for the U.S. military, which would require an increase of the Army's size. He defines the Army Modular concept and the brigade- centric construct as "an ant's-eye view" of the Army's overall mission, with a need on focusing more on "building a theater army for the long- running war in the great Middle East rather than the perfect brigade." Moreover, he defends the relevance of heavy units, criticizing the excessive emphasis on deployability, for

> The mission of land combat vehicles involves more than shipping them or airlifting them to a remote theater and then driving across a bridge. (Donnelly 2005, 59)

Donnelly states the same vision in another work, co-written with Frederick Kagan, *Ground Truth: The Future of U.S. Land Power* (2008). It represents a sound statement in favor of increasing ground forces, for their shortage remains as "the tightest constraint on U.S. military strategy . . . undercutting America's ability to fight the Long War." It also provides a plan of action for policymakers to begin the vital rebuilding of Army and Marine forces, dramatically strained as a consequence of the long-lasting OEF and OIF.

Several works edited by Williamson Murray incorporate the thinking of students at the U.S. Army War College. These essays consider the nature and direction of Transformation, and define its concept. It is far beyond the "modernization" that all armies need to undertake, for "Transformation refers to dramatic changes in organization, employment, and/or doctrine that affect dramatically structure and purpose" (Murray 2002, 26). Moreover, a genuine Armed Forces' Transformation rarely occurs in peacetime, for "the full impact and implications of technological, doctrinal, and tactical changes can never be clear in peacetime until war actually begins" (Murray 2001, 6). This statement was written in July 2001, months prior to the 9/11 terrorist attacks, and apparently gives

consistence to the idea that Transformation is driven by a war situation, as was the U.S. case with the GWOT.

## The SBCT: Transformational Prototype for the Future BCT

The SBCT is the object of an extensive literature since its conception as the Interim Brigade Combat Team towards the Objective Force, in 1999. Primary sources for analyzing modifications occurred in its organization and capabilities are the Tables of Organization and Equipment (TOE), but for the purposes of this work only major capabilities related to the different warfighting functions are to be researched. The *Fort Knox Supplemental Material (FKSM) 71-8 Brigade Combat Teams* (2008) is an open source with a detailed account on vehicles equipping SBCT, IBCT and HBCT, as well as organization up to Company (Co) level. Essential doctrinal references which are useful as primary sources are *FM 3-21.31 The Stryker Brigade Combat Team* (2003) and *FM 3-90.6 The Brigade Combat Team* (2006). The Stryker Center for Lessons Learned is another valuable primary source.

The works of John McGrath edited by the Combat Studies Institute Press provide valuable insight on the impact of Army Transformation. *The Brigade: A History* (McGrath 2004) includes considerations on the future of the Brigade as a fighting formation according to the modular concept, with the BCT as the capstone for the Army Transformation from an organizational standpoint. Moreover *An Army at War: Change in the Midst of Conflict* (McGrath 2005) presents several studies addressing the challenge of making Army Transformation compatible with ongoing military operations in the GWOT.

One essential document for assessing the operational performance of the SBCT is *From Transformation to Combat:* The *First Stryker Brigade at War* (Reardon 2007). Based on the performance of the 2nd Infantry Division's 3rd Brigade, the first SBCT deployed in

OIF in November, 2003, represents an insightful account on its conduct in combat operations, permitting to obtain conclusions on identified gaps and potential improvements. The CALL Initial Impressions Report *Operations in Mosul, Iraq: Stryker Brigade Combat Team 1, 3rd Brigade, 2nd Infantry* (2004) is also of value as a source to complete the view on its operational performance.

The RAND Corporation is a nonprofit institution that helps improve policy and decision-making through research and analysis. Considered as an influential "think-tank" on defense issues, RAND has published several works on the SBCT of great value for this work. *The Stryker Brigade Combat Team: Rethinking Strategic Responsiveness and Assessing Deployment Options* (2002) studies the U.S. Air Force capabilities to meet deployment requirements for the SBCT, concluding that "a force with more than 1,000 vehicles cannot be deployed by air from CONUS to the far reaches of the globe in four days" (Vick et al. 2002, xiv), which would contradict Gen Shinseki's intentions of deploying a brigade in 96 hours, one essential cornerstone of his transformational view.

The work of Eric Peltz *Speed and Power: Towards an Expeditionary Army* (2003), through a case study based on the SBCT, examines two components of early-entry force strategic responsiveness: rapidly tailoring a mission-focused mission package and moving the force. It concludes the need for an integrated global response strategy within the DOD, as well as specific recommendations for the Army to improve the model. Another valuable study from the RAND Corporation is the work of Daniel Gonzales et al. *Network-centric operations case study: the Stryker Brigade Combat Team* (2005), with conclusions on SBCT's shortfalls due to the use of legacy communications systems, but highlighting its value as "useful starting points for the operational concepts and organizational structures

that will one day be used by Future Combat Systems (FCS)–equipped Army forces" (Gonzales et al. 2005, xv). Another work of Daniel Gonzales et al. also published by RAND Corporation, *Networked Forces in Stability Operations: 101st Airborne Division, 3/2 and 1/25 Stryker Brigades in Northern Iraq* (2007), is an excellent study of the operational performance of two different SBCT, with useful conclusions from the perspective of Command & Control and Intelligence warfighting functions.

The AUSA is another important source for research on Army transformation issues. The document *Accelerating Momentum: The Stryker Brigade Combat Team As a Learning Organization* (2006) analyses the Army's leveraging of the SBCT capabilities and potential application of the lessons learned from its combat experience, with a favourable overall assessment on its validity as transformational element towards the Future Force FCS BCT. Other AUSA reports on this issue allow researching the origins of the SBCT on the Interim Brigade Combat Team, in *The IBCT: a Combat Force for Today, a Proving Ground for Tomorrow* (2001), and *Stryker is the Current Force* (2004).

Robert D. Kaplan, in Chapter Seven of his book *Hog Pilots, Blue Water Grunts: The American Military in the Air, at Sea, and on the Ground* (2007), gives an account of his experiences as a journalist embedded with the 172nd SBCT in Mosul, Iraq, in 2006. Considered as a secondary source, it is of relevance to know the impressions of Robert Kaplan, a journalist who specializes on defense issues, on the performances and daily routines of a SBCT in a counterinsurgency (COIN) environment.

Some Master of Military Art and Science thesis and research projects of the U.S. Army War College are also of great value. In particular, the works *Is the Stryker Brigade Combat Team a viable concept?* (Rocke 2003) and *Reshaping the Expeditionary Army to*

*Win Decisively: the Case for Greater Stabilization Capacity in the Modular Force* (Watson 2005) are to be used as a source on the feasibility of the SBCT as transformational prototype and its adequacy for stability operations. The research project *Alternative Organizations for Interim/Stryker Brigade Combat Teams* (Townsend 2003), conclude with recommendations for three potential Interim/SBCT organizational structures based in three possible scenarios.

## The Brigade as the Spanish Army Centerpiece

Up to now, there is no official document at Spanish Ministry of Defense level stating a defined action plan to achieve an end state for the SAF Transformation. Nevertheless, some political decision and subsequent military actions can be identified as concurrent to achieve a transformation in the SAF, also identified as similar to those in the U.S. Armed Forces, but with a lower level of ambition. In the last years, Spanish Army evolution to provide infantry brigades with the necessary enablers to permit operational self-sufficiency is concurrent with decisions on materiel acquisition, permitting an assessment on possible application of certain aspects of the U.S. Army Modular concept to Spain and, potentially, to other armies involved in a similar process.

The ongoing transformation in the SAF can be tracked through several official documents from the Spanish government and unofficial reports. The first straightforward reference was included in the *National Defense Directive 1/04* (Directiva de Defensa Nacional 2004).[2] Signed by the Spanish President of the Government every four years, at the beginning of a new political mandate, the National Defense Directive states the Spanish defense objectives and defense policies, and represents the basic guideline for the SAF action. The absence of a document such as the National Security Strategy, which is to be

drafted in the short future, turns the National Defense Directive into the basic action guideline for the Ministry of Defense and the SAF. This document states the intent of an improvement of projection and rapid response capabilities, as well as technological equipment acquisitions, as a conceptual approach towards future SAF capabilities related with a Modular Force concept.

The following document that permits to follow the SAF transformational path is the *Organic Law of National Defense 5/2005* (Ley Orgánica 5/2005 de la Defensa Nacional 2005). This law represented an important step ahead to strengthen Jointness within the SAF, as missions for services and Joint Chiefs of Staff were clearly delimited. The Chief of Defense Staff (CHOD) was ultimately the person responsible for planning and executing military operations, with service heads in charge of preparing and generating military forces accordingly. Such separation of functions, although *de facto* implemented in the last years, was clearly stated with this Organic Law. Moreover, the CHOD became the military advisor for the President of the Government and Ministry of Defense, and performs the strategic direction of military operations. A reinforcement of Joint action is a prerequisite for the SAF Transformation, being addressed with the provisions of this Law and subsequent creation of the Joint Operations Command for an effective planning and execution of Joint military operations.

The organizational aspects of the transformation towards a brigade-centric Army were addressed in 2006. The *Real Decreto 416/ 2006, Organization and Deployment of the Spanish Army, Navy and Air Force* (2006) stated the reorganization of all Army Force units around eight brigades, with other formations providing CS and CSS units as a pool of capabilities available for task-organizing purposes. This represented an important change

from the existent structure, as the two operational divisions (mechanized and light) converted just in organic command structures for generation and preparation purposes. The new creation of a division HQ, which would be task-organized to receive brigades and other CS and CSS capabilities according to the mission, is another step with close similarities to the U.S. Army Modular force concept.

A seminal document to research the Army transformation towards a brigade-centric construct is the *Army Transition Plan* (2007), with details on units' reorganization and dissolution. In a progressive implementation plan until 2010, the aim is to complete the brigades' missing capabilities mainly related to intelligence and protection. Other CS and CSS units were to integrate in Army level formations to facilitate tailoring units according to a specific mission and operational environment.

Current brigade organization is an essential primary source to identify operational capabilities, focused on warfighting functions. The level of study is Co. and above, although it will include units at lower level that possess capabilities with significant operational importance for the brigade. The study will take as a model the Spanish Legion Infantry Brigade (SLIB), which being equipped with the 8x8 wheeled Armored Personnel Carrier (APC), would have closer resemblance with the SBCT organization. Its APCs will be replaced with a new 8x8 vehicle, that could keep similarities with the Stryker.

Other valuable primary sources for researching SAF transformation are speeches and public statements from military and civilian leaders. Press news and reports are also useful as secondary sources, as this is a subject of increasing interest within the Spanish media.

After reviewing literature for a qualification of available sources, identifying and confirming the existence of a large number of primary and secondary sources, the next Chapter will state the research methodology for this work as the essential tool for answering the research questions.

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[1]Ralph Peters refers to Rumsfeld as the "Secretary of Defense Industry" (Peters 2005, 35), due to the alleged favors conceded to armament corporations during his tenure as SecDef.

[2]The author of this research work is the translator for these Spanish documents.

# CHAPTER 3

# RESEARCH METHODOLOGY

Having defined an essential background and the framework for this thesis, and a concise description of available relevant sources, this Chapter states how the sources examined will be exploited to answer the research questions and confirm the hypothesis. The primary research question addressed in this research work is: Are there lessons learned from the experiences of the U.S. Army in transforming divisional brigades to modular brigades that could be applicable to the Spanish Army case? Establishing an appropriate research methodology is an essential undertaking in this work because of the different sort of sources available and the nature of the research questions, requiring a combination of research disciplines. This Chapter is divided in two major blocks. Initially, it describes the basis for the analysis methodology, followed by a detailed explanation of research conducted on the primary and secondary sources.

This work will use a *qualitative approach* due to the fact that the processes and activities used to analyze the sources have an essentially non-quantitative nature. Identifying modifications in the U.S. Army modular concept and their application to the Spanish case requires such a research methodology. The focus is "to use gathered data to create theoretical ideas, compared with experimental research that starts with a theoretical position and accumulates data in order to test its validity," which characterizes a qualitative methodology (Davies 2007, 135). Moreover, analyses of modifications in the SBCT will focus on qualitative data, with the warfighting functions as comparative framework.

Once decided on a qualitative approach, this research work will use the *interactive model* proposed by Miles and Huberman (1991). The model is based on three streams: data

reduction, data display, and conclusions drawing/verification, represented in figure 2. In this view, these three types of analysis activity and the activity of data collection itself form an interactive, cyclical process (Miles and Huberman 1991, 22).

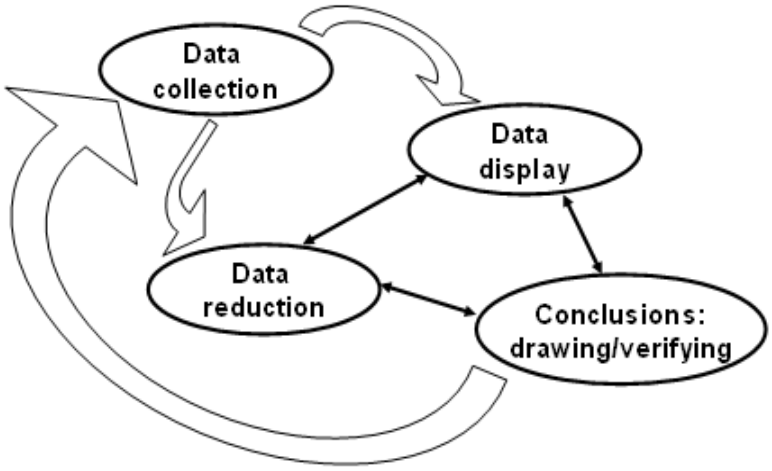


Figure 2. Component of Data Analysis: Interactive Model
*Source*: Matthew B. Miles and A. Michael Huberman, *Qualitative Data Analysis: A Sourcebook of New Methods* (Newbury Park, CA: Sage Publications 1991), 23.

There is a vast quantity of literature to research the influences from political and military top decision makers on the transformational issue, and the implications of the 9/11 attacks on this process. Policy documents, press releases, speeches, opinion articles by defense analysts, reports from commanders of modular BCTs participating in OEF and OIF, interviews to officials involved with the development of the modular BCT designs, are examples of the large variety of sources to consider. Consequently, *data reduction* is an essential endeavor in order to obtain valuable conclusions focused on the research questions. *Data display* will be presented in narrative format given the nature of this research.

According to Van Evera, there are two basic ways of testing theories: experimentation and observation. The observational test includes two varieties, large-n analysis and case study (Van Evera 1997, 50). Thus, the *case study* is an observational testing method, which can serve five main purposes: testing theories, creating theories, identifying antecedent conditions, testing the importance of these antecedent conditions, and explaining cases of intrinsic importance (Van Evera 1997, 55). Defining *antecedent condition* as "a phenomenon whose presence activates or magnifies the action of a causal law or hypothesis" (Van Evera 1997, 9), the antecedent condition for this case study are the SBCT experiences and lessons learned derived from operational commitments.[1] The independent variables are identified as the influence of personal views and operational requirements. The dependent variable is defined as the Spanish Army process towards a brigade-centric construct and the future brigade organization. Accordingly, the case study will be the research methodology used to *test the importance of an antecedent condition*, which ultimately serves the purposes of this research work: identify lessons learned from the SBCT model that might be of value to the Spanish Army transformational brigade.

This case study construct is also coherent with Guba and Lincoln (1981), which identifies four classes of purpose for a case study: to chronicle, to render, to teach, and to test (Guba and Lincoln 1981, 371). With regard to the last purpose, *to test*, "the appropriate action at the factual level is to examine, and the products of such examination are *facts*… at the evaluative level, the appropriate action is to weigh, and the products of this weighing are *judgments*" (Guba and Lincoln 1981, 373). Identified modifications in the U.S. transformational process with insight in the SBCT are to be considered as *facts* leading to obtain *judgment* or lessons learned with potential interest for the Spanish case.

The primary research question will be addressed by answering secondary and tertiary questions. This figure depicts the research model to follow.

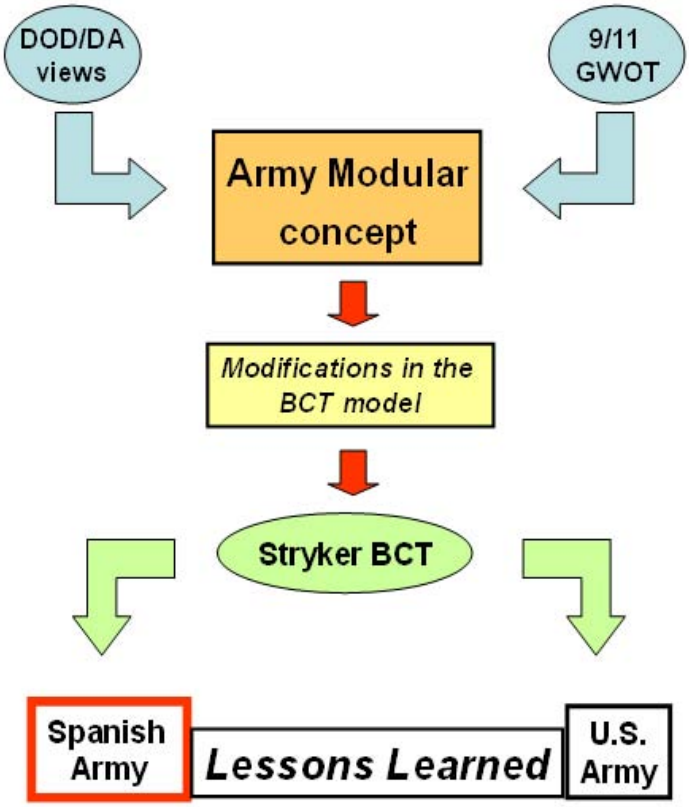


Figure 3. Research model

*Source*: Created by author.

The first step will be to identify major differences in the transformational model since its conception by Gen Shinseki in 1999 until January 2008. Cross-examination of three primary sources, as the technique to establish structural corroboration (Guba and Lincoln 1981, 107), permitted an identification of these differences.[2] The primary sources are related to three basic milestones in the transformational process. First, Shinseki's vision is researched through public statements and documents from Gen Shinseki in 1999 and

2000 outlining his *Army Vision*. Dated in 2004, the *Army Comprehensive Guide to Modularity* Version 1.0 (TRADOC 2004) is the second major source. Third, the FM 3-0.1 *The Modular Force* (DA 2008) will be the reference to compare changes in the model up to 2008. Other secondary sources will also be cross-examined to confirm or complete some conclusions.

Second, differences due to evolutionary change of the model will be contrasted with the DOD and DA decision makers' propositions on the employment of land power, as well as with the major operational implications of the GWOT for the U.S. Army, in order to confirm their relationship. The aim is to obtain conclusions on the influence of these two factors in the final model, with a focus on implications in the BCT construct from an organizational standpoint.

Third, the SBCT will be examined to test its validity as interim transformational prototype for the Future Force. After an identification of its main operational differences with the rest of BCTs (IBCT and HBCT), based on a study of different warfighting functions, the analysis will focus on the evolution of the SBCT from 2002 to 2008, with a comparison between the scheduled Future Force FCS BCT and the SBCT. Lessons learned for the SBCT applicable to the BCT model is the result of this step.

Fourth, a comparison case study is to be conducted between the Spanish transformation model and the U.S. version, according to the aforementioned case study construct in Van Evera (1997). The aim is to examine the contrasts and comparisons in two aspects. On the one hand, to what extent the influences of the operational tempo and decision makers' views can also be considered as independent variables on the Spanish process towards a brigade-centric construct. On the other hand, how the SBCT organization

and warfighting capabilities can be implemented in the Spanish brigade, based in the analysis of major lessons learned from operational performance in OEF and OIF. Conclusions are presented in the form of recommendations that could be useful for the Spanish transformational process, as well as for other armies that might be involved in a similar transformational process.

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[1]According to Van Evera, the term *antecedent conditions* "merely means that the condition's presence precedes the causal process that it activates or magnifies. Antecedent conditions need not precede the arrival of the independent variable onto the scene" (Van Evera 2007, 9). It is a phenomenon whose presence activates or magnifies the action of a causal law or hypothesis.

[2]In Guba and Lincoln, the two techniques for establishing structural corroboration are triangulation and cross-examination (1981, 106). Cross-examination is a feature of the legal model of evaluation, with several objectives. One of these objectives with an application to this research is "To help the investigator understand that plausible inferences exist other than the ones established by direct examination for any piece of evidence" (Guba and Lincoln 1981, 108).

# CHAPTER 4

# ANALYSIS

> The Stryker Brigade is not primarily about new vehicles; it is about a new way of organizing a brigade. It is about links that allow commanders to see, share, and understand information about the battlespace. They can acquire instantaneously a level of awareness that formerly would have been impossible at that level of warfighting . . . When the back of that vehicle opens up and the troops come out, their situational awareness will be better than any other group of troops that are delivered to a combat situation.
>
> General Richard B. Myers, Chairman, Joint Chiefs of Staff
> *34th Annual IFPA-Fletcher Conference on National Security and Policy,*
> December 3, 2003

As Chapter 3 established an adequate research methodology, this Chapter 4 collects and exploits data in order to answer the research questions. This enables development of conclusions that will serve to make valuable recommendations in Chapter 5. The primary research question in this work is: Are there lessons learned from the experiences of the U.S. Army in transforming divisional brigades to modular brigades that could be applicable to the Spanish Army case? This analysis is centered on the organizational aspects of the transformation, with insight on the role of the SBCT as a transformational vehicle towards the transformation's desired end-state, the Future Force.

Three blocks compose this Chapter. First, it includes a chronological analysis of the Army Transformation's evolution and interferences due to two major determining factors: personal views at DOD and DA levels, notably those of SecDef Rumsfeld and General Shinseki, and operational requirements of the GWOT. In turn, this analysis is divided in four parts: beginning of SecDef Rumsfeld's tenure and General Shinseki's launching of the Army Transformation; 9/11 and outbreak of the GWOT, including OEF

and OIF until summer 2003; the significance and scope of the Army Modular concept; and the main influences of the COIN operations in Iraq and Afghanistan in this process.

A second block in this Chapter studies the SBCT as the transformational prototype towards the Future Force. The study focuses on three basic aspects: evolution of the SBCT; its conception as a testing ground and bridge to the Transformation's desired end-state; and lessons learned from its operational performance in OIF. Finally, a third block examines the main issues related to the Spanish Army transformation towards a brigade-centric construct, with an identification of lessons learned from the U.S. experience that are applicable to the Spanish case and, moreover, to other armies also involved in such transformational process.

## The Evolution of the U.S. Army Transformation Concept

### Rumsfeld and Shinseki: The Early Proponents

During the 2000 presidential election campaign, the republican candidate George W. Bush had already stated his intentions of radically transforming the U.S. military. Notably, as early as in October 1999, Bush gave a speech at the Citadel Military School. This address represented the public announcement not only of his defense policy guideline to be implemented when eventually reaching the White House, but also of his purpose to transform the U.S. Armed Forces:

> He promised an immediate, comprehensive review of our military that would change the status quo and replace existing programs with new technologies and strategies that would skip a generation of technology, rendering the U.S. forces "agile, lethal, readily deployable and able to strike from across the world with pinpoint accuracy." (Cockburn 2007, 99)

The journalist and defense analyst James Kitfield refers to an interview with Condoleeza Rice during the presidential campaign, at the time Bush's chief foreign and

national security adviser. She predicted, “A President George W. Bush would transform the Pentagon more radically than any President since Harry Truman” (Kitfield 2005, 6). It should be noted that Truman was well known by imposing radical changes to the U.S. military, notably the creation of the DOD.

Consequently, when George W. Bush took office, his major goal for the DOD was the transformation of the U.S. military, as he had hinted at the Citadel. Nevertheless, he needed a SecDef who could implement his transformational agenda. After ruling out some candidates, Donald Rumsfeld came up as the right person for the job. On paper, Rumsfeld was an excellent choice for SecDef. To his previous performance as SecDef in the 1970s, he added excellent credentials as a corporate manager in the 1980s:

> To the outside world, it seemed that Rumsfeld, the tough, efficient manager, the no-nonsense CEO, was just the man to use modern business methods that would force the American military machine into the twenty-first century. Rumsfeld himself was fond of talking about “changing the culture” of the Pentagon and the need to implement new tactics, techniques and procedures. (Cockburn 2007, 109)

Nevertheless, he had previously demonstrated a tendency to favor defense corporation’s interests. From 1975 to 1977, Donald Rumsfeld held the position of SecDef in Gerald Ford’s administration. He was named SecDef at the age of 43, the youngest ever. During his tenure, he boosted some controversial and high-cost defense projects. Not only had he doubled the previous $144 million budget for the cruise missile (Cockburn 2007, 39), but also favored the $21 billion B-1 bomber program:

> By 1976 the project was rife with technical problems, delays, and vast cost overruns, rendering it the most expensive airplane ever built up to that time, while at the same time incapable of performing its mission as specified. Critics were clamoring for cancellation. Instead, Rumsfeld affirmed his faith in the project by flying it himself, or at least handling the controls of a prototype during an hour-long flight over southern California. (Cockburn 2007, 48)

His willingness to bend before corporate requirements was also demonstrated in the case of the M-1 tank, back in the 1970s. General Motors and Chrysler were competing for gaining the contract to provide the Army with a new generation tank. Chrysler had developed a turbine engine prototype, which was a new and unproven technology, burned a high quantity of fuel, and had more maintenance requirements. The Army pronounced in favor of General Motors' model, a traditional though improved diesel engine, which in addition was cheaper than Chrysler's. Nevertheless, SecDef Rumsfeld decided to assign the contract to Chrysler, that "searching for financial lifelines, had been lobbying the administration for a bailout" (Cockburn 2007, 50). Moreover, the Army preferred a 105-mm cannon for the new tank instead of a German 120-mm one. The Germans made clear that, in case the Army would not buy their cannon, the Luftwaffe would not acquire the AWACS. Ultimately, pressured by the Germans and by the Air Force, Rumsfeld once again disregarded the Army's preferences and signed the contract for the larger and more expensive gun.

In January 2001, SecDef Rumsfeld took office with "cherished goals of shrinking the army, investing in a new generation of high-technology weapons, and deploying a ballistic missile defense system" (Cockburn 2007, 9). At the beginning of his tenure, it was rumored that Rumsfeld intended to "cut the remaining active army divisions by another 40 percent, which would have amounted to around a 75 percent reduction from Cold War levels (Donnelly and Kagan 2008, 9). He was also determined to change the "Pentagon bureaucracy," defined as "an adversary that poses a threat, a serious threat, to the security of the U.S." (Boot 2006, 364). In addition to Bush's guidance, his transformational agenda reflected the influence of two major theorists. One of them was

Andrew Marshall, head of the Pentagon's Office of Net Assessment since 1973. In 1993, Marshall introduced the term "Revolution in Military Affairs" (RMA) to refer to the dramatic ongoing changes in doctrine, organization and procedures in the Armed Forces as a consequence of the new information technologies (Colom 2008, 38). This term was coined in contrast to the term "Technical-Military Revolution", devised by the Soviets in the 1980s to refer the influence of technical improvements, but with a more limited scope than the RMA concept:

> The new term, revolution in military affairs, was intended to suggest that more than technological advances were involved. It included not simply systems, but new doctrine and organizations. (Roxborough 2002, 69)

Rumsfeld was familiar with Marshall's approach to RMA before he took office as SecDef. Actually, during his ceremonial welcoming to the Pentagon on January 26, 2001, Rumsfeld went out of his way to acknowledge two old associates: one of them was Andrew Marshall (Cockburn 2007, 99).

Another major influence for Rumsfeld was the warfare theorist Harlan K. Ullman. His work *Shock and Awe: Achieving Rapid Dominance* (1996) was inspirational for the Rumsfeld's way of conceiving warfare. The cornerstone of this doctrine was the concept of *Rapid Dominance* on the adversary, which was to be achieved by imposing *shock and awe* on his leadership:

> The basis for Rapid Dominance rests in the ability to affect the will, perception, and understanding of the adversary through imposing sufficient Shock and Awe to achieve the necessary political, strategic, and operational goals of the conflict or crisis that led to the use of force. (Ullman 1996, 45)

Rapid Dominance encompassed a huge array of military capabilities other than pure kinetic ones. The psychological dimension was also essential, as "deception, misinformation, and disinformation are key components in this assault on the will and

understanding of the opponent" (Ullman 1996, 14). His work makes historical references to previous occasions when the psychological component was essential to achieve success on the opponent. Notably, there is a mention of the use of the atomic bomb in Japan at the end of World War II:

> Theoretically, the magnitude of Shock and Awe Rapid Dominance seeks to impose (in extreme case) is the non-nuclear equivalent of the impact that the atomic weapons dropped on Hiroshima and Nagasaki had on the Japanese. (Ullman 1996, 12)

Achievement of Shock and Awe heavily relied on technology investments and extensive experimentation, as well as on information and information management areas (Ullman 1996, 36). In this area, this concept also perfectly fitted with President Bush and SecDef Rumsfeld's vision on the way ahead for the defense transformation, with technology playing an essential role in the process.

In April 1999, well before taking office as SecDef with the Bush administration, Rumsfeld referred to *Shock and Awe* in a CNN interview during the NATO air campaign against the Former Yugoslavia. As former SecDef, Rumsfeld criticized the forcefulness of the U.S. military strategy, which had resemblance with the unsuccessful gradual commitment against North Vietnam in the 1960s. He criticized the gradual approach in the implementation of the air campaign: "There is always a risk in gradualism. It pacifies the hesitant and the tentative. What it doesn't do is *shock and awe* and alter the calculations of the people you're dealing with."[1] According to Rumsfeld, this gradual approach would not pay off with the Serbs.

Moreover, in October 1999, Rumsfeld joined three other former Secretaries of Defense, Harold Brown, Frank C. Carlucci, and James R. Schlesinger, in commending the excellences of *Shock and Awe* as a desired operational concept to William S. Cohen,

who was SecDef in the Clinton administration. “We are writing to you in support and endorsement of the concept of Rapid Dominance,” they said. “We believe that the concept of Rapid Dominance has sufficient merit to warrant further evaluation and experimentation” (Correll 2003, 54).

Ullman presented this concept as opposed to the overwhelming force displayed by the U.S. military in previous successful operations, notably Desert Storm in 1991, also referred as “Decisive Force” concept. It can be inferred that Shock and Awe was a way of conducting warfare “on the cheap,” as the effects of large conventional contingents could be achieved with just precision air strikes, small Special Forces formations, new information technologies, and massive employment of information operations. Most of Rumsfeld’s views and decisions as SecDef were based on this concept, as it represented the inexpensive manner to employ and even more, to organize the U.S. military. Enabled by the RMA achievements advocated by Marshall, it seemed to be the perfect foundation to set up the required defense Transformation.

In addition to these straightforward influences, his experiences in the private sector also heavily influenced Rumsfeld. After leaving the seat of SecDef in 1977, Rumsfeld entered the corporate world, becoming CEO of two pharmaceutical firms and an information technology firm. He experienced first- hand all the changes that occurred in the business arena for more than two decades. Therefore, when he again occupied the seat of SecDef in January 2001, he felt that the Pentagon was not keeping pace with “the technology revolution that has transformed organizations across the private sector” (Boot 2006, 364). He also tried to implement his own corporate experiences at the Pentagon, with an emphasis on the technological aspects.

The Transformation plans for the DOD were laid out in the Quadrennial Defense Review (QDR) due in the summer 2001. The QDR is an analysis that the Pentagon is legally required to produce every four years, with details on long-term defense requirements, and the structure of forces needed to achieve them. For SecDef Rumsfeld, the QDR 2001 was the perfect opportunity to convey his transformational plans. Stephen Cambone, Rumsfeld's special assistant in the early months, was named as the "point man on transformation," (Cockburn 2007, 113) and oversaw the preparation of the QDR 2001.

The basic guidelines for the elaboration of the QDR were stated by SecDef Rumsfeld in the document *Guidance and Terms of Reference for the 2001 Quadrennial Defense Review* (DOD 2001a), signed on June 22, 2001. It outlined Rumsfeld's conception on the transformation, as "new combinations of technologies, combined with innovative concept of operations and organizational arrangements will serve as the multipliers of future U.S. forces. . . . DOD must leverage information technology to create a *network centric operational force*" (DOD 2001a, 2). Concerning new dimensions of military power apart from conventional capabilities, it includes a clear statement favoring their enhancement, as the new QDR must

> Develop plans and programs that take full account of the transition of information operations, intelligence, and space assets *from enablers of current U.S. forces to core capabilities* of future forces. (DOD 2001a, 5)

When considering the priorities for investment, the document stated several fields: experimentation, intelligence, missile defense, information operations, precision strikes, unmanned systems, rapid deployable maneuver forces… all these issues were stated by Ullman in *Shock and Awe*, which also confirmed to what extent Rumsfeld was influenced by him. Specifically, with regard to the maneuver forces, the document stated:

> Leveraging C4ISR, a range of precision indirect fire systems, and lighter logistics, they should be lighter, more lethal and maneuverable, survivable, and more readily deployed and employed in an integrated fashion... They should be capable of distributed and dispersed operations. Special operations forces must be capable of conducting and sustaining limited direct actions, deep reconnaissance and forward target designation activities in area denial environments. This will require the ability to insert sufficient forces with stealth deep into enemy territory. (DOD 2001a, 14)

Thus, the emphasis seemed to be on minimizing the footprint on the ground, as the final objective would be achieved by other military capabilities including the low-bulk Special Forces. This approach has outstanding similarities with the principles of conducting warfighting advocated by Ullman in *Shock and Awe.* It can be inferred that Rapid Dominance, although not specifically mentioned in the guidance for developing the QDR, was inspirational for Rumsfeld's view of transformation. Services forcefully tried to defend their playground. According to Cockburn (2007), some deliberate leaks of information at high level within the Pentagon originated strong pressures from political and corporative constituencies:

> Shipbuilding states, such as Maine, got the word that Rumsfeld was contemplating severe cuts in the navy's shipbuilding program. Senators from Kansas were reduced to apoplectic fury when they read in the papers that the B-1 bomber force based in Kansas might be cut by a third….The army put out the word that Rumsfeld was thinking of cutting two divisions out of the active force of ten divisions. These leaks were not accidental. (Cockburn 2007, 115)

Initially, Rumsfeld seemed unable to take eventful decisions on some major programs that needed further consideration or even cancellation. This was the case of the F-22 "Raptor" air force fighter, the army's Crusader artillery gun, and the V-22 "Osprey" transport. Resistance to Rumsfeld's transformational stance was so severe that

> By the middle of August, eight months after he had returned to the Pentagon, it appeared that the military had Rumsfeld on the run. (Cockburn 2007, 118)

Nevertheless, the Army had started to trace the path towards Transformation well before SecDef Rumsfeld took office in January 2001. The lack of adequate strategic responsiveness had been a concern within the Army from years before.

> After the Persian Gulf War (1991), many in the Army expressed considerable disquiet over the lack of a rapidly deployable force that could stop enemy armored forces. Postwar analyses conducted at RAND and elsewhere suggested that the 82nd Airborne would not have been able to stop Iraqi heavy forces if it had continued its offensive into Saudi Arabia. (Vick et al. 2002, 2)

Interestingly, the Army Chief of Staff, General Eric Shinseki, had presented his views on the needed changes for the Army in a speech before the 45th AUSA annual meeting, on October 12, 1999. His statements were enclosed in the document *The Army Vision: Soldiers on Point for the Nation* (DA 1999), considered as the start of the current Army transformation. It outlined a Transformation of the Army into a lighter, quicker deploying force, which would achieve strategic dominance across the entire spectrum of operations. Interestingly, he presented his transformational intentions just four months after taking office as Army Chief of Staff:

> He felt a great deal of urgency in his efforts, because he noted that previous attempts at transformation had faltered when their originators left office. He was determined to ensure that his vision would be so firmly rooted when he left that it could survive the transition. (Kagan 2006, 242)

General Shinseki identified seven major attributes for the Army to achieve this: responsible, deployable, agile, versatile, lethal, survivable, and sustainable (DA 1999, 4-6). Most of these attributes referred to the Army's requirement for rapid deployment of an adequate combat power, which confirms the statement that "the critical factor in transformation according to Shinseki was deployability" (Kagan 2006, 242). The aim was to generate a war-fighting brigade on the ground in 96 hours, a division in 120 hours, and five divisions in 30 days. Moreover, the attributes *lethal* and *survivable* were related to

the employment of new technologies "to erase the distinctions between heavy and light forces" and "to leverage the best combination of low observable, ballistic protection, long range acquisition and targeting, early attack, and higher first round hit and kill technologies at smaller calibers that are available" (DA 1999, 6). Finally, the attribute *sustainable* principally related to reducing the logistics footprint and replenishment demand. All these characteristics for the Army's future force were in tune with SecDef Rumsfeld's transformational vision as stated more than one year later.

Two major deductions can be inferred from this approach to Army Transformation as envisioned by General Shinseki in 1999. First, it represented an attempt to *maintain relevance* among the other services, right after the failure to timely deploy "Task Force Hawk" in Albania for operations against the Serbs forces in Kosovo, in spring 1999 (Kagan 2006, 241). Task Force Hawk consisted of an Apache attack-helicopter unit, and a heavy force of about 5,000 people to include tanks, artillery pieces, and engineering equipment. The Army demonstrated a lack of responsiveness, as the deployment of such a force heavily depended on building adequate installations and re-equip existing low capacity roads to permit heavy traffic. Andrew Krepinevich, a reputed defense analyst, considered that the Army should get rid of its dependence on large fixed forward bases and ports of entry, as they represent choke points that funnel the flux of forces into theater and are easily targeted by the opponents.[2] It was essential to focus on deployability of an adequate combat power in a responsive and timely way. The Interim Brigade Combat Team, and later the SBCT, was to fulfill this requirement.

The second conclusion is that Shinseki's view for Army Transformation, as outlined in 1999 and later defined in 2000-2001, *fitted perfectly with SecDef Rumsfeld's*

*transformational perspective* as stated in the QDR 2001. The aforementioned Army's attributes envisioned by General Shinseki were also consistent with SecDef Rumsfeld's requirements for a more agile and less massive ground forces with ample use of new technologies. As early as in 1999, General Shinseki conceived a key role for technology investments like an enabler of transforming the Army, in line with Rumsfeld's vision to favor the RMA and its technological flavor:

> We will jumpstart the process by investing in today's off-the-shelf technology to stimulate the development of doctrine, organizational design, and leader training even as we begin a search for new technologies for the objective force. Doing so will extend our technological overmatch. (DA 1999, 6)

The QDR 2001 identified six critical operational goals to provide the focus for DOD's transformation efforts (DOD 2001b, 30). The analysis and comparison of these operational goals with the attributes envisaged for the Army's force by Shinseki in 1999 suggest the conclusion that the latter nested in the former ones, perhaps with the exception of the space systems capabilities (see Figure 4). These attributes defined in 1999 were to become the Objective Force characteristics, as stated in the *White Paper Concepts for the Objective Force* (DA 2001, 9) and later in the *Army Transformation Campaign Plan,* April 2001.

Moreover, well before the publication of these documents, General Shinseki stated before the Senate's Committee on Armed Services his Army's transformation strategy. It would go forward along three major paths: the Legacy Force, the Interim Force, and the Objective Force (Shinseki 2000, 7). While the Objective Force could be defined as the desired end-state of this transformational path, the Interim Force concept would be the origin of the Interim BCT and, later, of the SBCT.

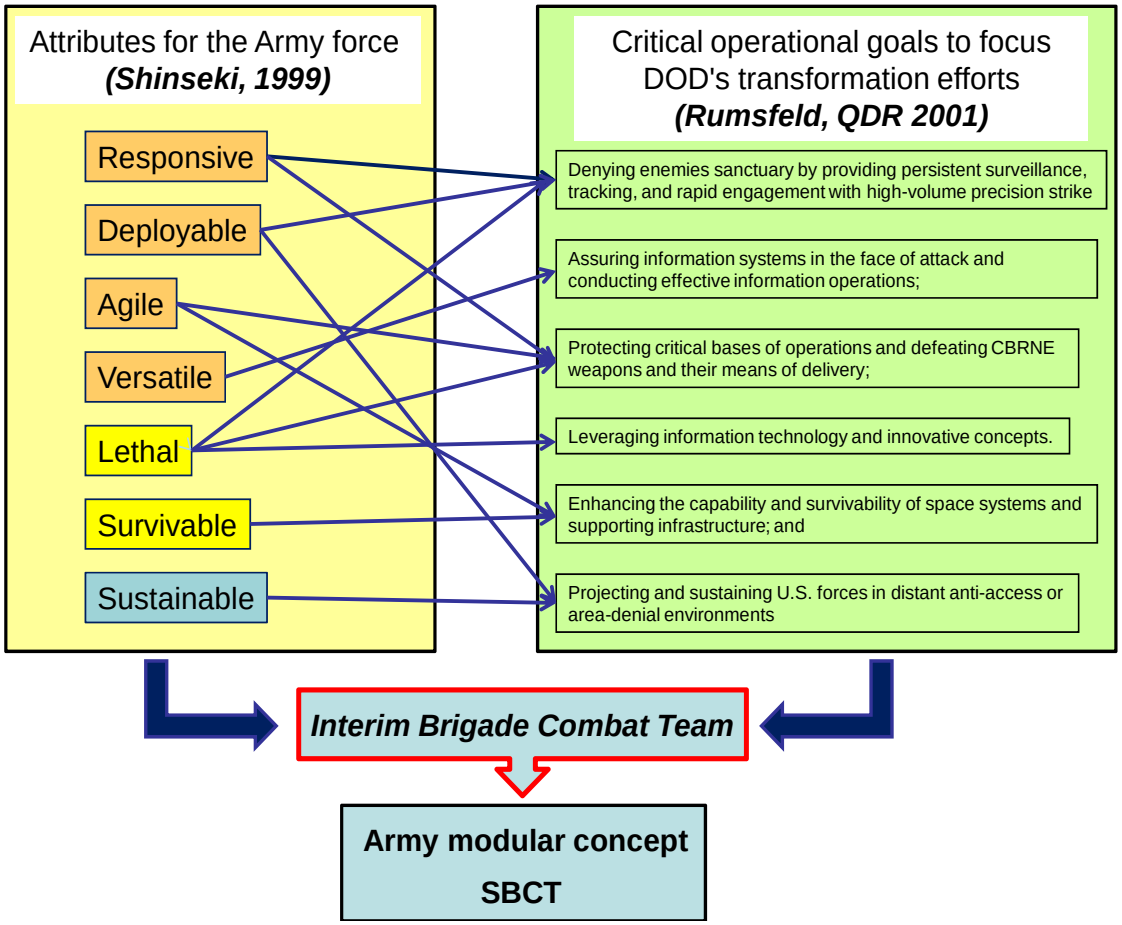


Figure 4. Nesting of Gen Shinseki's attributes for the Army force (1999) and SecDef Rumsfeld's critical goals for DOD transformation (2001)

*Source*: Department of the Army (DA), *The Army Vision: Soldiers on Point for the Nation* (Washington, DC: Office of the Chief of Staff, 1999); Department of Defense (DOD), *Quadrennial Defense Review Report* (2001), http://www.defenselink.mil/pubs/qdr2001.pdf (accessed November 30, 2008).

The concept of modularity did not come up yet. An analysis of these early documents stating Shinseki's transformational thinking had no mention of changing from a division-centric Army to a brigade-centric one, but just a reference to the modular character of Units (DA 2001, 20). Thus, the transformational model proposed by the

Army that would lead to the Objective Force did not reflect major organizational implications yet, other than a willingness to expand organic combined arms at lower tactical levels, as well as a reference to modularity:

> Maximizing commonality of design and systems and building fixed organizations with discrete sets of capabilities will contribute to a modular construct that enables rapid force tailoring prior to deployment as well as during employment, increasing force versatility and operational flexibility. (DA 2001, 12)

There was also an emphasis on the *technological aspects*, considered essential enablers for the Objective Force. Actually, human and technological enablers should be integrated with the synergy provided by doctrine, training, leader development, organizations, material and Soldiers (DA 2001, 15), as an antecedent of the later so-called DOTMLPF domain. In this specific field, it is also possible to deduce similarities with the SecDef Rumsfeld's view, as technology was to leverage transformation.

Nevertheless, the first steps of Army transformation in 2000-2001 faced strong constraints within the DOD. The United States General Accounting Office (GAO) reported some key challenges for the Army plans that would hamper the reaching of the Objective Force: technology, schedule, acquisitions, operations, human capital, and funding (GAO 2001a). Most of these constraints were related with the uncertainties of the economic scenario ahead, which could not ensure reaching Army transformational goals as envisaged in the Army Transformation Campaign Plan in 2001. At the same time, SecDef Rumsfeld was finding a fierce reluctance to change within the Pentagon's apparatus in the first months of his tenure:

> The bureaucracy fought back so effectively that the consensus in Washington was that Rumsfeld would be the first member of President Bush's cabinet to leave office. (Boot 2006, 364)

## 9/11 Terrorist Attacks: Successes in OEF and OIF Early Campaigns

The scenario drastically changed on September 11, 2001. In the eventful weeks that followed the 9/11terrorist attacks, subsequent political decisions on security issues enshrined Rumsfeld as a key figure within the Bush administration, giving him a “fresh lease of life” (Boot 2006, 364). The U.S. declared the GWOT, with the DOD assuming a leading role in the U.S. response to the attacks. It elevated the DOD ahead of other government agencies, increasing the defense budget and making it possible to accelerate SecDef’s and DA’s transformational agendas. The new situation empowered the SecDef to implement his view on the employment of military power. It is out of the scope of this research to study all the dynamics that shaped the political and military decisions that followed the 9/11 attacks. This work is to focus on those aspects related with Rumsfeld’s vision on transformational implementation of U.S. military capabilities and its implications on the Army transformation.

The initial objective for the GWOT was removal of Taliban-ruled regime in Afghanistan, which was providing a secure sanctuary to Al-Qaeda. Nevertheless, the U.S. Armed Forces had no contingency plan to invade Afghanistan, “only for firing cruise missiles and dropping bombs, which could not guarantee decisive results” (Boot 2006, 364). The planning and conduct of OEF, the military operation to eliminate such safe haven for Al-Qaeda, was the responsibility of the U.S. Central Command (CENTCOM) Commander, General Tommy Franks. The plan, finally endorsed by SecDef Rumsfeld, could be considered as conceived according to his transformational vision on the employment of military power: minimum footprint on the ground, with maximum employment of small Special Operation Forces, precision air strikes, and a supportive

information campaign. Minimizing ground footprint was an essential requirement. Ultimately, it was *Shock and Awe* off-the-shelf, as well as the final validity test of the RMA's postulates:

> The speed of military deployment was largely resolved by the combination of CIA paramilitary teams, Special Forces, and air power. Large-scale troop deployments were ruled out. The Soviet experience had shown that large troop deployments were not effective, aroused negative local sentiment, and were vulnerable to low-intensity attacks. . . . Financed and supplied by the CIA, working with the Special Forces, and backed up by overwhelming air support, the Northern Alliance would then advance against the Taliban and Al Qaida forces. (Cordesman 2004, 15)

In the aftermath of the overthrow of the Taliban regime, conducted through an "unconventional, transformational" military operation (Boot 2006, 364), Bush and his entourage seemed convinced that the Afghanistan campaign had proved the validity of the transformational approach, as a simplistic view on OEF would support (Kagan 2006, 308). Moreover, SecDef Rumsfeld felt ecstatic for what he believed a confirmation of his views on transformation:

> In December 2001, in a speech on "21st Century Transformation of the U.S. Armed Forces", he [SecDef Rumsfeld] gave a lyrical account of *the "transformational battle" of Mazar-e-Sharif*, the first major victory over the Taliban, won by "a combination of the ingenuity of the U.S. Special Forces, the most advanced precision-guided munitions in the U.S. arsenal, delivered by U.S. Navy, Air Force and Marine Corps crew, and the courage of valiant one-legged Afghan fighters on horseback" (Cockburn 2007, 126)

To some extent, OEF, as it was planned and conducted in 2001, could be considered Rumsfeld's war. Moreover, other top officials within the DOD shared this euphoria. Noticeably, the Army Secretary Thomas White, also considered the OEF and specifically Operation Anaconda, conducted in March 2002, as a corroboration of the transformational plans' validity:

> Other broad lessons drawn from the Army's performance during Operation Anaconda and the rest of the war were made by Army Secretary Thomas White. Evaluating the campaign in Afghanistan, he argued that the fighting situations encountered indicate that *the service is headed in the correct direction when it comes to transformation.* (Cordesman 2004, 114)

In addition to DOD officials, some reputed defense analysts also considered OEF as a valuable testing ground of the principles that guided the transformational path:

> The Afghan War has again demonstrated the need to be able to rapidly project land and air power at very long distance. It has demonstrated the value of strategic airlift, long-range strike capability, and the ability to operate with limited forward basing… Like Kosovo, however, the Afghan conflict has shown that a combination of precision air and missile strike capability, coupled to greatly improved intelligence and targeting systems, can provide much of the heavy firepower in some contingencies that previously had to be provided by artillery and armor. (Cordesman 2002, 20)

Success in the OEF that toppled the Taliban regime and eliminated Al-Qaeda's safe haven in Afghanistan was a determining factor for the planning of the next campaign in the framework of the GWOT. As early as in September 29, 2001, SecDef Rumsfeld asked Gen. Myers, just two days away from becoming Chairman of the Joint Chiefs of Staff, to begin preparing military options for Iraq, with two objectives: eliminate its weapons of mass destruction, and regime change to overthrow Saddam's regime (Feith 2008, 218). The DOD's political guidance was straightforward: the military campaign, OIF, would commit as few ground forces as possible, no more than 125,000. Utilizing the lessons of Afghanistan, the plan would rely heavily on Special Forces and precision air strikes rather than in large ground heavy formations, in what Gen. Franks called "a revolutionary concept, way outside the box of conventional thinking" (Boot 2006, 390). Moreover, from the beginning of the planning, SecDef Rumsfeld's personal inputs were straightforward on this issue, to the point that he contemptuously disregarded military proposals on the need for more troops on the ground, with "an offhanded dismissal of

years of professional planning" (Cockburn 2007, 153). He was also determined to "break the Army of its reliance on a heavy logistics structure, which in part explains the composition of the Iraq invasion force and its limited sustainability capability" (Donnelly 2005, 62). This strategy was contested by other members in the Bush administration, notably by Secretary of State Colin Powell. Former Chairman of the Joint Chiefs of Staff during the Gulf War in 1990-1991, "he was from a generation of generals who believed that overwhelming military force was found in troop strength--sheer numbers of soldiers and tanks on the ground" (Franks 2004, 394).

SecDef Rumsfeld's view can be considered as a direct consequence of his aforementioned belief in the principles of *Shock and Awe* and his absolute confidence in the technology, which eventually would lead to the same decisive results that in OEF had paid off brilliantly some months before:

> His [SecDef Rumsfeld's] aim was to show that he could conquer Iraq with a small light force, a truly rapid and decisive operation. This would prove that he had indeed carried out the mandate for *transformation*, confounding the generals who had dragged their feet and mocked his efforts the year before. His inspiration had already defeated the Taliban; now he would prove his case on the banks of the Euphrates. (Cockburn 2007, 162)

Another source of inspiration for Rumsfeld was Colonel Douglas Macgregor. A reputed military theoretician, Macgregor had published in 1997 *Breaking the Phalanx*, with a seminal influence for the Army force's transformational vision. According to Macgregor's thesis:

> It would be possible to take Baghdad with a fast-moving armored force as small as fifty thousand men. Jumping off from Kuwait . . . this expeditionary force would race directly across the desert to the Iraq capital, bypassing all towns and cities on the way. This scheme certainly had the attraction of novelty. (Cockburn 2007, 163)

SecDef Rumsfeld exerted a strong pressure on the OIF military planners. To encourage Franks to think along his particular strategic views, Rumsfeld sent Macgregor down to CENTCOM HQ early in 2002 to brief Franks on his ideas, in an attempt to recreate the previously successful OEF campaign:

> As hammered out by Rumsfeld and Franks, the Iraq invasion plan bore the heavy imprint of the legend of the Afghan war, supposedly won by elite Special Forces using unconventional tactics to achieve the same effect as whole divisions of conventional forces. (Cockburn 2007, 165)

The planning of OIF is to be considered as the culmination point of a degraded personal relation between SecDef Rumsfeld and the military establishment, notably the Army Chief of Staff, General Shinseki. Although this work has demonstrated that the transformational Army goals were in general concurrent with SecDef Rumsfeld's ones, some important friction points came up when its transformational vision confronted directly with the Army statement, notably with regard to the cancellation of the Crusader program, which intended to develop a new heavy self-propelled 155mm artillery gun as the backbone of the U.S. Army artillery until 2032. In accordance with SecDef Rumsfeld's view, DOD officials stated that the Crusader was rather a Cold War system than a transformational one. On the other hand, Army proponents defended the need for adequate fire support to the Army's Interim Force in a variety of scenarios, as well as the need for an improved support to the Legacy Force, particularly should they face major combat against enemies equipped with Soviet-style artillery, e.g. North Korea, Iraq, China, and Russia (Bruner and Bowman 2002, CRS-5). Finally, SecDef Rumsfeld decided to terminate the program. Gen. Shinseki, in a memorandum submitted to Rumsfeld after his depart as Chief of Staff of the Army, stated:

> The cancellation of Crusader provides another example where my actions have been misinterpreted or misconstrued by you and your office . . . Without any consultation or forewarning, you declared your intent to terminate the program in the middle of budget marks. . . . It was not Crusader, but the requirement for organic, indirect cannon artillery fires for ground forces which was the issue. The suggestion that the Army did not need cannon artillery and that it fared well without those fires in Operation Anaconda[3] was simply wrong and untrue. (Shinseki 2003, 2)

The Crusader was a heavy artillery cannon that did not fit in SecDef Rumsfeld's *Shock and Awe* conception of warfare. Nevertheless, it can be concluded that the disagreement among the Army Chief of Staff and SecDef Rumsfeld was due to competing personal traits and inferences in the military sphere to plan OIF rather than to pure transformational issues, as the army was heading on the right path according to DOD guidance. As shown before, although Gen. Shinseki's vision for the Objective Force nested with the DOD's transformational plans, SecDef's Rumsfeld opinion on military leaders was highly biased, as he thought them incapable to lead the change he envisioned for the U.S. military:

> The principal effect was to confirm Rumsfeld's believe that *the generals were consumed with "old think,"* but that if he held the line, he could yet force them into executing an operation employing relatively few troops, *a showcase for a transformed, slimmed-down army.* (Cockburn 2007, 164)

## Towards a Brigade-Centric Army: The Modular Concept

A next step to implement the new impending operational requirements was the decision to organize the Army force according to a brigade-centric model. Since the mid 1990s, the Army had been considering a possible transformation of the existing divisions into smaller, more flexible units with a brigade-based structure, which would also "shift towards a flatter military hierarchy" (Kagan 2006, 244) by reduced echelons of command. In this respect, the work from Douglas Macgregor *Breaking the Phalanx*

(1997) had a seminal influence in the Army's thinking of reorganizing the force in deployable, modular, brigade-size units:

> One way to modify the division organization without dramatically changing the existing warfighting structure is to *disestablish divisions as standing organizations* and to convert the current brigade task force into what amounts to a regimental combat team. This is similar to the brigade-based division option discussed previously. . . . Division commanders would assume command and control of whatever type and number of independent brigade task forces were needed for the specific mission. (Macgregor 1997, 67)

This paragraph, written in 1997, encompassed the essence of the modular approach that the Army embraced in its change towards a brigade-centric organization. Nevertheless, it is important to note that in the early documents where Gen. Shinseki announced his transformational intent there is no explicit reference to this evolution towards a brigade-centric Army. In 2003 and 2004, the DA published the *Army Transformation Roadmap* (DA 2003b, DA 2004b), a DOD requirement established in the *Transformation Planning Guidance* QDR 2001 by which the services had to publish annually an account of his Transformational intentions. From the organizational standpoint, these documents only included some references to the modular approach:

> Army *Units of Action (UA)* will comprise the tactical warfighting echelons of the Objective Force, filling the same role as today's brigade and lower echelons. . . . The Objective Force's *Units of Employment (UE)* will direct major operations and decisive land campaigns in future Joint operations. Units of Employment will include fully interoperable Army headquarters, will provide direction for Joint Operations as JTF Headquarters, JFLCC, or as ARFOR command headquarters. . . . *Modularity and scalability* will allow those headquarters to address the needs of the Joint Force. (DA 2003b, 9)

The UA can be considered as the "brigade task force" envisioned by Macgregor in 1997. According to this concept, the UA would "fight the future's battles" and the UE would "shape the battlespace" (DA 2003b, 26):

> Units of Employment will shape the battlespace in which Units of Action fight, including the provision of aviation, engineer and air and missile defense support to its Units of Action….The Unit of Employment will be able to provide command and control for Stryker Brigades and information enabled heavy forces, as well as components of the Joint Force. (DA 2003b, 27)

The role of the UE, as heir of the division, was to provide the operational framework that permitted to the UA fight and achieve tactical goals. The UA capitalized the transformational effort, becoming the essence of the Objective Force:

> By 2010, The Army will begin fielding the Objective Force, while completing both the fielding of the Stryker Brigades and the recapitalization and modernization of the Legacy Force. This next step aligns with the attainment of initial operational capability (IOC) by the first Objective Force *Unit of Action*. The Army's first Unit of Action, equipped with both FCS and the Objective Force Warrior system, will provide combatant commanders with the responsiveness of Stryker Brigades with all the lethality and survivability of information enabled heavy forces. (DA 2003b, 27)

Consequently, it can be concluded that this document stated the basis for the *organizational transformation from a division-centric construct to a brigade-centric one*. The UA, equipped with the FCS, would become the principal warfighting organization and the centerpiece of the Objective Force. With regard to the timeline, the intent is to field fifteen UAs by 2016. Nonetheless, the document did not include detail on the organization of either the UA or the UE. There was a broad reference to the UE capabilities, which would suggest that it was to be fielded with some organic assets beyond those merely related to the command and control warfighting function:

> These Units of Employment will have improved their air defense capabilities to protect themselves and their subordinate elements against all airborne threats. (DA 2003b, 28)

In July 2004, the *Army Transformation Roadmap* (DA 2004) announced important organizational actions to implement the Modular concept. Three of them can be considered as essentials from an organizational standpoint. First, the conversion of all

AC and RC brigades into the modular structure and the activation of up to 15 maneuver brigades. Second, the conversion to a modular configuration of select combat, combat support (CS) and combat service support (CSS) units into modular supporting brigades and functional brigades. And third, the modular conversion of division HQs to the so-called "unit of employment X, UEx" (DA 2004b, viii). The term *Objective Force* is substituted by *Future Force,* but maintains the same definition and scope.

This document, signed by general Shinseki's successor as Chief of Army Staff, Gen. Peter Schoomaker, is basically a continuation of the transformational path initiated five years before. The modular construct represents the organizational approach to the pursuit of the Future Force. Moreover, Chapter 3 "Providing Ready Forces" included more in depth on the transition for all Army Units to the modular model (DA 2004b, 3-1). Now, the transition towards a brigade-centric Army is straightforward:

> The *decisive effort of Army transformation* is the creation of modular, combined arms maneuver brigade combat team (units of action), or BCT(UA), of which there are three types: Heavy (armored/ mechanized), Stryker and Infantry. As part of this transformation, the Army migrates capabilities that were previously found at divisions and corps to the BCT(UA) — *the building block* of combat forces in the Future Force. (DA 2004b, 3-2)

This paragraph summarized the Army transformational approach towards the Future Force. The creation of the modular BCTs, including also those capabilities previously in the division level, is defined as the *decisive effort of Army transformation.* The document also includes a mention of the evolution of all modular brigades towards FCS-equipped formations starting in a ten-year horizon, in 2014 (DA 2004b, 3-4).

In October 2004, the TRADOC published the *Army Comprehensive Guide to Modularity* (TRADOC 2004), an encompassing account of the Army modular concept from a doctrinal perspective. It developed the UA and UE concepts expressed in the

*Army Transformation Roadmap* (DA 2004b), as well as the *supporting brigades* that would provide those CS and CSS capabilities to make it possible BCTs operations. Thus, the UEx would not have any organic forces beyond the elements that make up its HQ (TRADOC 2004, 1-10). This document also includes a paragraph that specifically addressed the evolution from a division-based to a brigade-based Army (TRADOC 2004, 1-13).

The study of the rationale behind the implementation of the Army modular concept is noticeable in order to identify the impact of the recent campaigns in Iraq and Afghanistan, as well as DOD transformational influences. Summing up, this document attributed the following reasons for the change:

1. In the former organization, although the brigade had to receive all required CS and CSS units from the division or above, the tendency for habitual relationships between combat brigades and their supporting units had developed *de facto fixed organizations* similar in principle to the new BCTs.

2. In Afghanistan and in Iraq (OIF- I), Army brigades showed an impressive ability to fight independently in widely separated, semi-independent engagements. With regard to the 3rd Mechanized Division's "masterful use of the brigade in the Iraqi war":

> At one point the three divisional maneuver brigades were each fighting outside a different key Iraqi city, Nasiriyah, Samawah, or Najaf, which were separated by between 60 and 75 miles . . . The ability of the brigade to disperse, then mass for operations like the Karbala-Baghdad drive, and its ability to fight alone or as a part of the larger mix, bodes well on its future as a U.S. Army organizational element." (McGrath 2004, 127)

The TRADOC document also includes a specific mention of OIF-I and its brigade-centric offensive operations to Baghdad:

> The "rolling start" of Operation Iraqi Freedom from the Iraq-Kuwait border to Baghdad exemplified how brigade-based operations have changed the way JFCs and JFLCCs fight. (TRADOC 2004, 1-14)

3. Brigades showed that they could deploy to a theater of war and initiate operations before the arrival of the full division, using a building block approach to structure theater operations around the successive arrival of brigades.

It can be concluded that the organization of the Army according to the modular concept was due to operational reasons derived from the *OIF-I brigade-based operations* and the need for an improvement in projection capability. Ultimately, this was one of the main reasons for Gen. Shinseki to decide to launch the transformation, after the inefficient projection of "Hawk Task Force" to the Balkans in 1999. Moreover, by the time this document was drafted in July 2004, the Army also had foreseen the incoming commitment in protracted stability operations in Iraq. A self-capable BCT structure, with organic CS and CSS elements, would facilitate delegation of responsibility to BCT's commander. Consequently, once the validity of brigade-based offensive operations was demonstrated in OIF, the brand new BCT construct seemed a valuable tool to conduct the stability operations in which the Army would be engaged in the years to come. Interestingly, most of these determining factors that justified this change in 2004 were envisaged by Macgregor several years before:

> Thus, converting ten divisions to thirty standing brigade task forces would add *cohesion and continuity* to the Army at a level where it is most critical to success in combat. It also creates *more deployable maneuver forces* that will influence the national command authorities as they decide what course of action to take in a crisis. (Macgregor 1997, 68)

## The Toll of the U.S. Army Commitments in the GWOT

At the beginning of 2004, even before the growing problems in Iraq in the spring led to an increase in force levels deployed for OIF, 26 of the Army's 33 combat brigades in the AC were scheduled to deploy abroad at some point during the year. Over the course of 2003 and 2004 together, virtually all of the 33 brigades were to deploy for operations. In addition, up to 40 percent of the Army Reserve and ARNG together had to participate in operational tours by 2004 (O'Hanlon 2004, 6). The increasingly-demanding commitment in OIF and other areas was starting to overstretch the Army capabilities. As some notable analysts outlined, "if the Pentagon's transformation model was for rapid, decisive operations, our post-9/11 experience tells us there can be no one-battle war" (Donnelly and Kagan 2008, 87). Gen. Shinseki's successor as Army Chief of Staff, Gen. Schoomaker, had to address this situation by refocusing on the current force:

> While the previous decisions to accept reasonable risk in our Current Force were considered prudent at the time, *the strategic and operational environment has significantly changed* in light of the large-scale engagement of Army forces in Operation Iraqi Freedom and other expeditionary operations. Ever-changing demands on our force, coupled with our commitment to mitigating risk to our Soldiers, have necessitated re-examination and transformation of our Army's resource process and business practices. (Brownlee and Schoomaker 2004, 12)

This concern was also raised by reputed defense analysts. Thomas Donnelly considered that "Transforming the military to be a swifter, more efficient firepower machine seems secondary to transforming the force to execute enduring, manpower-intensive missions patrolling the American security perimeter" (Donnelly 2005, 3). Thus, the ongoing COIN campaigns should be the new DOD focus, with the Transformation being pushed into the background. The GWOT would not permit a desired "period of

transition" with the strategic pause that the Army needs to rearm and refit prior to the achievement of the Future Force:

> The United States cannot afford a modernization program so heavily dependent on revolutionary transformation. Engaged as a global superpower in a set of missions that exhaust the current force, the Pentagon should content itself with evolutionary change and pay more attention to the period of transition. (Donnelly 2005, 85)

Thomas Barnett, another reputed defense strategist, advocates an organization of the U.S. military power in two blocks. On one side the *Leviathan*, with "the warfighting capacity and the high performance combat troops, weapons systems, aircrafts, armor, and ships associated with all-out war against traditionally defined opponents" (Barnett 2005, xvii). On the other side the *System Administrators* (SysAdmin), the forces that "wages the peace after the Leviathan force has successfully wager war". With regard to the GWOT and the U.S. Transformation, he attributes to the Iraq campaign the cause for changing the focus of the transformational efforts, moving from being "capital-intensive" (e.g., the Leviathan's hugely costly weapons systems) to "labor-intensive" (e.g., the SysAdmin´s well trained counterinsurgency forces and military police):

> *The Iraq War* will leave no lasting imprint on the U.S. military, but *the Iraq Peace* will redefine it from top to bottom, shifting transformation's center of gravity from the air to the ground, from major combat operations to postconflict stabilization operations, from the Leviathan to the SysAdmin. (Barnett 2005, 2)

Four direct consequences can be identified from this new operational scenario that had a direct impact on the Army's transformational agenda as far as the organizational aspects are concerned. First, the modular redesign was accelerated in order to rapidly field more brigade-type units able to deploy. Refitting the Army units according to the modular model would increase the availability of units for the GWOT. The QDR 2006, edited in February 2006, addressed the priority of the ongoing GWOT, when considering

necessary “accelerating the transformation of the Department to focus more on the needs of Combatant Commanders and to develop portfolios of joint capabilities rather than individual stove-piped programs (QDR 2006, 4). This seminal document validated the Army modular concept, as it stated that the DOD would:

> Continue to rebalance capabilities by creating modular brigades in all three Army components: 117 in the Regular Army (42 BCTs and 75 support brigades); 106 in the Army National Guard (28 BCTs and 78 support brigades); and 58 support brigades in the U.S. Army Reserve. *This equates to a 46 percent increase in readily available combat power* and a better balance between combat and support forces. (QDR 2006, 46)

It can be considered that the Army Modular approach was the main tool used to achieve more deployable combat units to address the demands of the GWOT, notably the Iraq scenario. This increase in deployable units would also “bring stability to soldiers and their families,” easing the stress among the personnel due to the more frequent operational deployments (Feickert 2005b, Summary). Moreover, right after 9/11, the Army had accelerated its efforts to field medium-weight units (Reardon and Charlston 2007, 67), a situation that speeded up the creation of the SBCT.

Second, the Legacy Force was to update its current materiel to face ongoing operations in the GWOT. The Transformation started to be contested by some analysts, considering that “Administration’s plan for implementing transformation provides too much funding for longer-term transformation goals and not enough funding for near term needs.”, while there was inadequate funding for modernization of current Army M1 tanks and M2 Bradley fighting vehicles, as well as other operational improvements related with the protection against the new threats in the COIN scenario, such as ceramic body armor, Humvees with improved armor, and helicopter survivability equipment (O’Rourke 2006c, CRS-30). It is worth noting that in FY2007, the Congress added significant

amounts of funding to initial requests to permit the modernization of legacy systems. Notably, the House added $147 million and the Senate $238 million to an initial request of $359 million to upgrade the M2 Bradley (Daggett 2006, CRS-36).

Third, the Army had to rebalance some of its capabilities in favor of the specific requirements for stability operations. Units of less likely employment on the current operational environment would be eliminated to permit an increase in those units with higher demand. In the next years, about 100,000 personnel would shift their original primary combat skills, and up to 10,000 military jobs would be transferred to civilian contractors:

> Notably, the Army would reduce its field artillery, air defense, engineer, and armor units substantially (by 24, 10, 11, and 19 battalions, respectively). It would reassign many of the billets to increase transportation, civil affairs, and psychological operations units, as well as military police and special operations forces. (O'Hanlon 2004, 6)

On the other hand, concerns were raised on the lack of enough infantry troops within the new BCT to wage COIN operations that demanded an increased "boots on the ground" presence. Except the SBCT, that would maintain three CAB, the HBCT and the IBCT would have just two CABs. In total, the modular conversion meant to evolve from 233 combat battalions (Bn.) with 699 maneuver companies (Co.) at the end of 2004, to 161 maneuver Bns. with 541 maneuver Cos. by the end of 2011, a 30 percent reduction in the number of Bns. and a 22 percent reduction in the number of Cos (Feickert 2006, CRS-3). This was the toll to increase the overall number of deployable BCTs.

Fourth, there were increasing voices in favor of augmenting the size of the Army. This was probably the most controversial consequence, as it directly confronted with SecDef Rumsfeld's transformational view for the U.S. Army. Thomas Donnelly

advocated an increase in the size of the U.S. land forces, based on the need for making it compatible with ongoing operations in the GWOT with a decisive "two-theatre" capability. Other relevant defense analysts also advocated a rapid grow in the Army and Marines total force, due to the increasing demand of ground forces (Donnelly and Kagan 2008, 30). Therefore, contrary to SecDef Rumsfeld's preferred Shock and Awe approach, the stability operations in Iraq and Afghanistan necessarily require a huge and protracted presence on the ground:

> The Pentagon must accept that the post-invasion phases of GWOT--the set of missions ranging from very violent COIN operations to more benign forms of nation building--are the decisive parts of these campaigns. The DOD must further recognize that these sorts of constabulary efforts are exceedingly likely in the future . . . The challenge is not how fast we can get there, but how long we can stay. (Donnelly 2005, 55)

Moreover, he perceives that "unanticipated commitment of forces in Iraq constraints U.S. strategy globally, to the point of disrupting efforts to transform the force or train" (Donnelly 2005, 19). In his view, force transformation is not feasible amidst the demanding operations in which U.S. Army is involved:

> Finally, the Pentagon does seem to have realized that there are opportunity costs to its project of "force transformation". Far from being a cheap solution for military effectiveness, transformation is, essentially, an additional mission for a smaller force; at times, furthermore, a voluntary mission that runs directly contrary to the other missions we have. (Donnelly 2005, 5)

Nonetheless, despite these implications due to the GWOT, the Army continued his transformational path, with a brand new unit recently designed to serve as a bridge between the legacy force and the Future Force: the SBCT. This unit was also to participate in operations sooner that initially scheduled, as the impending demand of combat units so required.

## The Stryker Brigade Combat Team as a Transformational Tool

### From the Interim BCT to the Stryker BCT

Since its definition in 1999, the Army transformational concept stated the need for a type of unit that would fill a specific operational gap within the Army's capabilities catalog. General Shinseki alluded to this gap in *The Army Vision* (DA 1999), the initial document that outlined his transformational view for the U.S. Army:

> We will retain today's *light force deployability* while providing it the lethality and mobility for decisive outcomes that our heavy forces currently enjoy. We will retain *heavy force lethality* through overmatch while giving it deployability and employability in areas currently accessible only by light forces. (DA 1999, 6)

Nevertheless, the Army identified this operational requirement well in advance, since the end of Gulf War, in 1991. Army Chief of Staff Gen. Sullivan, and later his successor Gen. Reimer, showed their concerns on the lack of adequate rapid deployable units with strong combat power. During Operation "Desert Shield" in 1990, the 24th Infantry Division needed 48 days from notification to deploy into theatre by ships (Rocke 2003, 44). By contrast, the ready brigade of the 82th Airborne Division took only two days to deploy and required as few as 26 C-17 sorties (Rocke 2003, 45), but lacked enough protection and fire power to effectively face a potential Iraqi armor attack on Saudi Arabia.

Consequently, in 1998, under the Force XXI concept that emphasized digitalization and ample employment of new technologies, the Army developed a "Strike Force" based on the 2nd Armored Cavalry Regiment at Fort Polk, Louisiana, "the Army's newest step towards creating a rapidly deployable organization" (Reardon and Charlston 2007, 2). This experimental unit, which can be considered as the predecessor of

the SBCT, was conceived as a force easy to deploy and supply anywhere, but as lethal as the heavy forces:

> Concerned that the Army's combat units relied solely upon vehicles such as the M1 Abrams tank and the M2 Bradley fighting vehicle that were too heavy for rapid deployment, Reimer took the first steps to create *medium-weight units* capable not only of fighting traditional wars but also of responding quickly and effectively to smaller emergencies. (Reardon and Charlston 2007, 67)

Reimer's successor, Gen. Shinseki, was to fulfill the task. In March 2000, Gen. Shinseki, in his statement before the Committee on Armed Services, put forward the main characteristics of the *Interim Force,* considered as one of the three major paths of the Army transformation (see Figure 1). Nevertheless, the Army had already started to stand up a prototype unit at Fort Lewis, Washington, which had to be finalized by the end of 2000 (Reardon and Charlston 2007, 3). Initially called *Interim BCT*, this was the origin of the SBCT. This unit would differ from those existing in the Army at that time in two main aspects. First, a new Interim Armored Vehicle (IAV) was to equip it as the backbone material, which would provide specific capabilities. Second, its new operational and organizational structure would differ from that of the Legacy Force units' structure. At the same time, general Shinseki envisaged two goals for the Interim Force:

> The Army will begin fielding a Brigade Combat Team (BCT) at Fort Lewis, Washington this fiscal year. This initial BCT, the first step toward the Interim Force, will accomplish *two goals*. First, it will give The Army an enhanced capability for operational employment to meet worldwide requirements. Second, the initial BCT will validate an organizational and operational model for Interim Force. Based on this validation, The Army will field the Interim Force. (Shinseki 2000, 7)

When considering both goals, it is worth noting the conception of the Interim BCT not only as a validation vehicle towards the Objective Force, but also as a *gap-filing capability* that permitted responding to those current operational requirements that might

arise. Actually, when Gen. Shinseki referred to an operational gap that required immediate response, he was alluding to the lack of adequate response during the deployment of "Task Force Hawk" in the Balkans, in 1999:

> We have heavy forces that have no peer in the world, but they are challenged to deploy rapidly. The Army has the world's finest light infantry, but it lacks adequate lethality, survivability, and mobility once in theater in some scenarios. (Shinseki 2000, 6)

The Interim BCT would fill this gap. Consequently, the Interim BCT was born with the challenge of making compatible its status as a vanguard and testing ground of the Objective Force, but at the same time had to be fielded in a short-term to address current operational demands. Thus, the Interim Force "was intended to supplement rather than replace existing light and heavy units" (Reardon and Charlston 2007, 4), as a complement for the Legacy Force. As an indicator of the urgency to develop the project as rapidly as possible, the procuring of funds for the acquisition of the IFV began in 2000, opting for an off-the-shelf vehicle in order to accelerate the process to the maximum. The first Interim BCT had to reach its full operational capability by 2003. In total, the Army procured funds to organize and equip six Interim BCTs: four in the Army Active Component, one in the Pennsylvania National Guard, and one based on a medium-cavalry regiment initially tasked with supporting the XVIIIth Airborne Corps (Townsend 2003, 9).

Interestingly, this concept had been developed by Douglas Macgregor in his work *Breaking the Phalanx* years before. In 1997, when the Army was heading towards the Force XXI structure as organizational end-state for the Army forces, he envisioned "an *intermediate force design* that will begin to bridge the gap which separates today's Army from that envisioned in Force XXI" (Macgregor 1997, 61). Called "Combat Group", this

new “information age warfighting organization” would be smaller in size than the division, configured for delivery by air from bases in the continental U.S., organized to reflect warfighting functions at lower levels, modular in character, with high operational and tactical mobility, capable of dominating larger areas with new technology and weapons systems, and needless of extensive maintenance (Macgregor 1997, 74). This concept fits perfectly with the Interim BCT’s operational capabilities and, later, with the SBCT’s. Some notable similarities are related to the focus on information dominance, the emphasis in reducing the logistical requirements of heavy units while providing increased mobility and lethality, and the existence of combined arms formations to a lower echelon (Stempniak 2003, 36).

In his work, Macgregor considered four types of Combat Groups: Heavy, Airborne-Air Assault, Heavy Recon-Stryke, and Light Recon-Stryke. The description of this *Light Recon-Stryke Group* is very similar to the capabilities assigned to the SBCT, even with a mention to the same vehicle finally selected:

> Strategic mobility requires a mix of capabilities that will allow early entry ground forces to fight their way in or, soon after arrival, expand their battlespace to quickly establish control or win the conflict. The 4,850 man Light Recon-Stryke Group is equipped with the Armored Gun System and a version of the Light Armored Vehicle (LAV)… the *LAV (block III)* does offer advantages in terms of interoperability with the USMC in future crisis response operations. (Macgregor 1997, 79)

From the very beginning, the Interim BCT was designed to include those capabilities also conceived to equip the rest of brigade-type units in the future. It also took advantage of previous experiences with the “Strike Force” developed at the end of the 1990s. From this standpoint, it can be inferred that the Interim BCT represented *a truly transformational instrument.* In the words of Army Secretary Thomas E. White:

We can use these interim brigades to support experimentation and testing as we transform the Army to our Objective Force, the ultimate goal of our Transformation. (AUSA 2001, 2)

In 2001, the organization scheduled for an Interim BCT was defined as follow:

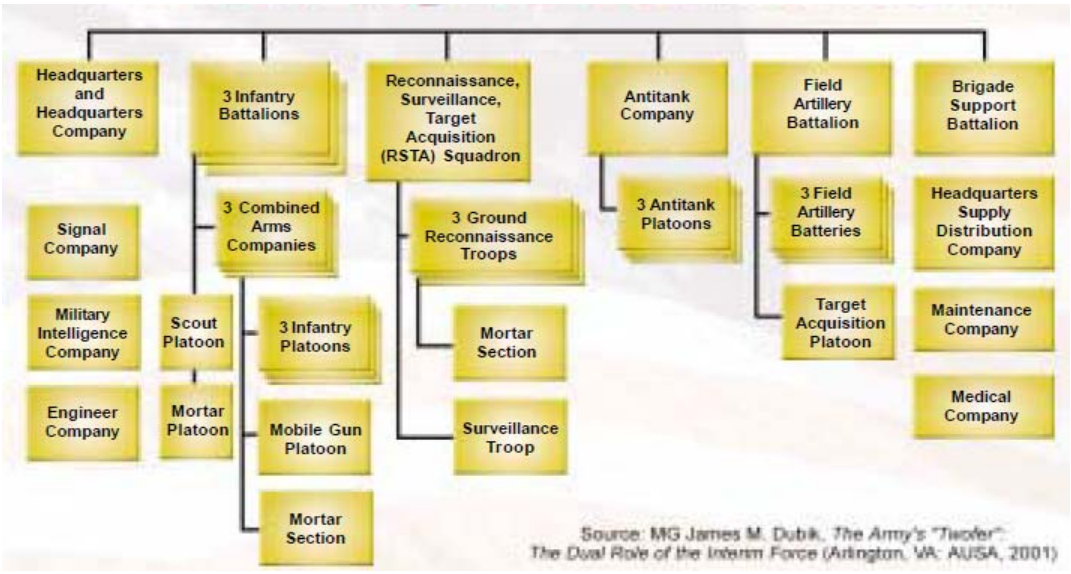


Figure 5. Interim BCT organization
*Source*: Association of the United States Army (AUSA) Torchbearer Issue. *The IBCT: a Combat Force for Today, a Proving Ground for Tomorrow* (2001), 1 http://www.ausa.org/programs/torchbearer/issuepapers/Issue%20Papers/ibct.pdf (accessed December 8, 2008).

From an organizational standpoint, the importance of the Interim BCT for the transformational process is twofold. First, it *set the standard* for the reorganization of all the Legacy Force's BCTs according to the modular construct that would follow shortly. The Interim BCT would include as organic units most of the CS and CSS elements belonging to the division before, notably one RSTA Squadron, one Field Artillery Battalion (Bn.), one Brigade Support Bn., one Engineers Co., one Signals Co., and one

Military Intelligence Co. Second, it permitted to envisage the *operational organization of the Objective Force units,* due to its role as Objective Force's proving ground. Its capabilities would include those belonging to the division level or above, and other new ones, such as Unmanned Aerial Vehicles (UAV) and tactical internet. More important, the IAV had as an unavoidable requirement to be *deployed in a C-130,* the Air Force's primary intratheater cargo aircraft, or in a C-17 in its intratheater role (AUSA 2001, 2). All IAVs had to be able to enter and exit the aircraft capable of conducting immediate combat operations, although not necessarily carrying full basic loads, and their combat weighs should not exceed 19 short tons (Vick et al. 2002, 8). The emphasis on projection capability was evident.

It is worth analyzing to what extent the Interim BCT nested within the principles of DOD transformation as stated by SecDef Rumsfeld in the QDR 2001. The Interim BCT can be traced back to the "Strike Force" brigade design in 1998 and then the "Medium-Weight Force" or Medium Brigade by September 1999 (Townsend 2003, 5). When SecDef Rumsfeld announced the tenets of Defense Transformation in the *Guidance and Terms of Reference for the 2001 Quadrennial Defense Review* (2001a), the characteristics that he envisioned for the joint force were to a great extent aligned with those considered by the Army several years before for the Interim Force:

> The terms of reference of Secretary of Defense Donald Rumsfeld's Quadrennial Defense Review (QDR) 2001 note the importance of broadening the range of military options available to the President. They call for enhancing the employability and deployability of U.S. forces, extending their reach, and minimizing their deployed footprint. They identify a need for forces that are "*lighter, more lethal and maneuverable, survivable, and more readily deployed and employed* in an integrated fashion." (Binnendijk 2002, 105)

It can be concluded that the Interim BCT really complied with the force's characteristics envisaged in DOD transformational goals. The analysis of the QDR 2001 reinforces this conclusion. This document considered several Strategic Tenets (DOD 2001b, 13): *A capabilities-based approach*, with an important role for "transformed maneuver and expeditionary forces and systems;" *Projecting U.S. Military Power*, related with the Interim BCT's scheduled projection capabilities; and *Transforming Defense*, where the contribution of the Interim BCT would play an essential role. Moreover, the QDR 2001 included a *transformed concept of deterrence*, reorienting the U.S. global military posture, where the Interim BCT would be an essential DOD tool:

> The Secretary of the Army will accelerate the introduction of forward-stationed *Interim Brigade Combat Teams* (IBCTs) to strengthen deterrence and improve U.S. strategic responsiveness on a global basis. In consultation with its European Allies, the United States envisages that an IBCT should be stationed in the European area by 2007. In addition, the Secretary of the Army will explore options for enhancing ground force capabilities in the Arabian Gulf. (DOD 2001b, 27)

Interestingly, the Interim BCT concept also aligned with the four *Transformation Pillars* as defined in the QDR 2001 (DOD 2001b, 32):

1. *Strengthening joint operations*, as the Interim BCT would play an important role in implementing an expanded joint forces presence policy due to its expeditionary capabilities. In addition, his improved command and control systems would permit a complete integration within a joint formation.

2. *Experimenting in Support of Transformational Change*, with the Interim BCT conceived as the experimentation vehicle towards the Objective Force.

3. *Exploiting Intelligence Advantages*, as the Interim BCT introduced down to brigade level two unique intelligence capabilities: a new RSTA squadron, equipped with

reconnaissance troops, UAVs, electronic warfare assets, and other sensors; and new communications technologies, that would increase the situational awareness.

4. *Developing Transformational Capabilities,* with the Interim BCT capitalizing some of them thanks to its projection capabilities in distant anti-access and area denial environments, and its capabilities to provide persistent surveillance, tracking, and rapid engagement.

It can be concluded that the Interim BCT concept was coherent with the transformational principles as stated in the QDR 2001. Among other consequences, this concurrence with the DOD transformation view facilitated that the Army succeeded in achieving funding support to build up these Interim BCTs, whose cost was about one billion dollars each (AUSA 2001, 2).

One initial endeavor to set up the Interim BCT was the choice of the IAV to equip it. The final decision was in favor of the LAV-III, whose earlier versions have been in service with the Marines since the 1980s (Townsend 2003, 8). As this vehicle received the name "Stryker,"[4] the brand new Interim BCTs being fielded in Fort Lewis, Washington, changed their denomination to *Stryker BCT* in July 2002. The *Stryker* vehicle became "the flagship asset of the medium-weight SBCT" (AUSA 2002, 1), including up to ten different variants ranging from the Infantry Carrier Vehicle to the Mobile Gun System (MGS). Notably the MGS, equipped with a 105-mm gun, permitted a real *combined arms structure* down the Bn. level, as each Rifle Co. would be equipped with one MGS platoon as a support unit for its Rifle platoons. The common chassis for all the variants resulted in an 85 percent parts commonality (AUSA 2002, 2), which simplified maintenance and diminished the logistic tail. In this respect, the SBCT also

proved to serve the DOD transformational purposes, one of which was to reduce the forces footprint. More than 300 Stryker vehicles were to field each of the six SBCT.

One essential characteristics of the Objective Force was the ability to place a combat capable brigade anywhere in the world, regardless of ports or airfields, in 96 hours (Shinseki 2000, 6), as an indicator of the Army transformation's emphasis in rapid projection and strategic responsiveness. The SBCT, as a transformational vehicle towards this Objective Force capability, should fulfill this requirement. Nevertheless, some studies conclude that this demanding operational requisite must consider multiple aspects such as overflight rights, location of deploying units, Air Forces' airlift capacity, nearness to airfields or ports, suitability of host-nation infrastructure, available en route airbases, and weather conditions, among others (Vick et al. 2002, 13). Most of these constraints are out of the Army's sphere of responsibility, depending on multiple DOD or even U.S. government arrangements in order to permit implementation of this self-demanding requirement.

Notably, a RAND Corporation analysis on possible variables and potential scenarios, elaborated in 2002, conclude that it is not possible to deploy a SBCT, with more than 1,000 vehicles in total, from the U.S. homeland to the far reaches of the globe in 96 hours of the first takeoff:

> With some mobility enhancements, it will be possible to achieve deployment timelines on the order of *one to two weeks*, which is quite rapid for a motorized force. Specifically, this analysis found that the combination of CONUS bases (particularly Fort Polk), an SBCT forward-based in Germany, and regional preposition sites in Guam and Diego Garcia offers the ability to deploy the SBCT by air or sea to key regions in 5 to 14 days. (Vick et al. 2002, 115)

Moreover, any Army goal related to the ability to deploy this SBCT as it was defined required full commitment of the Air Force. This sister service is an essential

enabler to make possible those desired capabilities related not only with rapid projection, but also with enhanced situational awareness and jointness:

> More broadly, we note that *the Air Force has a stake in Army transformation* efforts. The Army envisions future forces operating in ways that are likely to require closer air-ground cooperation on intelligence, surveillance, and reconnaissance (ISR); lift; and precision fires. We recommend that Air Force and Army leaders initiate a dialogue on these issues of mutual concern. The Army would greatly benefit from the USAF's expertise on air deployment, ISR, survivability of transport aircraft, and air-to-ground fires. (Vick et al. 2002, xvii)

Another study about the SBCT's expeditionary capabilities reached similar conclusions on the inability to deploy far from the U.S. homeland in 96 hours (Peltz, Halliday, and Bower 2003). The capability to move the whole unit in C-130 was also contested by the Air Force, who considered that the C-17 without question had to participate in any SBCT deployment (Townsend 2003, 20). Nevertheless, the report concluded that the SBCT has a great ability to enable rapid deployment initiation, due to its organic configuration as a combined arms formation that integrates maneuver support and sustainment capabilities (Peltz, Halliday, and Bower 2003, xvi). As an overall consideration, the SBCT, although requiring 270 C-17 missions to move the whole brigade, would deploy in 45 percent less time than a HBCT would (Peltz, Halliday, and Bower 2003, xviii). Moreover,

> An SBCT could potentially deploy from Fort Lewis to Skopje in 7.4 days . . . This is significantly faster than a mechanized brigade combat team with a best-case condition time of about 13 days, but still longer than the future force goal of 96 hours. To achieve the 96- hour goal in this scenario, a force would have to be 127 C-17 mission equivalents in size or *a little less than half the deployment footprint of an SBCT*. For reference, a light BCT, at a little less than 100 C-17 mission equivalents, could deploy in a little over 3 days in this scenario. (Peltz et al. 2003, 28)

Interestingly, this analysis proposed a phased-model deployment, with a first phase composed of a *combined arms battalion task force plus* accounting about 40

percent the size and capabilities of the full SBCT. This *Stryker Battalion Task Force* could deploy from Fort Lewis (Washington) to Skopje (Macedonia) in about 4 days, while employing 38 percent of the total FY05 lift capacity (Peltz, Halliday, and Bower 2003, xx). This conclusion validates the SBCT concurrence with the modularity design which was being implemented in the rest of the Army units.

These studies permit one to conclude that, although the SBCT would not reach the 96-hour requisite to deploy all over the globe as stated for the Objective Force, it represents an important improvement with regard to previous force projection capabilities and responsiveness. Light infantry units like the 82th's Division Ready Brigade might deploy in a smaller period of time,[5] but the operational characteristics of the SBCT provided greater protection and firepower within an acceptable response timeframe. Moreover, the SBCT does offer a significantly faster response option than a HBCT. It can be inferred that the SBCT, besides fulfilling current need for an increased Army expeditionary capability, is a valid testing instrument to assess the desired projection requirements for the Objective Force.

In March 2003, the publication of the FM 3-21.32 *The Stryker Brigade Combat Team* (DA 2003a) represented an important milestone in the process to set up this brand new capability in the U.S. Army. Its preface outlined two characteristics for the SBCT closely related with the brigade organization:

> The Stryker brigade combat team is designed to be a *full spectrum, early entry combat force.* It has utility in all operational environments against all projected future threats. It possesses significant utility for divisions and corps engaged in a major-theater war; however, *the SBCT is optimized to meet the challenges of smaller-scale contingencies.* (DA 2003a, xi)

The emphasis in its early entry capacity directly related to the projection capability that was ingrained in the SBCT's concept from the outset. The SBCT became the optimal unit to provide an early entry in those semi-permissive or non-permissive environments requiring more protection and firepower than that light forces could provide. Moreover, his intra-theatre lift capability through C-130 aircraft avoided the dependence on large airports of entry than other heavy units required.

Another major characteristic is the SBCT's optimization for small-scale contingencies. In a major-theatre war, the SBCT was defined as capable of conducting all four types of offensive operations (attack, movement to contact, exploitation, and pursuit), as well as both linear and nonlinear defenses within the area defense, mobile defense, and retrograde concepts (DA 2003a, 1-6). Nevertheless, in a small-scale contingency the SBCT would pay off best. Two characteristics of this environment are normally poor infrastructure and uncertain situation. The SBCT seemed adequately suited to addresses both issues, due to its low requirement for ports of entry and its increased intelligence capabilities. Moreover, another important SBCT feature was its flexibility, which permitted its employment in a great variety of roles, as for example:

> When employed in an MTW [major-theatre war], the SBCT is a force multiplier to a division or corps because of its ability to *conduct rear area security operations* over a large geographic region. (DA 2003a, 1-10)

The comparison of the SBCT organization stated in the FM 3-21.32 (Figure 6) and the one scheduled for the Interim BCT two years before (Figure 5) leads to the conclusion that both structures were closely similar from an organizational standpoint. In 2001, although the definition of the Legacy Force was still under study, the Interim BCT (future SBCT) seemed already mature enough.

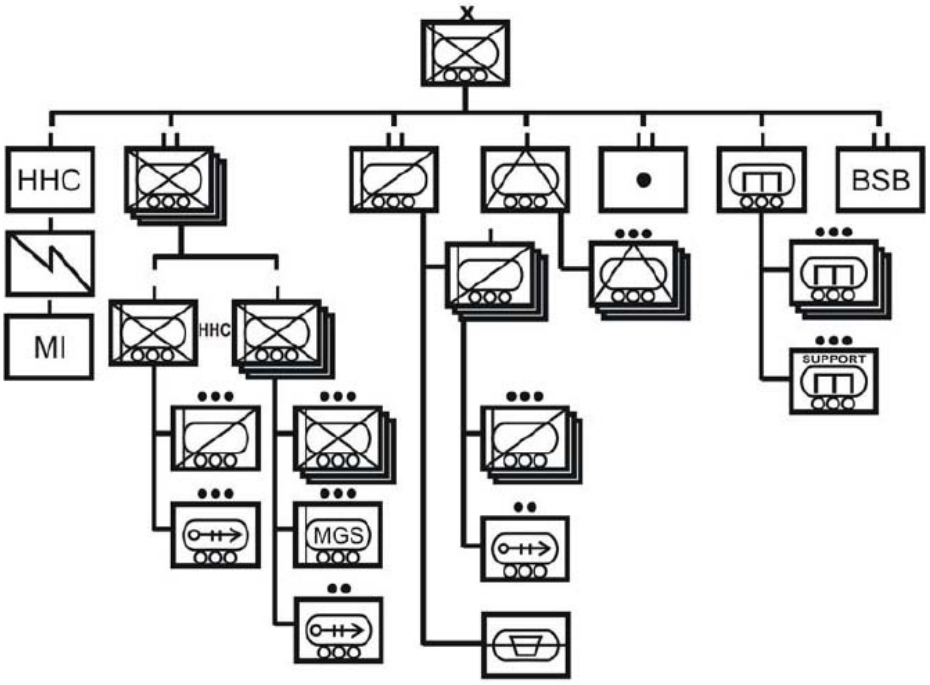


Figure 6. The SBCT organization (2003)
*Source*: Department of the Army, Field Manual (FM) 3-21.32, *The Stryker Brigade Combat Team* (Washington, DC: Government Printing Office, 2003), 1-13.

The next step was to certify the SBCT's full operational capability (FOC). The 3rd Brigade, 2nd Infantry Division, became the first certified SBCT, through an operational evaluation in the Certification Exercise "Arrowhead Lightning" at the Joint Readiness Training Center (JRTC), in May 2003. This overarching evaluation included a deployment exercise and an operational evaluation that is a congressionally mandated report to be sent through the SecDef to Congress stating that the SBCT was operationally effective and suitable (AUSA 2003b). Shortly after, this brigade deployed to Iraq, just the first of a long list of SBCTs employed in the GWOT.

## The SBCT as a Bridge to the Future Force

Some analysts consider that transformation should be treated as a separate mission for the force, thus requiring "dedicated forces not immediately engaged in combat duties" (Donnelly 2005, 41). Others even consider that "the Stryker, finally, is in no way transformational in itself" (Kagan 2006, 249), questioning that even Shinseki himself would really see the SBCT as transformational. Nevertheless, the employment of the SBCT in combat operations, in the framework of the GWOT, was deemed the best way to test and improve the Interim force towards the Future Force requirements, including the testing of those capabilities that the FCS would provide to the future BCT:

> The SBCT also serves as a learning platform/organization upon which to build for the future--the Army's future Modular Force including the Future Combat Systems (FCS). . . . Experience derived from the SBCT is preparing Soldiers and leaders for future service in the FCS BCT. (AUSA 2006, 6)

Once assessed the validity of the SBCT to fulfill the operational gap that required expeditionary capabilities for the Army's current demands, and its coherence with the DOD's transformational view, this work will analyze to what extend the SBCT served as a testing ground for the Future Force, formerly Objective Force. This analysis of the SBCT's validity as interim formation towards the Future Force will be conducted by contrasting the SBCT organization and operational capabilities stated in FM 3-21.32 *The Stryker Brigade Combat Team* (DA 2003a) with the main characteristics of the Future Force referred in *2004 Army Transformation Roadmap* (DA 2004).

According to the later document, the Future Force concept is founded on six main operational themes: Operational Maneuver from Strategic Distances, Entry and Shaping Operations, Intratheater Maneuver of Mounted Forces, Decisive Maneuver, Network-Enabled Battle Command, and Distributed Support and Sustainment (DA 2004, 4-1). An

identification of the SBCT's capacity to address these Future Force's operational themes would assess the validity of this brigade as the transformational bridge towards the Future Force, which was one basic tenets of the SBCT conception.

*Operational Maneuver from Strategic Distances* is defined as "the rapid projection of modular, scalable, combined arms formations, tailored in force capability packages to meet the requirements of each contingency" (DA 2004, 4-1). The SBCT address this requirement, as its structure and materials permit airlifting in more advantageous conditions than a HBCT does. With regard to strategic airlift, one Infantry BCT requires 141 C-17 sorties, and one HBCT 442 C-17 sorties, while a SBCT needs 260 (Rocke 2003, 46). It demonstrates that, although the SBCT requires 84 percent more sorties than an IBCT does, it can deploy with 41 percent less sorties than a HBCT, a considerable reduction in airlift effort. Moreover, the Stryker Bns. are organized as combined arms formations, even to the Rifle Co. level, which permits tailoring the force in a modular, scalable process while maintaining its combined arms nature.

*Entry and Shaping Operations* is related to the capability to "seize the initiative, shape the battlespace and set the conditions for decisive operations" (DA 2004, 4-1). The SBCT is specially suited for entry operations through multiple entry points, due to a dual operational capability: its mobility in C-130, which makes it independent from well-established air ports of entry, and its combined arms structure down to small unit level, which permits task organizing the brigade to diversify entry points. Moreover, its firepower and increased intelligence assets and situational awareness enable the SBCT to shape the battlespace effectively until the arrival of other augmentation forces. In addition to its organic Field Artillery Bn., and Tactical Air Control Parties (TACP) at Bn.

and RSTA Squadron levels, each Stryker Bn. has huge firepower provided by the MGSs, with one platoon per Rifle Co. Intelligence capabilities are greatly improved thanks to the Military Intelligence Company, the RSTA Squadron, and Unmanned Aerial Vehicle (UAV) even at Bn. level.

*Intratheater Maneuver of Mounted Forces*, defined as the ability to "circumvent prepared defenses, extend the operational reach of the joint force commander, and exploit opportunities" (DA 2004, 4-1). The Stryker vehicles, together with the full motorization of all the rest of supporting elements within the brigade, provide this capability:

> The mobility of the Stryker vehicle gives the SBCT the speed and agility to rapidly respond to changes in the battlespace that are represented in the common operational picture provided through the network. (Gonzales et al. 2007, xxxii)

In OIF, the SBCT proved a unique capability to expand operational reach further than other combat units in theatre. Although assigned an area of responsibility (AOR) in Northern Iraq, a common practice was to detach units to temporarily operate in other areas, which spanned its operational reach to more than two-thirds of Iraq (Reardon and Charlston 2007, 69).

*Decisive maneuver* is based in three aspects: simultaneous, distributed operations within a noncontiguous battlespace; direct attack of key enemy strike, and maneuver capabilities; and continuous operations within an increased operational tempo (DA 2004, 4-1). Again, its combined arms structure below to Co. level and its high mobility permit distributed operations in a noncontiguous AOR. Together with enhanced organic intelligence and fires capabilities, the brigade's subordinate formations are capable of maneuvering by a combination of fire and movement to achieve decisive results, while overwhelming the enemy's operational rhythm:

> The SCBT's ISR and networking enhancements improve the sharing and quality of information and thus create a shared "common picture" of battlespace information. (Gonzales et al. 2007, 7)

*Network-Enabled Battle Command*. This is a critical feature that distinguished the SBCT from other Army combat formations. Initially, 75 percent or more of SBCT combat vehicles were equipped with networked battle command systems, and high-bandwidth beyond-line-of-sight SATCOM links were used to connect brigade- and battalion-level command and control centers (Gonzales et al. 2005, 105). It allowed rapid sharing and exploitation of the information acquired by the new intelligence assets:

> The SBCT utilizes a concept of operations that emphasizes information-sharing with elements that bear a striking resemblance to some of the concepts found in Network-Centric Operations theory . . . The Stryker brigade's embedded RSTA capabilities, organic military intelligence company, and other features enable it to generate its own high-quality situational awareness information. (Gonzales et al. 2005, 101)

This is a fundamental force enabler all across the brigade, which is equipped with Force XXI Battle Command Brigade and Below (FBCB2), hardware and software system that links satellites, sensors, communication devices, vehicles, aircraft and weapons in a digital network. This system, together with the Joint Tactical Radio System, provides the brigade leaders with unique situational awareness capabilities:

> Stryker Brigades are networked and can bring enhanced joint and expeditionary capabilities to the fight. Stryker Brigades see more of the battlespace from the ground than any other unit in theater. Soldiers communicate with commanders and one another via e-mail; they see adversaries' and fellow Soldiers' locations relative to their own in near real-time, with the help of FBCB2. (AUSA 2004, 2)

*Distributed Support and Sustainment*, which is characterized by a minimum requirement for supporting bases and logistics footprint. This was one of the tenets of the

SBCT's design from the outset, and one of the cornerstones for DOD's transformational vision, as Deputy SecDef Paul Wolfowitz stated to the U.S. Congress, in 2002:

> In many other cases, U.S. forces depend on vulnerable foreign bases to operate -creating incentives for adversaries to develop "access denial" capabilities to keep us out of their neighborhoods. We must, therefore, reduce our dependence on predictable and vulnerable base structure, by exploiting a number of technologies that include longer-range aircraft, unmanned aerial vehicles, and stealthy platforms, as well as reducing the amount of logistical support needed by our ground forces. (Wolfowitz 2002)

Stryker's chassis commonality, providing up to ten different versions, implied a substantial reduction in maintenance requirements, as a way of improving projection capability through reduced logistics. In this aspect, the SBCT also agreed with DOD requisites:

> One key approach to this reduced logistics footprint is the equipping of the entire brigade team with vehicles sharing an unprecedented degree of commonality in order to reduce the number and quantity of spare parts required to support the deployed I/SBCT. (Townsend 2003, 8)

Consequently, it can be concluded that SBCT's organization and capabilities fit perfectly with those characteristics defined for the Future Force. The SBCT was organized to incorporate some operational features that provide unique capabilities when compared with the other Army brigades. It demonstrates SBCT's validity as an effective bridge towards the transformation desired end state, the Future Force.

## Evolution of the SBCT: Combat Experiences and Other Determining Factors

The Stryker program received considerable momentum after the 9/11 attacks. Many senior DOD officials viewed the SBCT as a "critical component in the GWOT" (Reardon and Charlston 2007, 14). The SBCT's operational tours in the framework of the GWOT provide useful conclusions on potential improvements for the SBCT organization

and capabilities. Reports and information regarding SBCT's operational performance display the information in multiple formats. This work will consider just those experiences that could be applicable to the Spanish case in order to identify lessons learned for the Spanish Army. Moreover, these lessons learned could also be of value for other armies implementing a similar transformational model.

Since its conception as the Interim BCT, the SBCT has suffered several modifications, most of them aiming at increasing its size by providing additional manpower and assets. In 2001, the Interim BCT Table of Organization and Equipment stated 3,494 personnel and 12,840 short tons of weight for the whole brigade, while just a year after the estimated weight was 14,663 short tons (Vick et al. 2002, 17), which represents a 14-percent increase of the initial weight. From the early stages, it was assessed that enabling the SBCT to participate in operations other than small scale contingencies would require an augmentation of its combat load and personnel:

> After General Shinseki set the bar the Medium Brigade proposal evolved into what became known as the Initial Brigade and various proposals for the brigade's design underwent extensive testing and analysis in simulation-based wargames. . . . However, the simulations also indicated that the lethality, survivability and redundancy required for effectiveness at the higher-intensity levels of conflict necessarily caused *unwanted growth in the size and weight* of the brigade's organization—the exact problem with the Legacy Force's heavy divisions. (Townsend 2003, 5)

Consequently, from the very beginning, all the attempts to improve SBCT's operational performance by applying experiences or new concepts had to find a complicated balance between achieving such improvements and avoiding an increase in weight and personnel to such extent that it would lose its original nature: rapid projection and strategic responsiveness.

It is worth noting that the Army seemed to have abandoned two of the tenets initially defined for the Interim BCT: transportability in C-130, and deployability in 96 hours from the first takeoff. As mentioned before, both requirements proved unrealistic due not only to the real Air Force's lift capabilities, but also to other out-of-DOD issues, like the availability of intermediate staging bases, among others. Additional protection items in the Stryker vehicle added some 2.5 tons of dead weight to each vehicle and expanded its girth by close to three feet (Reardon and Charlston 2007, 17), making C-130 airlifting unfeasible. Interestingly, neither requirement is mentioned in FM 3.21-31 *The Stryker Brigade Combat Team* (2003a), which only refers to the capability for rapid deployment in generic terms:

> Strategically, the SBCT is capable of rapid deployment by air into any theater of operations. Operationally, the SBCT is capable of intra-theater deployment by ground, by sea, or by air transport. (DA 2003a, 1-2)

When designing the SBCT, several alternative options were considered in order to reduce the number of Stryker vehicles, for two reasons. On the one hand, the final weight and logistic footprint had to be back to its initial levels, after the aforementioned augmentations in weight had taken place. On the other hand, there was a chance for a potential lack of enough funds to fully equip eighteen Stryker Bns., the equivalent to six brigades, as funds were initially granted only for four brigades. One option consisted of a design with two Stryker Bns. and a third maneuver Bn. of "something other than motorized infantry" (Townsend 2003, 21). The third Bn. could be motorized with non-Stryker vehicles once in theatre, or augmented with trucks from echelons above brigade. Another option considered each Stryker Bn. with two Rifle Cos. equipped with Stryker and a third Rifle Co. with trucks. This option had as an advantage that each Bn. was

organized identically (Townsend 2003, 21). Eventually, with the provision of enough funds to field six SBCT, a full-Stryker brigade option prevailed, although the brigade's progressive augmentation of weight was still an issue to address.

Another aspect extensively analyzed was the SBCT's configuration with only two infantry Bns. instead of three. This design not only would economize resources for the ongoing other-than-SBCT's modular transformation, but also would reduce the SBCT's transport requirement by almost one third if a proportional reduction was made to the rest of the brigade's elements. In intensive simulated-testing exercises, although the two-Bn. configuration worked reasonably well in stability operations, peace-keeping, and combat in small scale contingencies, it proved inefficient when considering a major theater war (Townsend 2003, 20). Eventually, the decision favored the three-Bn. design in order to keep the SBCT capable of operating in more demanding scenarios other than small scale contingencies, as it is corroborated in FM 3.21-31:

> The SBCT conducts operations against conventional or unconventional enemy forces in all types of terrain and climate conditions and all spectrums of conflict (major theater war [MTW], smaller-scale contingency [SSC], and peacetime military engagement [PME]). (DA 2003a, 1-1)

The SBCT have not been proved in a large-scale conventional combat situation yet. Nevertheless, its operational deployments in OIF, since 2003, provide a valuable source of experiences. In March 2003, the first SBCT, the 3rd Brigade, 2nd Infantry Division, could not participate in OIF-I, as it was not declared operational until May 2003. But in October 2003, this SBCT was deployed to Iraq. The 3/2 SBCT took over the AOR assigned to the 101st Airborne Division, in the Iraq's Northern provinces, with Stryker Bns. assuming responsibility of areas formerly assigned to brigades:

> In areas just outside of the city, a single 800-soldier Stryker battalion backfilled an entire 5,000-man infantry brigade from the 101st Airborne Division. For example, in the region north and west of Mosul where Iraq bordered Syria and Turkey, the 1st Squadron, 14th Cavalry, began shadowing the 101st's 3d Brigade Combat Team. Meanwhile, in the area south and west of the city, the 5th Battalion, 20th Infantry, fell in with the 101st's 1st Brigade Combat Team. (Reardon and Charlston 2007, 26)

So, the brigade assumed responsibility for an area initially assigned to a whole division, even though the security situation started to deteriorate in Mosul area. It demonstrates the superior command and control-related capabilities owned by the SBCT compared to the Legacy Force's 101st Airborne Division:

> Although the 101st ABD had some advanced battle command systems, it was largely an "analog" unit, i.e., one that communicated using analog radios and generally used voice-only, line-of-sight communications at the tactical level. . . . In contrast, Stryker units had networked digital communications networks and access to high-capacity satellite communications at lower echelons. (Gonzales et al. 2007, xiii)

The 3/2 SBCT was relieved by another SBCT, the 1/25 SBCT, in October 2004. Even though both SBCTs conducted more major combat-type operations than the 101st Division did, SBCTs suffered considerably less casualties per average number of personnel, about one fifth compared with the 101st Division (Gonzales et al. 2007, xvi). A combination of improved tactics, new networked intelligence capabilities embedded at the lowest tactical levels, and decentralized operations to conduct targeted raids based on these intelligence products proved highly effective. The SBCT was reinforced with some analytical capabilities formerly resident in the division HQ, with its intelligence staff considerably more robust, and also supplemented in analytical capabilities by the military intelligence Co. (AUSA 2006, 16). The organic RSTA Squadron, whose principal mission was to build and maintain situational awareness, proved to be a unique intelligence asset (Reardon and Charlston 2007, 7). This squadron, a Bn.-size unit, is

composed of three Reconnaissance troops (with three Recce platoons and one mortar section each) and one Surveillance troop, equipped with one UAV platoon (four "Shadow"), one sensor Platoon, and one NBC-reconnaissance platoon (Tully 2003, 10). It is able to recon up to nine routes simultaneously (one per platoon-size unit) or conduct surveillance of up to eighteen designated areas simultaneously, or any combination thereof (Rocke 2003, 37). Although not designed to conduct security missions, it performed superbly in reconnaissance and surveillance missions. A common practice is to assign one Recce Troop to an Infantry Bn. for certain missions. Nonetheless, during the performance of the 3/2 SBCT, it was assessed that there was a lack of trained tactical interrogators (Sanderson 2005, 3), and of enough human intelligence (HUMINT) assets within the SBCT's Military Intelligence Co.:

> The SBCT's limited effectiveness at collecting intelligence from the population hampered efforts at counter-infiltration and its conduct of targeted operations or raids against high-value targets. (Gonzales et al. 2007, xxiii)

Although the first SBCT initially deployed with five Tactical HUMINT Teams (THT), four other THTs were organized with assets and personnel from its RSTA Squadron, due to the size of the AOR to cover. In addition, four theater-level THTs were assigned to the brigade in a direct support role, another four theater-level THTs were also assigned to the SBCT AOR in a non-support role to the brigade, and each subordinate Bn. was generally assigned at least two THTs in a direct support role (CALL 2004, x). When the 1/25 SBCT deployed, some modifications were included based on the 3/2 SBCT's experience. As HUMINT capabilities had been largely dedicated to Forward Operating Bases' local employee screening (CALL 2004, ix), the 1/25 SBCT was even reinforced with more HUMINT teams, with screening being conducted at division or

corps level as one lesson learned for the future. Moreover, 1/25 SBCT was less involved in out-of-area missions, its AOR was reduced to focus just on the Mosul area and surrounding towns, and benefited from an improved stability operations training program prior to deployment (Gonzales et al. 2007, xxiv). In addition, its superior performance is greatly attributed to its enhanced capability to integrate intelligence:

> The 1/25 SBCT had additional intelligence capabilities the other two units did not possess, including software tools from the law enforcement community that were adapted to analyzing insurgent networks. The 1/25 SBCT was also able to make effective use of joint and national ISR capabilities to a much greater extent than a traditional light infantry brigade could . . . While these joint and national ISR sources were not new, their *effective integration* into tactical operations in real time was. The ability to use the information they generated in real time, using networks, led to significant operational performance improvements. (Gonzales et al. 2007, xxxi)

As some analysts stated, in a COIN environment, "the demands for intelligence assets at the tactical level have mushroomed" (Donnelly and Kagan 2008, 94). In this increasingly demanding scenario for accurate intelligence, the integration of all information provided by different sensors proved essential to enhance mission effectiveness. Aerial sensors available for the SBCT included not only organic UAVs, but also Air Force sensors, as the Predator, and other manned rotary or fixed-wing aircraft. The Rover III, capable of providing video link between up to fifteen different air platforms and ground commanders, received high marks from users in the 1/25 SBCT, being expanded until Bn. level. Nevertheless the Raven, a mini-UAV operated at Bn. level, received poor ratings. Its noise level and acoustic signature made it impossible to remain undetected. It resulted in frequently using the Raven for non-imagery uses, just to draw insurgents' fire as a way to give away their location. Moreover, the Raven required operators with a high level of expertise (Gonzales et al. 2007, 155).

The effectiveness of the SBCT's intelligence structure in operations was praised by the journalist Robert Kaplan, who was embedded in the 172th SBCT, the successor of the 1/25 SBCT also in Mosul area:

> Information now came to captains less and less down the vertical chain of command from their own battalion headquarters, and more and more horizontally, from other junior officers in other battalions via informal e-mail networks, as well as directly from Iraqi units. The lieutenant colonel who commanded an infantry battalion and the major who was his executive officer did not always have to be consulted. (Kaplan 2007, 231)

From a protection standpoint, several measures were implemented to mitigate Improvised Explosive Device (IED) effects. Density analysis maps were continuously updated and studied before every patrol mission and security convoy operation. Soldiers practiced new reaction drill procedures for vehicle rollovers, fires, and casualties caused by an IED attack daily before leaving the compound. The Stryker had high survivability when attacked by IEDs. Rarely was a Stryker unable to move on its own power after an attack, regardless of the number of tires it may have lost. Even after being attacked, the Stryker vehicles could usually get soldiers to medical facilities quicker and safer than a military ambulance. Nevertheless, the number of fire extinguishers was increased from the initial three per vehicle to seven, due to the difficulties of putting out fires once started (Gonzales et al. 2007, 158).

Another specific measure with regard to protection was the aforementioned increase in vehicle survivability against rocket-propelled grenade (RPG) antitank systems. Although the Stryker offers ballistic protection from 12.70-mm caliber bullets and 152-mm airburst shells (Rocke 2003, 47), additional protection was needed against the insurgents' wide use of RPGs. It consisted of the addition of a 3-mm. steel plate behind the vehicle's ceramic armor, together with an encircling grid of hardened steel

bars to the Stryker's hull to make antitank rockets detonate before hitting anything vital (Reardon and Charlston 2007, 17). Nevertheless, this increase in protection through the slat armor had an impact in Stryker's performance, being identified as a lesson learned the need of specific drivers' training on Strykers with slat armor (CALL 2004, xi). Moreover, this improvement in protection had a negative effect on its airlift capability and maneuverability in urban areas, with the increase in dead weight (about 2.5 tons) also impacting on logistics requirements (maintenance and fuel consumption).

The enormous battlefield awareness achieved through leveraging all the data collected by joint and Army intelligence systems, spread until the individual fighting vehicle, was instrumental to reduce vehicle's vulnerability to enemy antiarmor weapons (Reardon and Charlston 2007, 6), which can be considered as an important contributor to increased protection.

The brigade's signal Co. is responsible for establishing the Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) network, using the tactical internet, as well as the radio and single-channel tactical satellites (TACSAT) capabilities (Rocke 2003, 38). With regard to main learning from a command and control perspective, it is worth highlighting two issues. First, the FBCB2 system should be fielded to the lowest tactical levels, as it is a useful tool to improve situational awareness in all Stryker units. Second, due to the on-foot nature of most of the operations conducted in a stability operations environment, dismounted units at team level should have battle command devices or at least an own forces tracking system (Gonzales et al. 2007, xxxiv). Both these requirements are coherent with the Future Force's capability with regard to achieving a full networked integration of all assets and

units to the lowest levels. In escort-type missions, “the digital communications suite each Stryker possessed proved invaluable,” permitting company commanders to monitor the movements of convoys and coordinate protection measures:

> Each time an ambush occurred, a Stryker commander marked the enemy’s location on his computer system, which automatically transmitted data to the rest of the escort. The system allowed the Americans to coordinate an effective response in the shortest possible time. (Reardon and Charlston 2007, 46)

From a movement and maneuver perspective, the SBCT significantly enhanced the U.S. forces’ ability to respond, acting as a “highly mobile infantry force capable of responding rapidly and effectively to changing operational conditions” (Reardon and Charlston 2007, 64). The SBCTs, although initially deployed in Northern Iraq, were normally detached Bn.-level units to operate in other regions far from their initial AOR, being used as a sort of operational reserve. In addition, the *Stryker* proved much more efficient than the tracked Infantry Combat Vehicle *Bradley* with regard to its fastest movement, its smaller logistical tail, and its higher mechanical reliability when travelling great distances, not to mention the relative silence that accompanied the rubber-tired Stryker that earned for the unit the nickname *Ghost Soldiers* from the insurgency (Reardon and Charlston 2007, 64).

The movement and maneuver capabilities are also emphasized by the increased Co.’s firepower with regard to a light unit. Each Rifle Co. includes three MGSs, two 120-mm mortars and either snipers or marksmen up to squad level (Rocke 2003, 50), not to mention the fire support provided by the medium machine gun mounted in each Stryker. All these fire assets provide enormous capabilities to enable highly effective Co.’s tactical movement and maneuver, independently of eventual support provided by higher echelons. Another essential factor to assess its improved movement and maneuver

capabilities is provided by “a combination of enhanced situational understanding and operational mobility” (AUSA 2006, 16), which allows SBCTs in Iraq to control a battlespace of up to 250 kilometers by 350 kilometers.

From an organizational standpoint, the SBCT’s combined arms structure down to Co. level, as well as its command and control system, enabled more autonomous task-organized subunits to operate in non-continuous areas of operations:

> The Stryker, with its added safety features that drastically cut down on casualties from IEDs and suicide bombs, its ability to travel great distances without refueling, and its FBCB2 computer system that gave captains and noncoms situational awareness and the latest intelligence for many miles around, had helped liberate field units from dependence on their headquarters, making them more autonomous. (Kaplan 2007, 231)

The integration of the MGS as an organic asset at Co. level makes possible a unique combined-arms approach in the SBCT. Each Rifle Co. has a MGS platoon, with three 105mm cannon vehicles to provide bunker buster and anti-tank firepower to the Co.’s infantrymen (Tully 2003, 12). The lessons learned from former Stryker Bn. commanders highlighted their preference of this MGS instead of the initially fielded Antitank Guided Missile Stryker variant with TOW missile (Sanderson 2005, 3). It is worth noting that the Objective Force envisaged the MGS centralized at Bn. Level, with each Objective Force’s CAB consisting of two MGS Cos. (18 systems in total) and two Rifle Cos. It can be concluded that this difference between the SBCT and the Objective Force’s organization of MGS capabilities intent was to provide more self-sufficient capabilities to the Co. level, as a result of OIF’s experiences where Co.-level units must conduct autonomous operations. To this respect, the responsibilities assumed by Co. commanders in 3/2 SBCT, in 2003, were enormous:

> The mission Beaty's unit received when it arrived in Tall Afar exemplified the scale of responsibility virtually every rifle company within the brigade assumed. Company C had charge of a zone that measured thirty by twenty-four miles. In addition to protecting the city's 340,000 Arab, Kurdish, and Turkmen inhabitants, the unit oversaw the security of six smaller towns; numerous villages; two major international oil pipelines and their associated processing infrastructure; the Mosul Dam, the primary source of electricity for all of northern Iraq; the Al-Kisik Military Compound, which was the future site of a New Iraqi Army division and headquarters; and miles of roadways and rolling terrain linking all these places. The company's mission involved the provision not only of security but also of support for local governments and reconstruction projects. (Reardon and Charlston 2007, 29)

Each Rifle Co. also included a Mortar section with two 120-mm mortars mounted in M1129 Stryker vehicles (U.S. Army Armor Center 2008, C-18), a type of weapon normally held organic at Bn. level. Moreover, the SBCT implements the *"arms room concept,"* which consists of equipping both Co. and Bn. levels not only with 120-mm mortars mounted in Stryker vehicles, but also with 60-mm (Co.) or 81-mm mortars (Bn.) for dismounted operations (Rocke 2003, 51). This ensures Co. and Bn.'s autonomous fire support for either mounted or dismounted operations, which enhances operational flexibility within the rapidly evolving situations derived from COIN operations. It can be inferred that the SBCT organization followed the same guiding principle of the Army modular organization: to provide as much combat self-sufficiency as possible to lower levels, which facilitates rapidly reconfiguring and task-organizing the force for stability operations' specific environment.

Other example of decentralized capabilities is the snipers' organization. Although at Bn. level there are two 12.70-mm and two 7.62-mm sniper rifles (U.S. Army Armor Center 2008, C-16), organic sniper teams decentralized lower than Bn. level proved highly effective. The SBCT included sniper teams at Co. and platoon levels (Reardon and Charlston 2007, 24), and even a skilled marksmen per Infantry squad (Rocke 2003, 34).

The wide use of snipers contributed to reduce collateral damage among innocent civilians as it permitted better selective force application. Nevertheless, some lessons learned assessed on the need for an increase of the number of snipers even at squad level, for two main reasons: the higher projectile penetration power of the sniper rifle compared with the standard M4 rifle, and the reluctance to use machine guns in highly populated areas (Sanderson 2005, 3).

One of the biggest deficiencies identified was the lack of enough dismounted personnel to conduct stability-type tasks. A major lesson learned from operations in a COIN environment is the need for dismounted presence in a face-to-face contact with the population.

> When the new unit arrived in Iraq, theory diverged from operational reality just as soon as the brigade received its first mission to conduct stabilization operations, a process that depended heavily on constant presence rather than rapid maneuver… The unit had to convert its field artillery battalion and cavalry squadron into de facto infantry units. (Reardon and Charlston 2007, 68)

The differences between Stryker's versions also posed problems to the commanders on the ground. While each Stryker vehicle could dismount an Infantry squad of nine soldiers, the Stryker Recce version equipping reconnaissance platoons in the Infantry Bns. and in the RSTA squadron only transported three cavalry scouts (U.S. Army Armor Center 2008, C-17, and C-22). This concern was considered by former SBCT commanders, in his lessons learned from OIF, as "the greatest challenge" of the SBCT's design:

> In both cases, the commanders felt that they did not have adequate dismount strength in these recon platoons to accomplish the assigned missions. Currently, the recon vehicle is manned with a driver and a vehicle commander with the potential to dismount three scouts. Given their experience and the mission sets they were asked to accomplish, this number was insufficient for both internal force protection and combat operations in urban terrain. Infantry battalion

> commanders were in some cases resistant to cross-attach rifle companies with reconnaissance troops due to this lack of dismount capability. (Sanderson 2005, 2)

From a sustainment standpoint, the chassis commonality has proved very effective in reducing requirements for spare parts and maintenance operations, with the SBCT vehicles reaching an operational readiness rate of more than 96 percent, significantly superior to other types of BCT. Moreover, the SBCT consumes much less fuel than a HBCT, which reduces the requirement of fuel supply convoys (AUSA 2006, 18) and, consequently, the U.S. forces' vulnerability and exposure to insurgent attacks. The use of contract maintenance personnel during operations was assessed as very fruitful and positive (Sanderson 2005, 3). Nevertheless, the organic Brigade Support Battalion (BSB) was not capable of sustaining the widespread SBCT's AOR with 38,000 square kilometers, and the brigade had to receive support from a Corps Support Bn. and other corps elements (CALL 2004, ix). To this respect, one conclusion was the recommendation of creating a dedicated Stryker Support Group out of the Corps Support Bn. to specifically support the SBCT when operating in a doctrinally larger AOR, and when time-in-theater exceeds six months (CALL 2004, ix).

The size of the assigned AOR, and the lack of operational situations requiring a fire support role, caused the brigade to task organize and use fire support elements, such as mortar platoons and field artillery batteries, in some non-doctrinal economy of force roles. As in most of the BCTs deployed in Iraq, the SBCT's Field Artillery Bn. conducted non-specific fires missions, due to the need of maximizing manpower and resources within the brigade for stability related tasks. 3/2 SBCT's 37th Field Artillery, for example, limited its traditional fire support role to the use of its radars to pinpoint enemy mortar and rocket positions for later destruction by armed helicopters or infantry, with the

artillerymen conducting patrols and, along with Iraqi Army and police units, providing security for convoys of Turkish trucks transporting fuel from Iraq's oilfields at Kirkuk (Reardon and Charlston 2007, 27). Other non-fire support related tasks were Improved Explosive Devices (IED) sweeps, and cordon and search raids (CALL 2004, xi). Robert D. Kaplan, a journalist who was embedded with the 173th SBCT in 2006, wrote about the brigade's Field Artillery Bn.:

> Though almost all the work it did in Iraq was infantry related— shepherding the development of an Iraq army brigade, while cat-herding twenty-one new Iraqi police stations along the Tigris River valley— it still had to work nights to renew its artillery certification on the 155mm howitzer. (Kaplan 2007, 254)

The BCT in general and the SBCT in particular require specific augmentation to conduct stability operations. While optimized for combat operations, the brigade depends on outside augmentation to initiate even the most critical tasks during initial stages of progressive stabilization (Watson 2005, 12). Some of these stabilization tasks are related to conducting Information Operations, processing detainees and prisoners of war, repairing damaged infrastructures, clearing explosives disposals, caring for refugees and displaces persons, distributing relief supplies, among others (Watson 2005, 23). Although echelons above brigade would assume some of these tasks, the BCT should be suited to exercise command and control of augmentation assets to initially conduct these tasks in its AOR. The BCT's organic Brigade Troops Battalion (BTB) seems to offer a potential HQ for receiving these augmentations and synchronizing initial stabilization efforts (Watson 2005, 13). The lack of this Bn. in the SBCT, unlike the IBCT and HBCT that do have it, is a shortage for the SBCT. Thus, the addition of a BTB HQ not only would facilitate the administrative coordination of non Bn.-level units within the SBCT (Engineers, Co., Signals Co., Military intelligence Co., Antiarmor Co.), but also would

provide an additional capability to integrate potential augmentation assets for stability-related tasks. At the same time, the BTB would provide more commonality between the SBCT's organic structure and that of other BCTs.

## The Spanish Army, Towards a Brigade-Centric Construct

Apart from the U.S. Army, many other Western armies are involved in transformational processes to adapt their organization and capabilities to the new international security scenario. Notably, the Spanish Army has started a process to transform its structures that, to some extent, has notable resemblances to the U.S. Army transformational process, principally with regard to the modular concept and the evolution towards a brigade-based Army. This process is embedded in a SAF attempt to transform the military, which has been publicly stated by both Spanish political and military top officials.

### The Spanish Army's Transformational Status

The current process of SAF transformation received political endorsement in 2004. The *National Defense Directive 1/2004* (Spanish Presidency of the Government 2004), edited by the administration that took office in March 2004, expressed the intention of transforming the SAF, and stated several measures to adapt the Spanish military to the new strategic demands. The creation of a Joint Reaction Force; a reorganization of the Defence Joint HQ, with the creation of a Joint Operations Command; and a new Office for the Transformation to lead the process, were some of the intentions expressed in this political-level document that required subsequent development by the SAF. One section was specifically dedicated to the "Spanish Armed

Forces Transformation," stating that the forces should evolve to become "more mobile and flexible," and "equipped with advanced technological capabilities" (Spanish Presidency of the Government 2004, 8).

Nevertheless, several issues concerning the transformation had started its definition previously. In 2003, the publication of the Spanish *Strategic Defense Review* (Spanish Ministry of Defense 2003a and 2003b) represented an important milestone for transforming the SAF towards the new strategic requirements, as it included a collective reflection on security and military issues by civilians and military experts. With regard to the Army capabilities, this document stated:

> The Army must continue its transformation towards units that permit *easier projection,* have greater deployment capability, and are *modularly organized* ad hoc for the specific mission. In order to combine greater tactical mobility with sufficient strike capability, it will be necessary to lighten the heavy armament. The key to success lies in rapid projection capacity, pursuing effectiveness in combat. (Spanish Ministry of Defense 2003a, 61)

This recommendation for the Army transformation kept notable resemblances with the U.S. Army transformational path started at the end of the 1990s. Without a specific mention to the SBCT, it alluded to its basic characteristics when referred to increased projection capabilities and lightened equipment, while maintaining sufficient strike capability. Moreover, there is a specific mention to organize the Spanish Army according to a modular construct. The importance of the brigade as a combat organization is also referred when describing the Spanish Army's level of ambition with regard to the projection capabilities for combat forces. The Navy had to be capable of deploying an entire infantry brigade (Spanish Ministry of Defense 2003a, 66), and the land forces must have the following capabilities with regard to its brigades:

> Participate in the full spectrum of crisis response missions for an indefinite period of time, in two theatres distant from each other and from national territory, *rapidly deploying one Brigade in each of them*, with the necessary combat and logistics support; *or two Brigades* and the required combat and logistics support in one single theatre with a Division Headquarters capable of commanding a multinational force. (Spanish Ministry of Defense 2003b, 191)

Unlike the U.S. Army brigades, the Spanish Army brigades had been organized as combined arms structures, with organic CS and CSS units, from years before. Since the last reorganization of the Spanish Army at the beginning of the 1990s, there were three basic types of Infantry brigades: armor, mechanized, and motorized. In addition to its infantry Bns., each brigade included a Field Artillery Bn., an Engineers Co, a Logistics group, and a HQ Bn. with a Signal Co, an Intel Co, and those support elements needed to deploy two brigade command posts. There were organizational differences among the motorized brigades, due to their specific operational role: mountain brigade, airborne brigade, parachutist brigade, light-armor brigade, and others. Moreover, the Army had one Mechanized Division and one Rapid Reaction Division that included most of these infantry brigades, as well as division-level CS and CSS units.

In the last years, both Spanish military and political leaders have made public statements on the necessity to transform the SAF. Former Minister of Defense, Mr. Alonso, stated the need for continuing a transformation "from Armed Forces basically conceived to defend our homeland to others that also maintain *capacity of projection and sustainment* in distant areas" (Spanish Ministry of Defense 2006, 13). Gen. Sanz Roldan, former Chief of Defense, declared that

> The Spanish Army is to redefine its units, in both quantity and quality, in order to make them easily projectable. *Modularly organized* according to the mission, Spanish Army units must combine enhanced tactical mobility, adequate decisive capacity, and lightened equipment. *Capability for rapid projection* is the

> key for success, while maintaining a high combat effectiveness. (Spanish Chief of Defense 2005, 12)

This statement can be considered a straightforward implicit reference to the U.S. Army modular construct and the capabilities provided by the SBCT. Other defense analysts had also highlighted the requirement for a comprehensive transformational approach within the SAF, advocating for a modular Army where "the basic combat organization will be *the brigade*" (Bardají and Cosidó 2003, 5), as well as the creation of a type of units whose characteristics are similar to those of the SBCT concept:

> Our armor and mechanized units must be substantially lightened to become more projectable and acquire an essential tactical mobility. Moreover, our light forces must increase their protection and firepower. Both attributes ought to converge towards a new type of units that *combine the projection and mobility* of light forces *with the firepower and protection* of armor units. (Bardají and Cosidó 2003, 5)

In 2006, the *Real Decreto 416/ 2006, Organization and Deployment of the Spanish Army, Navy and Air Force* (2006) represented an important step ahead towards implementing a brigade-based Army. It stated several capstone organizational changes that can be grouped in three blocks. First, the *two divisions* were deprived of their operational capabilities to just become HQs responsible for training of subordinate brigades and generation of Army contingents. A new division HQ, without organic subordinate units, was created to receive those combat, CS, and CSS units as needed, and to activate deployable division command posts when required. Second, the *brigades were reorganized* to complete some missing capabilities, gaining one Recce Cavalry Bn., one Combat Engineers Bn., and other organic assets trying to achieve organizational homogeneity among the brigades. And third, CS and CSS out of brigade were reorganized in *Army level organizations*, most of them brigade-level units that would

provide specific capabilities: helicopter command, air defense command, artillery command, engineers command, special operations command, and others. These changes, although particularly adapted to the Spanish Army specificities, show a close similarity with the U.S. transformational model with regard to the modular concept and a brigade-centric organization. Moreover, the brigade-centric approach is clearly stated:

> The brigade becomes the essential maneuver element that will integrate all basic operational capabilities to permit a rapid, cohesive initial response. (Real Decreto 416/ 2006, paragraph 5.3)

Once the reorganization finishes by 2010, the Army would have one Corps-level HQ to provide all operational command and control structures above brigade (Real Decreto 416/ 2006, paragraph 5.1), and four Light brigades, three Mechanized (Heavy) brigades, one Cavalry brigade, plus three other brigades in Canary Islands, Ceuta, and Melilla (Real Decreto 416/ 2006, Annex I). In addition, the Army would concentrate its CS and CSS units in several brigade-level commands, with some resemblance to the supporting brigades of the U.S. Army modular concept.

In 2007, the Army General Staff edited the *Spanish Army Transition Plan*, with details to allow implementation of the aforementioned changes in the following years. This document recognizes the importance of the *Real Decreto 416/ 2006* as starting point for the Army transformation. Although this work only focuses on those measures related to the brigade-centric structure, other important measures were described that would have a great impact on the Spanish Army structure in years to come. They are stated in the section *Objectives for the Army Force transformation*, with specific mention to the brigade: “Strengthen the brigade and equip it with new capacities to ensure an adequate response” (Spanish Army Transition Plan 2007, 3).

All transformational changes were to coexist with the current operational commitments, principally focused in three scenarios: Balkans, Afghanistan and Lebanon.[6] In summer 2006, the Spanish government decided to actively participate in the United Nations deployment in Southern Lebanon, providing the bulk for a multinational brigade. At the same time, the commitment in Afghanistan is also gradually increasing. In December 2008, the Spanish government raised the existing limitation on the number of troops to participate in missions abroad, 3,000 soldiers, authorizing to deploy up to 7,700 soldiers.[7] This scenario of increasing demand, with the described process of Army transformation, made it essential to articulate a Readiness Cycle for the brigades. Moreover, other variables to consider were the ongoing armament programs already committed, in an economic scenario with reductions in the defense budgets.

The SAF Transformation is currently one key commitment within the Spanish Ministry of Defense. The document *The Spanish Armed Forces: Improving Operational Efficacy*, issued by the Spanish Chief of Defense Staff in September 2008, dedicates one chapter to the Transformation, whose aim with regard to the force is described as follows:

> The Spanish military transformation addresses the need for reduced, potent, expeditionary, highly mobile, sustainable, technologically advanced, and interoperable Armed Forces that are capable of conducting military operations in both national and international environments, in all the spectrum of conflict. . . . (Spanish Chief of Defense Staff 2008, 27)

Presently, several works are ongoing in order to define a comprehensive transformational strategy at both services and SAF levels. The Chief of Defense Staff has created the *SAF Transformation Unit*, an auxiliary body directly accountable to the CHOD, and responsible for "research processes, analysis of new organizational and doctrinal concepts, and those related to implementing new technologies" (Spanish Chief

of Defense Staff 2008, 29). The recently published *National Defense Directive 1/2008* stated again the need for a transformation of the SAF, requiring "the definition and acquisition of necessary military capabilities" (Spanish Presidency of the Government 2008, 10). Moreover, it also declared the intent of "maintaining a steady, sufficient budgetary effort to provide a stable economical scenario that permits complexion of the current transformational process" (Spanish Presidency of the Government 2008, 11). An effective implementation of these transformational objectives requires coordination at the highest SAF level. Although recently born, the SAF Transformation Unit should gain relevance as the coordinator body of the service's transformational agendas, in order to achieve a comprehensive approach that is essential to ensure unity of effort.

## Lessons Learned from the U.S. Army Transformation

The Spanish Army construct around the brigade as the centerpiece for operational organization implies important changes. The analysis of the U.S. Army transformation towards a brigade-centric model, with the modular concept as the main organizational guidance, provides some lessons learned which are applicable to the Spanish Army. This section includes some of these experiences that could be of value not only for the Spanish Army but also for other armies involved in such process.

The contrast of the U.S. Army transformational path defined in 1999, with the political view on this issue stated by SecDef Rumsfeld in 2001, permits one to conclude that the Army's intent was nested in the DOD's approach expressed in the QDR 2001 and subsequent documents. Spain experienced a political change in March 2004, after eight years of continuity provided by the same party in the government. Nevertheless, with regard to political inputs in the transformational process, it is worth noting that all the

principles stated in the Defense Strategy Review 2003 on changing the Army in a more projectable and modular organization maintained validity when the new administration took office in March 2004. The new government's guideline to transform the military stated in the *National Defense Directive 1/2004* had multiple implications at the Armed Forces level, but the principles guiding towards a modular brigade-centric Army proved valid and concurrent with the subsequent directives that developed it.

When considering the definition of operational deployment requirements for the Army units, it is essential to include the assessment of the Navy and Air Force from the outset. The projection of any Army formation is heavily dependent on the type and number of transport assets available by sister services, as well as on many other variables, as for example the number of bases to use as staging areas. Army's intentions with regard to SBCT's deployability included as key issues its capability to deploy in any place in 96 hours of the first takeoff, and to be capable of using C-130 aircraft. Both requirements proved highly demanding shortly, as well as unmatched with the real capacities of the U.S. Air Force and the availability of staging bases abroad. Thus, it is essential that any planning process related with the definition of projection capabilities be conducted in close coordination with both Air Force and Navy in order to avoid further revisions that, ultimately, could deprive credibility to the project.

The U.S. Army capability to deploy a division, based on the building blocks represented by the BCTs, supporting, and functional brigades, has proved effective in OEF and OIF. But the U.S. Army division, although no longer an organic unit, maintains those capabilities that permit its activation and deployment as a cohesive HQ. Notably, the division HQ has been increased with some positions that were provided before by

other CS and CSS units, such as the Fires Coordinator or the G-6 Communications Officer. Most of the personnel to activate the six functional cells in the main command post are organic to the division HQ: movement and maneuver, intelligence, fires, sustainment, protection, and command, control, communications, and computer operations cell (DA 2008a, 5-11). Only when operating as a Joint Task Force HQ or Land Component Command HQ, would the division HQ receive significant augmentation, including other services' members The U.S. division has one HQ Bn. as the only organic unit, composed of four companies, with those capabilities needed to activate two command posts (main and tactical) and one mobile command post: headquarters and headquarters company, intelligence and sustainment headquarters company, signal operations company, and support company (DA 2008a, 5-20).

On the contrary, the activation of the Spanish division HQ is largely based on augmentation of its core permanent staff, as well as in case-by-case assignments of signals and sustainment units that would permit the activation and deployment of its command posts, as these assets are not organic to the division HQ. From a command and control standpoint, an organic HQ Bn. providing the core of communications and materiel needed to deploy the divisional command posts would increase common knowledge and effective activation.

The U.S. Army transformation is an overarching process that affects all the aspects in the DOTMLPF domain. One essential aspect is the material development, centered in the FCS system. Although the FCS development has some uncertainties about its technical and financial viability, the desired end state is to equip at least fifteen BCTs in the long term. The Spanish Army is also equipping its units with new vehicles and

technology, although without a so ambitious scope as the FCS represents. In September 2008, the MRAP (Mine Resistant Ambush Protected) vehicle started to equip the Spanish forces deployed in Afghanistan and Lebanon.[8] In total, Spain will acquire 395 MRAP Class I (crew of 4-5) and 180 MRAP Class II (crew of 8-10), with a priority to equip those units deployed in operations. The MRAP, RG-31 Mk5E Nyala, will be produced in Spain by General Dynamics-Santa Bárbara Systems, under license from a South African subsidiary of BAE Systems.[9]

In addition, the Spanish Army is working in the definition of a project to replace all armor personnel vehicles with the Future Land Combat System (FLCS). Basically, this project will equip with a new 8x8 wheeled-armor vehicle the light infantry brigades, as well as other CS and CSS units within mechanized and armor brigades. Although the final decision on the model and technical characteristics is still under study, this vehicle would start equipping the Army units by 2015.[10] The FLCS is to have some of the Stryker vehicle features, notably its protection, airlift deployability, and integration of situational awareness systems. It is worth noting that the Spanish Army, since 1990s, has an "armor-light" brigade, equipped with an 8x8 wheeled-armor vehicle. This unit, the Spanish Legion Infantry Brigade (SLIB), is consistent with the "intermediate forces" concept as defined in the Strategic Defense Review 2003:

> So in addition to light forces with a sufficient degree of protection, there is also a need for *intermediate forces*. While these forces will not have the combat power of the armored/mechanized units, they have sufficient strike and rapid reaction (projectability) capability. In addition to rapid location on the scene of the crisis, this would permit crisis control when the need is not for decisive force but for superiority from the outset. (Spanish Ministry of Defense 2003a, 105)

In addition to its three Infantry Bns., two of them equipped with the Spanish 8x8 vehicle BMR, the SLIB includes organic CS and CSS units, with one Cavalry

Reconnaissance Group recently added (Real Decreto 416/ 2006, Annex I). Consequently, its organic structure maintains close resemblances to the SBCT one, with the exception of several intelligence collection assets that the SLIB does not have in its inventory, as for example brigade-level UAVs. Once equipped with the FLCS, the SLIB could benefit from all lessons learned from the SBCT performance, as both units will share significant organizational similarities and equipment likeness.

The ratio between light infantry units and heavy units is also another issue to consider. Once it has completed its modular transformation, the U.S Army envisages for the AC 48 BCTs, with the following distribution: 18 HBCTs, 1 Armored Cavalry Regiment, 6 SBCTs, and 23 IBCTs. In addition, the ARNG will have 28 BCTs: 7 HBCTs, 1 SBCTs, and 20 IBCTs (DA 2008a, 1-2). With its recent reorganization, the Spanish Army force has the following BCT-type units: four Light Infantry Brigades, three Mechanized Infantry Brigades, and one Cavalry Brigade. The next table shows the ratio between each type of unit and the overall force:

Table 1. Ratio of BCT-Type Units in the U.S. and Spanish Armies

| | U.S. Army BCTs (AC) | | U.S. Army BCTs total (including ARNG) | | Spanish Army BCTs | |
|---|---|---|---|---|---|---|
| | Number | Ratio | Number | Ratio | Number | Ratio |
| HBCTs | 18 | 37% | 25 | 33% | 3 | 38% |
| Armor Cav | 1 | 2% | 1 | 1% | 1 | 12% |
| SBCT | 6 | 12% | 7 | 9% | 0 | 0 |
| IBCT | 23 | 48% | 43 | 57% | 4 | 50% |

*Source*: Department of the Army (DA), Field Manual (FM) 3-0.1, *The Modular Force.* (Washington, DC: HQ Government Printing Office, 2008).

Thus, it can be inferred that both armies maintain a similar ratio of HBCTs and IBCTs, with the U.S. Army having a significant number of IBCTs in the ARNG. Nevertheless, the most significant differences are in the SBCTs and the Armor Cavalry units. In the U.S. Army's AC, the SBCTs represent 12 percent of the total BCTs, while the Spanish Army has not identified any unit with such characteristics yet. Moreover, the Spanish Army maintains one Cavalry Brigade out of 8 BCTs in total, while the U.S. Army has practically eliminated these brigade-size Cavalry units in order to focus in providing one organic RSTA squadron per BCT.

The role and organization of the Cavalry units within the Spanish Army differs from that of the U.S. Army. According to the last force structure modification, only two light brigades, one of them the SLIB, have an organic Cavalry Recce Group (Orden Def 3771/2008, Annex I). Nevertheless, one Cavalry Recce Regiment is set up in order to attach Recce squadrons to the HBCTs on a case-by-case basis. The missions of these Cavalry Recce units are also somewhat different. The U.S. Army emphasized its reconnaissance and surveillance role, although occasionally can be reinforced "to screen, guard, or cover, but doing so degrades its primary mission to find and track the enemy." (TRADOC 2004, 9-3). The RSTA squadron would conduct "combat information, to include fighting for information when necessary" (DA 2008a, 1-12). Thus, security missions are excluded from its general tasks. By contrast the Spanish Cavalry Recce Group, in addition to its reconnaissance and surveillance missions, is to perform security and even limited combat missions.

Other difference between both U.S. and Spanish units relates to the number of subordinate Co.-size units. While the RSTA Squadron has three, the Cavalry Recce

Group has two,[11] which enables it to conduct just two Co.-level efforts. It reduces the Group's ability to operate in a brigade-level operation within a non-contiguous AOR, where normally each of the three infantry Bns. should receive a Co.-size Cavalry unit in his Bn.'s AOR.

The modularity achieved even at Co. level is another essential feature of the SBCT that reflects the intent of implementing in the SBCT the same organizational approach that guided the Army modular concept. Thus, SBCT's subordinate units have organic capacities that permit a seamless, rapid attachment to other units, while maintaining combat effectiveness with their own assets:

> While engaged, the [SBCT] brigade managed to reform itself into various task organizations several times, reassembling companies, reassembling battalions, reforming itself to meet the mission on, indicating modularity in an echelon below the brigade. . . . In April through June 2004, a residual force consisting of one company from the 5-20th, a cavalry troop, a brigade antitank company, and several engineer platoons, functioned as an infantry force, a fairly common operational procedure for the brigade. (McGrath 2004, 53)

Each Stryker Bn. has one Tactical Air Control Party (TACP) with its organic Stryker vehicle, in addition to a 120-mm mortar platoon (U.S. Army Armor Center 2008, C-13). As aforementioned, each rifle Co. also owns enough fire support elements to permit autonomous operations, notably the MGS platoon and the 120-mm mortar section. These units also have vehicles to transport their combat load without requiring significant attachments from the Brigade Support Battalion. This organization is a key enabler to rapidly deploy Bn. or even Co. level units, which also provide a great flexibility to task-organize units.

Chapter 5 will include the main conclusions reached with this work, as well as some recommendations for the ongoing transformational process in the SAF and, specifically, the Spanish army.

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[1]Available in http://www.cnn.com/US/9904/06/vietnam.vs.kosovo/ (accessed February 12, 2009).

[2]See *Analysis: Task Force Hawk*, with the opinions of General Eric Shinseki, Ralph Peters, Lawrence Korb, Andrew Krepinevich, and Major General James Dubik on the impact of "Task Force Hawk" performance in Albania for the future of Army Transformation. Krepinevich considered as essential the Army's capability to project combat power independently of fixed installations and entry points that represented an easy targeted in an anti-access adversary's strategy. These entry points were "the canyons of the twenty-first century", in reference to the Indian Wars in the nineteenth century and the Indians' ability to ambush U.S. cavalry forces in cannons, normally used by the U.S. forces to rapidly access to a certain place. This analysis is available in http://www.pbs.org/wgbh/pages/frontline/shows/future/experts/ taskforce.html (accessed February 21, 2009).

[3]Operation Anaconda was conducted in Afghanistan against remaining Taliban elements close to the Pakistani border. The mountainous area only permitted the employment of light infantry units, Special Forces, intensively supported by rotary and fixed wing assets.

[4]The vehicle was named *Stryker* in honor of two Medal of Honor recipients: Private First Class Stuart S. Stryker and Specialist Robert F. Stryker, who served in World War II and Vietnam, respectively. (Vick et al. 2002, 7)

[5]The 82nd Airborne Division had one battalion permanently on 18 hours standby, ready to be deployed anywhere in the world, and if necessary, the rest of the division's Ready Brigade would join it within a day. The standby time is the timeframe required to activate and assemble the unit in an airbase or seaport ready for projection. http://www.globalsecurity.org/military/agency/army/drb.htm (accessed March 15, 2009).

[6]Spain contributes to the UN mission in Lebanon (UNIFIL) by providing the framework of a Multinational Brigade. In Afghanistan, Spain is the eight contributor by number of troops, mainly deployed in the West region (Herat area), with around 900 soldiers. In the Balkans, most of the forces are deployed in Kosovo, with an additional contingent in Bosnia-Herzegovina. http://www.mde.es/ contenido.jsp?id_nodo=4367&&&keyword=&auditoria=F#libano (accessed March 15, 2009).

[7]"Defense Minister Chacón will be able to make adjustments in missions abroad." *El Mundo*, December 20, 2008.

[8]"Defense sends to Afghanistan 17 mine-protected armor vehicles." *El País*, September 5, 2008.

[9]"The vehicle that will change the mission in Afghanistan." *El Mundo*, January 12, 2009.

[10]http://www.mde.es/dgam/Jornada_1112/doc2.pdf (accessed May 3, 2009).

[11]http://personal5.iddeo.es/cmolero/legion.htm (accessed May 2, 2009).

# CHAPTER 5

# CONCLUSIONS AND RECOMMENDATIONS

> Our Armed Forces have undergone several changes in the last decades; but these changes, although establishing bases for the essential modernization, are insufficient. Now, it is necessary to make a qualitative step forward to embrace the *Transformation*. This is the only way ahead to successfully face all the challenges in this new century.
>
> General Sanz Roldán, Spanish CHOD
> *Address at the "Club Siglo XXI"*
> June 6, 2005

The research and analysis conducted in Chapter 4 permits formation of an answer for the primary research question in this work: Are there lessons learned from the experiences of the U.S. Army in transforming divisional brigades to modular brigades that could be applicable to the Spanish Army case? As a major conclusion, the Spanish Army can effectively benefit from the U.S. Armed Forces transformational experience with regard to the evolution towards a brigade-centric construct. This would provide learning experiences that help define and reorient the SAF Transformation and, specifically, the Spanish Army process.

The research methodology described in Chapter 3 has proved a valid instrument to develop this work. Using the *case study* construct as an observational method to test the validity of the thesis, the antecedent condition for this case study has been the SBCT experiences and lessons learned derived from operational commitments. The dependent variable was defined as the Spanish Army process towards a brigade-centric construct and the future brigade organization. The corroboration of the influence of the antecedent condition on the independent variable has tested the validity of the theory or thesis, which ultimately has permitted to answer the primary research question.

## Brigade-Centric Army and the SBCT: Origin and Evolution

The Transformation of the military was the DOD's top priority for the Bush administration in 2001. The appointment of Donald Rumsfeld to lead this process, former SecDef in the Ford administration and with broad experience in the corporate world, was on paper a sensible choice. His transformational view, the RMA and its associated concept of Network Centric Warfare, but moreover the principles of *Shock and Awe*, were his preferred sources to implement a new way of waging U.S. military engagements, far different from the massive force engagements of the Gulf War, in 1991. The analysis of his transformational vision, as outlined in the *Guidance and Terms of Reference for the 2001 Quadrennial Defense Review* and later consolidated in the QDR 2001, reflects that those concepts were the cornerstone of the DOD's model for the desired Transformation.

The U.S. Army had stated its own transformation well in advance. In 1999, only four months after taking office as Army Chief of Staff, Gen. Shinseki launched what he intended to be a profound change of the Army with the focus on achieving more projectable, rapid deployable units but with enough protection and firepower, as "the critical factor in transformation according to Shinseki was deployability" (Kagan 2006, 242). The lack of success while attempting to timely, effectively deploy "Task Force Hawk" in Albania, during the NATO campaign in 1999, showed the Army's deficiencies in this area, which might gain the Army irrelevance in the new operational environment. Notably, an analysis of the attributes conceived by the Army for the Objective Force (responsible, deployable, agile, versatile, lethal, survivable, and sustainable) shows their

coherence with SecDef Rumsfeld's transformation vision when defined about two years later.

Moreover, the contrast and comparison between these seven attributes, stated in 1999, and the six critical operational goals for DOD Transformation, defined in the QDR 2001, draws to conclude that the Army's vision for the Objective Force perfectly fitted with the DOD's transformational approach. Thus, two major conclusions can be reached in this respect. First, Gen. Shinseki focused on deployability as the driving reason for Army transformation, in an attempt to maintain relevance with regard to other services with more expeditionary capacities. Second, the desired end state for Army Transformation as envisaged in 1999, the Objective Force, was nested with SecDef Rumsfeld's transformational stance as stated in the QDR 2001, including the key role that new technologies had to play in the process.

Initially, SecDef Rumsfeld found fierce resistance within the defense establishment towards his transformation plans. After 9/11, the DOD became the centerpiece of the U.S. response to the terrorist attacks, which accelerated SecDef Rumsfeld's envisaged transformation. His view on the employment of the military power directly influenced the military planning for the operations in Afghanistan and Iraq. Therefore, in 2001, OEF to topple the Taliban regime in Afghanistan was conceived as a "transformational campaign," where SecDef Rumsfeld validated his warfare view: ample use of selective airpower and information technologies, with a minimum footprint on the ground. *Shock and Awe* proved a valid, successful formula, which was to be implemented again in 2003 against Saddam's regime in Iraq.

Nevertheless, it can be inferred that the lack of understanding among SecDef Rumsfeld and top military leaders, notably Gen. Shinseki, apparently had little to do with transformational issues. With the notable exception of the Crusader program cancellation, that could indicate a certain degree of divergence between both DOD and Army transformation approaches, the lack of understanding among Army leadership and SecDef Rumsfeld can be attributed to two main causes. First, personality traits, and second, the interference of SecDef Rumsfeld in military planning for OIF, whose attempt to implement his transformational vision imposed severe restrictions to military planners in the number of land forces. Therefore, it can be concluded that, in broad terms, both DOD and Army transformational visions were concurrent, as initially defined at the beginning of the 2000s.

The Army Modular concept was embraced later by the Army. The basis for the organizational change from a division-centric model to a brigade-centric one was endorsed in 2003, with the concepts of UA and UE in the *Army Transformation Roadmap.* Later, with Gen. Schoomaker as new Army Chief of Staff, the Army announced detailed plans to implement the Modular Army in the *Army Transformation Roadmap 2004.* An analysis permits identification of three major implications from an organizational standpoint: conversion of all AC and RC brigades into *BCTs,* including organic CS and CSS resident in divisions before; activation of *supporting brigades* and *functional brigades* with CS and CSS assets to support BCTs capabilities; and modular conversion of *division HQs* into command and control structures of BCTs and supporting brigades that might be assigned on a case-by-case basis. It is worth noting that the modular concept's general terms were developed and published by Douglas Macgregor in

1997, in his work *Breaking the Phalanx*, with a great influence in the model finally implemented in the U.S. Army.

In March-April 2003, 3rd Division's advance towards Baghdad, where its maneuver brigades efficiently conducted distributed operations in a wide front, demonstrated the validity of the BCT concept that had started implementation. But in addition to the successes in this campaign, the two main reasons leading to adopt the modular approach had to do with the protracted operations in the GWOT, notably the manpower-intensive engagement in OIF. The Modular concept raised the number of combat brigades from 33 to 43. Moreover, a BCT with organic CS and CSS assets was better suited to the new COIN scenario, where autonomous operations in non-contiguous AORs required self-capable units that could operate without dependence on support from higher echelons.

The prolonged OEF and OIF stability operations, with an increasing demand on troops to address the deterioration in the security situation, had an impact on the Army's transformational plans. Some analysts raised objections on the feasibility and convenience of such transformation, considering that the priority should be the ongoing GWOT operations, as "for land forces especially, continuous presence is a higher virtue than the ability to strike rapidly from great distances" (Donnelly and Kagan 2008, 89).

Four major consequences of the Transformation due to the GWOT can be inferred for the purposes of this work. First, the conversion towards the modular construct was accelerated, as the demand for BCTs and associated supporting brigades also increased. To some extent, the Army Modular concept can be considered as the main tool used for the military to rapidly set up more combat units for OIF. Second, the legacy units had to

upgrade and refit their platforms, which forced diversion of DOD's funds from other transformational efforts. Third, some specialties less demanded in COIN operations (artillery, armor, combat engineers, and air defense) were transferred to those more required for the new scenario (psychological operations, military police, and civil affairs). And fourth, the total size of the Army and Marines was to grow, which conflicted directly with SecDef Rumsfeld's vision of intensive use of new technologies that would reduce the need of manpower.

From the outset, a new capability was developed to address an identified gap in the Army inventory: a unit combining light force deployability and heavy force lethality. With its antecedent in the experimental "Strike Force" developed at the end of the 1990s, the Interim BCT was to fulfill this operational deficiency. But at the same time, it represented one of the three major paths towards the Objective Force, the Interim Force. Thus, the Interim BCT, the direct antecessor of the SBCT, was designed to play a dual role in the Army transformation: to fill the aforementioned operational gap, and to validate an organizational and operational model for the Interim Force as one essential tenet in the Army Transformation. This Interim BCT would be organized according to the new structure that was starting to be implemented for the rest of Army brigades, and also was to be equipped with a new IAV. Interestingly, in 1997, Douglas Macgregor in *Breaking the Phalanx* had already advocated a type unit, the Light Recon-Stryke Group, with close resemblances to the model defined by the Army years later as the Interim BCT.

The development of these Interim BCTs received high priority in Gen. Shinseki's transformational plans, which permits one to conclude there was a sense of urgency as

the Army was trying to show visible transformational results in the shorter term. When considering organizational issues, two major conclusions can be obtained from the Interim BCT role in the Army Transformation. First, it set out the guidelines for the structure to be adopted later for all the Army brigades in their BCT construct. And at the same time, it addressed the need for a transformational testing unit aiming at the final Objective Force structure. These two organizational challenges were to be compatible with the need for a rapid, deployable unit that the Army urgently needed for current operational demands.

A comparison and contrast of the Interim BCT concept with the transformational tenets stated in QDR 2001 draws as a conclusion that this brand new unit fitted with the DOD Transformation views. The four DOD Transformation Pillars were adequately addressed by the Interim BCT, as well as the Strategic Tenets also defined in the QDR 2001. Moreover, the chassis commonality based in the platform *Stryker* also permitted reduction of the logistic footprint, another transformational principle. It can be inferred that this adequacy with the DOD transformational objectives was probably the main reason for the funds support received by the Interim BCT, shortly named SBCT, which permitted equipping and organizing up to six SBCT in just a few years. The comparison of the Interim BCT as defined at the end of the 1990s, and the SBCT organization as finally implemented, also led to the conclusion that both organizations were almost identical, without suffering major changes through its final implementation.

One noticeable aspect of the SBCT characteristics that proved unfeasible was Gen. Shinseki's intended deployment anywhere in the world within just 96 hour of the first takeoff. Several detailed studies soon concluded that both the real U.S. Air Force

airlift capacities and the availability of intermediate staging bases did not permit the accomplishment of such a demanding deployment requirement. One major conclusion is that the sister services directly involved in the fulfillment of any projection capacity must be involved to properly assess the feasibility of such requirements. Nevertheless, the modular approach down to Bn. and even Co. levels allows the rapid projection in the 96-hour timeframe of a *Stryker CAB Task Force plus* with about 40 percent of the SBCT total combat capability. In any case, the time needed to project the SBCT is considerably less than that required to project a HBCT, and its combat power is higher than that of a more rapidly deployable IBCT. Thus, the experiences for the deployment and projection of the SBCT can be considered as a valid testing tool to evaluate these attributes to be implemented in the Future Force.

The SBCT was also conceived as a unit specially suited for small scale contingencies. Although it can operate in a major-theatre war performing a great variety of roles, its increased intelligence capacities, independence from large infrastructures to be deployed, and adequate protection and firepower makes the SBCT exceptionally suited for entry operations in semi-permissive or non-permissive environments. Another major conclusion is that the SBCT effectively fulfilled the operational deficiency that it was intended to address.

Some analysts question the effective role of the SBCT as a transformational vehicle towards the Future Force. Nevertheless, an analysis of the SBCT organizational and operational features as stated in the FM 3-21.32, and a comparison with the six main operational themes that are the foundations of the Future Force defined in the *Army Transformation Roadmap 2004* permits one to conclude that the SBCT is an effective

bridge to the Future Force. Operational Maneuver from Strategic Distances, Entry and Shaping Operations, Intratheater Maneuver of Mounted Forces, Decisive Maneuver, Network-Enabled Battle Command, and Distributed Support and Sustainment are requisites for the Future Force that are adequately approached by the SBCT, which demonstrates it is valid as a transformational bridge.

## SBCT's Operational Experiences: A Source of Lessons Learned

The employment of the SBCT in the initial stages of the stability operations in Iraq, starting in October 2003, permits one to conclude valuable lessons learned applicable to the Spanish Army, and to other armies that might be involved in a similar process. From all the learning experiences referred in Chapter 4 of this work, the main conclusions are grouped in two broad categories: those related with organizational aspects, and those referred to the six warfighting functions that are noticeable in the SBCT operations. Nevertheless, this work just provides the basis for further in-depth analysis on some specific aspects that could be of more interest.

### Organizational issues

The Air Force and the Navy must be closely integrated in every planning aiming at defining Army units' projection capabilities. Two basic features of the initial Interim BCT concept had to be disregarded in the SBCT: airlifting in C-130, and deployability anywhere in the world in just 96 hours from the first takeoff. Early requirements to enhance protection augmented both weight and size of the Stryker vehicle, making it unfeasible the transport in C-130. The 96-hour projection also proved unrealistic due to U.S. Air Force capabilities, and staging bases availability. Apparently, both highly

demanding requirements were not adequately coordinated with the other services. Or perhaps Gen. Shinseki really attempted a risky bet that, although unrealistic and probably unfeasible, would draw the DOD attention on the Army's new emphasis on expeditionary capabilities, and change the Army's mindset towards this issue.

The different studies on the number of Bns. per brigade show that the three-Bn. organization should not be discarded. Not only in high intensity combat operations, but also in stability operations, three combat Bn.-size units are a requisite to operate in up to three subordinate AOR while maintaining a minimum reserve. An intermediate solution to the lack of enough Stryker vehicles to equip three Bns. per brigade is to maintain a third Bn. motorized in other-than-Stryker vehicles.

The RSTA squadron, organized and equipped for surveillance and reconnaissance missions, is not suited for assuming responsibility of an AOR where COIN operations demand strong ground presence and, occasionally, combat operations. Consequently, the RSTA squadron should not be considered as a substitute of an Infantry Bn., as it is equipped neither for combat missions nor for security ones. From this standpoint, the IBCT and HBCT's two-Bn. structures should be revised, with the creation of a third Bn. per brigade as the organizational priority for the upcoming enlargement of the Army.

During COIN operations, the different Stryker versions in infantry and Recce units make it difficult to task-organize and assign missions involving both types of units, as the former can dismount nine soldiers and the later just three cavalry scouts. A revision of the Stryker version equipping the Recce units, both in the RSTA squadron and in the Bns.' Recce units, might led to an increase in the number of soldiers capable of conducting dismounted missions. This would provide more commonality with the squad-

type Stryker vehicles, and at the same time would enhance the Recce units' interaction capacity with local population, as an unavoidable operational requirement in stability operations.

Unlike the IBCT and HBCT, the SBCT does not have an organic Brigade Troops Battalion (BTB), whose HQ could add important operational capabilities to the brigade. Notably, in stability operations, the SBCT would normally receive augmentations to conduct some specific non-combat tasks, like engineers for repairing infrastructures and clearing of explosive disposals; military police for processing prisoners of war; civil affairs and logistics units for caring for refugees and displaces persons, among others. The BTB HQ could represent a command and control capability able to coordinate the activities of these stability-related assets. Moreover, the activation of this BTB would help reduce the brigade HQ's administrative workload with regard to Co.-level units that currently depend directly from the brigade commander.

## Warfighting Functions

From the research and analysis conducted in Chapter 4, the main conclusions with regard to the performance of the different warfighting functions are:

*Movement and maneuver.* The Sryker Bns. are ideally suited to constitute an operational reserve, being assigned out-of-area missions far from the parent SBCT´s AOR, by three main reason. First, the combined arms structure down to Co. level, with organic fire and sustainment elements as the MGS platoon and the 120-mm mortar section, permits a rapid and effective task-organization to address unexpected situations in the theatre. Second, the Stryker units provide faster movement than a CAB from a HBCT, with fewer logistics requirements. And third, the enhanced communications and

information system integrating the great number of intelligence assets permits the commander to acquire rapid situational understanding and effective reaction to unexpected situations.

The “arms room concept,” with the fire support weapons (notably mortars) able to fire either from the vehicle (120-mm mortars) or dismounted (60-mm and 81-mm mortars) provides a great flexibility for the employment of Cos. and Bns. in autonomous operations regardless of fire support from higher echelons. This characteristic proves essential in COIN operations, where Cos. are assigned large AORs in non-contiguous operations. The ample use of snipers and marksmen down to platoon level also provide great self-sufficiency to lower echelons, while ensuring discriminate use of firepower that reduces collateral damages.

*Command and control.* The Force XXI Battle Command Brigade and Below (FBCB2), which links intelligence assets, weapons and vehicles in a single network, is a key enabler of SBCT´s superior operational capacity. In addition to the Joint Tactical Radio System, they provide unique capabilities that expand situational awareness down to the lower levels. This feature proved instrumental when taking over responsibility in Northern Iraq from other legacy units. Notably, Stryker Bns. were able to assume responsibility of AORs previously assigned to entire brigades from the 101st Division, in 2003.

*Intelligence.* The SBCT’s intelligence collection capabilities are highly increased by two organic units: the RSTA squadron and the Military Intelligence Co. The use of the RSTA squadron as an infantry-type unit proved inadequate by the lack of enough dismounted personnel, with the Recce troops (Co.-size unit composed of three Recce

platoons) normally assigned to Stryker Bns. Organic HUMINT capabilities had to be heavily reinforced, as the THT soon proved the most appropriate collection asset in a COIN environment. While UAV at brigade level (Shadow) performed well, with the Rover III integrating adequately information provided from several sensors, the mini-UAV Raven at Bn. level turned out not so effective. Nevertheless, much more than the collection assets themselves, the superior intelligence capabilities relied on the network-approach permitted by the communication and information system equipping the brigade down to the individual combat vehicle.

*Fires.* The normal use of the organic Field Artillery Bn. and mortar platoons is in other-than-fires missions, due to the need of manpower to conduct all stability-related tasks, and the lack of operational situations requiring artillery or heavy-mortar fires support. The artillerymen regularly conduct convoys escort, patrols, IED sweeps, and coordination elements with the Iraqi units. Nevertheless, the use of radars to locate insurgent's mortar and rocket firing positions is of great value for subsequent actions with armed helicopters or infantry. In the specific COIN scenario, the fires support provided by air assets is sometimes the only one available, with each Stryker Bn. being assigned a Tactical Air Control Party (TACP), and equipped with one organic Stryker vehicle for this specific purpose.

*Sustainment.* The family of Stryker vehicles, sharing the same chassis and basic maintenance requirements, simplifies the logistics requirements, so reducing the footprint of sustainment assets. Ultimately, a reduction in the logistic requirements implies less logistic convoys, which at the same time reduces exposure to enemy attacks. Other major conclusion is the inability of the organic Brigade Support Battalion (BSB) to effectively

sustain SBCT operations in an enlarged AOR of up to 38,000 square kilometers. Higher sustainment echelons had to reinforce the brigade, prompting recommendation for the creation of a specific Stryker Support Group in higher echelons specially organized to support the SBCT in enlarged AOR's operations.

*Protection.* Standard Operating Procedures (SOP) are implemented to mitigate the IED effects, which are extensively rehearsed. Although the Stryker has demonstrated a high degree of survivability to enemy attacks, it had to be reinforced with a steel plate and a grid of steel bars. The direct consequence was the addition of 2.5 tons of dead weight, and the expansion of its girth, making it unfeasible the airlift in C-130 aircrafts. Drivers also require specific training with this "hardened-Stryker vehicle" prior to deployment. On the other hand, the command and control system equipping each Stryker, that expands enhanced situational awareness to squad leader level, has proved valuable to anticipate insurgent attacks and, ultimately, can be also considered as a key contributor to protection.

## Recommendations for the Way Ahead

Based on the analysis of the U.S. Transformation, the dynamics involving the Army's evolution towards a brigade-centric model, and the role played by the Stryker Brigade Combat Team (SBCT) in this process, some recommendations are to follow that might be of value for the SAF and for those other armed forces also involved in similar transformational processes:

1. The SAF Transformation requires a clear, straightforward *definition of the endstate* to achieve. There is a danger of converting the concept of "Transformation" into an empty slogan or buzz-term, just a synonym of the constant evolution that any Armed

Forces must endure to adapt themselves to societal changes and new operational realities. The emphasis in Transformation must "remain on the end product or the very purpose of the organization", or the transformational process would fall back merely in a reengineering or rightsizing process (Kem 2006, 88). The SAF needs to define and develop a comprehensive, shared vision on the endstate to be achieved by the services, with clear definition of the *Future Joint Force's* attributes to achieve at the end of the process. This overarching definition of capabilities should drive all the service's transformational efforts towards a common objective. To this purpose, the recently created *SAF Transformation Unit*, adequately resourced with personnel from all services, is on paper the most suited body to coordinate the process at SAF level. Once defined the way ahead, keeping in tune the political and SAF-level transformational objectives with the Spanish Army objectives is essential to achieve effective results, as the U.S. process did.

2. Transforming the Armed Forces is a long term endeavor. Nevertheless, once the desired endstate is clearly defined, all efforts should be focused on its implementation regardless of major significant events that might appear through the process. Although some U.S. analysts consider that "The experience of land warfare in the post-9/11 period has frustrated nearly every aspect of the transformational approach" (Donnelly and Kagan 2008, 94), there are enduring concepts still ongoing, despite the U.S. engagement in the GWOT. Among them, the SBCT is a reality, and the FCS is also being gradually implemented, although adapted to the new DOD priorities. The SAF should define its *long term transformational approach*, then focus all acquisition programs and

organizational changes to achieve this endstate, while maintaining a flexible mindset to adjust the process to unexpected major events.

3. Although with differences in scope and amount of resources, both the U.S. Army and the Spanish Army transformational processes towards a brigade-centric construct have close resemblances from an organizational standpoint. Nevertheless, one remarkable difference is the absence in the current Spanish Army inventory of an "intermediate" or "medium" unit, combining rapid deployability and protection, that otherwise was considered by the Strategic Defense Review 2003 and other Army studies in the past. The implementation of the FLCS, with a new 8x8 wheeled IAV as the centerpiece of the program, should be leveraged to *design a SBCT-type organization* for those light brigades finally equipped with this vehicle, complemented with other essential capabilities related with command and control, and intelligence. This sort of unit would provide an enhanced operational capability to the Spanish Army, whose commitment in operations abroad in the last decades has required that type of *hard-skinned combat units* (Bosnia, Kosovo, Iraq, Democratic Republic of the Congo, and Afghanistan). Moreover, its contribution in both NATO and European Union's rapid reaction structures (NATO Response Force, Battle Group) requires a *rapid projection capability* with enough combat power that the Stryker-type unit is better suited to provide.

4. In addition to the need of addressing a specific operational gap with regard to projection, the SBCT was designed for another essential role: to serve as a transformational vehicle towards the Future Force. Once the final design for those units equipped with the new FLCS is defined, the Spanish Army should implement a similar approach by designating a unit that would serve as a *testing ground* of this new capability

in the Spanish Army, while taking advantage of lessons learned from the U.S. experiences with the SBCT. *The Spanish Legion Infantry Brigade (SLIB),* with two Bns. equipped with the Spanish 8x8 vehicle BMR, and with an organic structure closely similar to the SBCT (including the recent addition of a Recce Cavalry Group), is adequate to perform this role as a test organization of a Spanish Stryker-type unit.

5. When *defining projection and deployment capabilities* for Army units, sister services must be involved in the process from the very beginning. Although obvious, this issue is disregarded sometimes, and later modifications in the initial deployment requisites might damage the credibility of the whole project. To some extent, that was the case with the initial projection features envisaged for the Interim BCT (deployment wherever in just 96 hours, with C-130 airlift), which proved unfeasible later. Realistic timeframes and deployment procedures, defined in close coordination with the Air Forces and the Navy, is an essential prerequisite to design a rapid projectable capability.

6. A robust, expanded *command and control network* that integrates all elements providing situation awareness, and that makes them available down to the lowest levels, ought to be considered as the centerpiece for the design of any transformational unit. To this respect, the SBCT provides an adequate model to inspire any similar command and control structure design.

7. The Army Modular concept should be expanded down to levels below brigade. Regardless of the SAF's level of ambition to deploy brigade-level organizations, the frequent deployment of Bn.-size contingents by the Spanish Army could lead to consider *the Bn. as the building block* of any operational organization to generate. Again in this issue, the U.S. Army Modular concept, and more specifically the SBCT, provides a valid

reference on how to provide Spanish Army's Infantry Bns. and, even Rifle Cos., with those organic self-sustaining capabilities that permit a seamless integration in whatever task organization might be created.

8. *Centralization* of some CS and CSS assets at Army level, and *decentralization* down to Co. level of those capabilities that permit self-sufficient autonomous operations, is a must in nowadays' non-contiguous COIN scenarios, where support from higher echelons is not always timely available.

9. Organic *Recce Cavalry Groups* within the Spanish Army's light infantry brigades should focus on Recce and surveillance-type missions. For the SBCT, the RSTA squadron has proved a unique asset to increase situational awareness which, ultimately, provided commanders with superiority over the adversary. On the contrary, the employment of the RSTA squadron in infantry-type missions in OIF did not pay off adequately. Focus on screen and guard missions rather than on security missions would be the most efficient approach. Moreover, the Recce Group should be provided with a third Co.-size unit in order to effectively support up to three Bn.-size AORs.

10. As in the U.S. Army, the division in the Spanish Army is no longer an organic structure. Nevertheless, the Spanish Army division HQ should have an organic HQ Bn. with essential communications and support capabilities to deploy the divisional command posts. In addition, its staff should be permanently manned with those core positions required for rapid activation and deployment, although receiving later some augmentations according to specificities of the mission. These are two prerequisites to achieve an adequate procedural commonality and to permit a rapid, efficient activation of a division-level operational structure.

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