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Abstract

THE OBJECTIVE FORCE: PATTERNS OF CHANGE? By MAJ Michael J. Lawson, Field Artillery, 61 pages.

The bifurcation of global threats since the collapse of the bipolar paradigm, as well as technological proliferation has heightened uncertainty in US Army operations. This uncertainty has manifested in adversaries with broader capabilities to directly impact US dominance, lessening the advantages inherent in technology centric solutions. In 1999, the CSA proposed an Objective Force that would alter the patterns of organizational action through technological dominance. This monograph examines these patterns of alteration against the experiences of a deployed Legacy Force unit and suggests that the capabilities embedded in them do not require the creation of a new force. These pattern alterations exist in part in current forces and these forces are capable of rapidly adapting.

This examination begins with an analysis of the origins that led the CSA toward the Objective Force. Based on the perceptions of senior leaders, the need and direction for change was clear. While the Objective Force concept has not been tested, the framework articulated by TRADOC is sufficient to analyze its theoretical and conceptual foundations. Viewed through complexity and systems theory, the monograph threads the ideas of the Objective Force through the prism of the complex adaptive system and identifies the patterns of alteration that seek to counter the perceived methodism of the Legacy Force. This analysis provides evaluation criteria to compare the proposed capabilities of the Objective force with those of a Legacy Force unit.

This monograph concludes that the US Army does need to change but the course does not have to be the Objective Force. It recommends the creation of organic modular combined arms units at brigade and below composed of light/medium and heavy/medium forces to enhance capabilities, as well as staff reorganizations to mitigate the ad hoc nature of current staff processes. Coupled with these recommendations is a change in manning process to enhance cohesion and leader continuity and development, and informational enablers that focus on content to enhance commander visualization.

The Objective Force: Patterns of Change?

**A Monograph
by
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CHAPTER ONE

INTRODUCTION

The US Army transformation to the capabilities based Objective Force represents a force able to operate in the full spectrum of operations outlined in FM 3-0.¹ The United States Army Objective Force Concepts White Paper, outlines a framework for a network centric Army capable of global deployment, predicated on decisive victory.² The organizational design of this force leads directly to how it fights. Whether units are complementary to larger echelons or supplementary semi-autonomous units will impact command and control, operational employment, sustainment, and freedom of action.

But does the Army need to radically change organizational design and structures to achieve these capabilities? Can the current Army of Excellence and Force XXI organizations, hereafter referred to as the Legacy Force, adopt this new approach?

United States Army transformation is an effort to fix the unbalanced combined arms team. The unbalanced team refers to the inherent weaknesses of forces at the extremes of force design – the heavy dominance and the light dominance.³ The dominance of armored forces covers a specific capability for cybershock and deep penetration. Equally as well, light forces (airborne, air assault and infantry) provide vertical envelopment and deep infiltration. What is lacking is not a medium force, per say, but a more versatile force, one that has the capacity to bridge the transitions from multi-terrain environments (urban, desert, jungle, mountains, etc.), and operate among the range of operations.

¹ Eric Shinseki, "Army Transformation" (address presented at Association of the United States Army annual meeting in Washington, D.C., October 17, 2000); and. U.S. Department of the Army, *FM 3-0: Operations*. (Washington, D.C., 2001), 3-2. The extremes refer to the capabilities of light and heavy forces to operating in the full spectrum of operations over the full range of conditions.

² US Department of the Army. *U.S. Army White Paper: Concepts for the Objective Force* (Washington, D.C., 2001), i.

³ Ibid., 1. The unbalanced combined arms team refers to the organizational adjustments seen as a weakness of current force structures. The extremes refer to the capabilities of light and heavy forces to operating in the full spectrum of operations over the full range of conditions.

But the Objective Force, as a technology centric concept, creates limited dominance over time, because technological dominance is transitory, particularly in military operations.⁴ The development of a technological advantage has been, sometimes quite rapidly, countered by additional technological actions, i.e. employment of submarines and the development of sonar, employment of combat aircraft and the development of anti-aircraft and radar systems, the development of GPS and the GPS jammer. Because of this fact, the Objective Force technological adaptations must be a secondary benefit of operational, organizational, and doctrinal concepts. The Objective Force adaptations cannot reside solely in the technological arena. Historical examples, such as Napoleon's Grand Army's victories at Austerlitz and Ulm or the Third Reich's Weirmacht blitz into Poland and France demonstrated that forces possessing current technological capabilities combined with unique operational concepts, organizations and tactics can achieve decisive results. In an environment of rapid change success may ultimately go to the organization that can adapt its organization, doctrine and conceptual design, as well as technology.

The introduction of the capabilities based Objective Force presents a host of controversial proposals to reshape the US Army. Many of these proposals are not marginal but significant alterations of existing institutional interactions and organizational concepts.⁵ Before proceeding further, it is worth noting the limit of the current research. This research conducted on the Objective Force concept will not address in detail the US Army's culture or institutional and bureaucratic mechanisms. However, there will be instances when the linkages between and among these areas will require elaboration.

⁴ Ibid. The introduction to the Objective Force states, "The power of advanced technologies, especially information technology, enables The Army to achieve situational dominance and decisionmaking momentum to create a new construct for the application of force."

⁵ Donald Vandergriff, *Path to Victory: America's Army and the Revolution in Human Affairs* (NY: Presidio Press 2002). For a thorough discussion of personnel system reforms that issues related to current forces; For a thought provoking discussion on flattening organizational design and its implications on organizational change see Douglas A. MacGregor, *Breaking the Phalanx* (Westport: Praeger Books, 1997).

This monograph will examine whether the US Army needs to change its force structure to achieve the CSAs vision of the Objective Force. More specifically, does the organizational structure of a Legacy Force heavy division have the capabilities the CSA outlined in the Objective Force Concepts White Paper? The process used to answer this question is a comparison of capabilities desired in the Objective Force and those capabilities resident in a Legacy Force division employed in the current operational environment.

Chapter Two analyzes the context of the current operational environment (COE) articulated in FM 3-0 Operations, the TRADOC Contemporary Operating Environment White Paper, and TRADOC Pamphlet 525-5, Force XXI Operations. This analysis will focus on the perceived need for change due to strategic threats and rapid technological advancements as the impetus for the capabilities desired in the Objective Force. The chapter concludes by establishing the organizational pressures for change that have propelled the Objective Force proposal.

Chapter Three analyzes the Objective Force theoretical and conceptual foundations. The purpose of this chapter is to outline the overall framework in order to set the conditions for a comparative analysis with the Legacy Force heavy division.

Chapter Four is a case study of a Legacy Force division employed in the contemporary operating environment. This case study provides a point of comparison for Objective Force capabilities and those of a Legacy Force unit. If unit capabilities resident in Legacy Force outfits are able to achieve those commensurate with the Objective Force then, there may be little need to dramatically alter organizational structures.

Chapter Five provides conclusions and recommendations. The technology centric Objective Force framework may not provide the sole answer to the demands of change. A more evolutionary approach may be in order, one that is not dominated but accentuated by technology.

There are some assumptions required for this research. First, the Objective Force Concepts White Paper is the definitive source for CSA Objective Force framework and capabilities. Second, all discussions about future technological advances will, on the basis of history, not be

accepted as accurate. Third, the technological capabilities currently in the joint force inventory are those that forces will use when the Objective Force is initially fielded in 2008.

CHAPTER II

ORIGINS OF CHANGE

During the 1999 Association of the United States Army annual meeting and subsequent briefings in 2000, Chief of Staff of the Army (CSA) General Eric Shinseki presented an ambitiously broad vision of a transformed Army. This future force, framed on a distributive system of systems, organized around six key combat functions (strike, protect, sense, decide, move, and sustain) coordinated through multiple platforms is centered on technology - networked information, precision strike, and lethal overmatch.⁶ What was the impetus for General Shinseki's vision? What in the strategic environment caused a demand for change? Was it the contemporary operating environment or technology or both? And, how does this impetus for change translate into the Objective Force?

Historically, the US Army has changed its organizations as a result of three trends: to meet a specific threat exemplified in the Pentomic Division of 1955-1963; to utilize or accommodate new technology such as the 11th Air Assault Division (Test) of 1963-1965; and to accommodate austerity in one or more areas, such as the 7th Infantry Division (Light) of 1983-1986.⁷ These reorganization initiatives altered the processes by which the US Army operated.⁸ However, these trend lines show a convergence in time in terms of diverse types of threats, rapidity of technological applications, and proliferation and scope of demands on available forces in the current environment.

⁶ Eric Shinseki, "Army Transformation" (address presented at Association of the United States Army annual meeting in Washington, D.C., October 17, 2000). The vision statement is very short on operational concepts in creating dominance over the current concepts of Airland battle concept. It relies heavily on undeveloped technological solutions and the development of the Future Combat System.

⁷ Department of the Army, Training and Doctrine Command, #14 "Sixty Years of Reorganizing for Combat: A Historical Trends Analysis" (Ft. Leavenworth: Combat Studies Institute, 2000). 26, 76.

⁸ Michael Hammer, *The Reengineering Revolution: A Handbook*, (NY: Harper Collins, 1995). 11. A process is defined as a mechanism by which work is performed and value added. The Army work is close combat created through the mechanism of force generation and application resulting in the accomplishment of the desired outcome - dominance of the land.

The strategic environment can be viewed in broad terms along four diverse interconnected continuums shown in figure 1.⁹ Although the Army has always operated in this

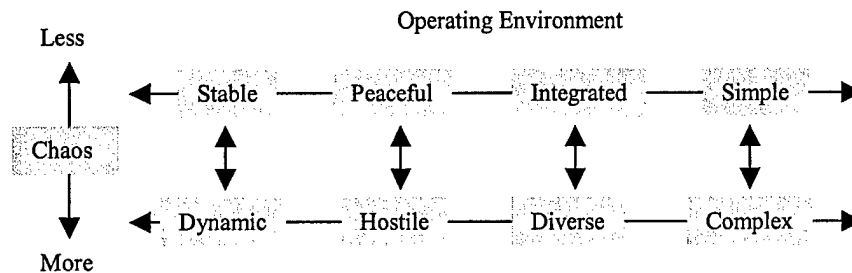


Figure 1

environment, the connections have not always been apparent. Short of stating the obvious, this represents a dynamic, complex environment. These environmental factors are not the extremes of equilibrium or chaos, but relative conditions used as barometers for organizations, as they interact (act, react, and counteract) within this environment. These environmental factors relate to an organization's ability to cope with its environment "to predict it, comprehend it, deal with its diversity, and respond quickly to it".¹⁰ The inherent complexity of this environment is not an abstract concept an organization can overlook or avoid.

This complexity is exemplified in the unanticipated paradigmatic shift in 1990. This paradigmatic shift from the bipolar world, caused by the 1990 collapse of the Soviet Union, to a multi-polar world had dramatic consequences on US Army operations in the past twelve years. The divergence of power bases (regionalization particularly in the Near and Far East), the proliferation of sophisticated military technologies, and increased tensions along religious, ethnic and cultural "fault lines" such as the Balkans, Chechnya, Kashmir, and Nagorno-Karabakh

⁹ Henry Mintzberg, *Structure in Fives: Designing Effective Organizations* (Englewood, NJ: Prentice Hall, 1993), 135-6. These factors are discussed specifically relating to organizational design and development.

¹⁰ *Ibid.*, 137.

presented the Army with near simultaneity of the aforementioned environmental factors at the more chaotic end.¹¹

The US Army Training and Doctrine Command (TRADOC) has outlined several trends of the multi-polar world that have direct impact on the application of force: power redistribution resulting from collapse of the bipolar world and fragmentation of marginal states, economic interdependence directly impacting national decisions on force employment, rapid technological change, proliferation and military adaptation, and environmental conditions.¹² These trends form a linkage within the four diverse continuums that demonstrate current and future operations are and will remain diverse, complex, dynamic and more hostile than those in the bipolar world.

Since 1990 the US Army has performed a broad range of missions including peacebuilding, small and large-scale conflict, international humanitarian and domestic disaster assistance. These diverse operations have molded the Army's views of future operations and strategies for accomplishing its goals.¹³ These views include a recognition that adversaries will make every effort to exploit US vulnerabilities by desynchronizing the synergistic effects of joint operations.¹⁴ United States Army forces organized and equipped for a specific style of warfare possess vulnerabilities that can be effectively exploited.¹⁵ The dramatic success of the US Army

¹¹ Samuel Huntington, *Clash of Civilizations* (New York: Touchstone Books, 1997). Description of current and future conflicts characterized by religious, ethnic, and broad cultural conflicts along fault lines – interconnection of cultures – threatening previous mechanisms such as transnational organizations, non-cultural treaties and defense arrangements to mitigate conflict.

¹² Headquarters TRADOC, *TRADOC Pamphlet 525-5 Force XXI Operations* (Fort Monroe: Headquarters TRADOC, 1994), 9. For environmental factors, the issue is demographic changes, religious and ethnic tensions, degradation of natural environmental such as water, land, air, and natural resources.

¹³ Eric Shinseki, "Army Transformation" (address presented at Association of the United States Army annual meeting in Washington, D.C., October 17, 2000). Views of the CSA on the contemporary operating environment.

¹⁴ MacGregor, 176.

¹⁵ *TRADOC Pamphlet 525-5 Force XXI Operations* (Fort Monroe: Headquarters TRADOC, 1994), 3; and Headquarters TRADOC, *TRADOC Contemporary Operating Environment White Paper* (Fort Monroe: Headquarters TRADOC, 2001), 16. US forces are optimized for close combat in the rolling and open terrain of Europe against an echeloned enemy. This reality created the conceptual and doctrinal basis of Airland Battle providing forces significant overmatch in conventional capabilities.

during the 1991 Gulf War overshadowed several critical time and space niche vulnerabilities such as rates of deployability, force generation, logistical sustainment, and structural responsiveness.¹⁶

United States Army forces cannot develop strategies, operational plans, and concepts based on the willingness of adversaries to concede time, space, information, and technological dominance. The Army must expect adversaries to use all available means to exploit vulnerabilities in depth. So the nature of change is not so much that the US Army is dominant but that this dominance is transitory, unless the organization is able to change in such a way as to overcome current vulnerabilities. But change driven by technology will create its own vulnerabilities, such as,

... technological prowess will tend to equalize among polities over time, especially when, as today, much of the frontier technology is civilian in origin and can be acquired off the shelf; asymmetrical doctrines and practices of war may reduce the value of high technology weaponry quite sharply; the political and geographical context of conflicts may demand manpower intensive operations rather than precise firepower; a technological hubris could encourage an army to lose its adaptability to different conditions; and, as unsurprisingly has happened in Afghanistan, bombardment can become an end in itself with the conduct of war reduced to the application of firepower.¹⁷

Within the four continuums of the complex dynamic environment, TRADOC presented a geopolitical framework, as depicted in figure 2, for understanding current threats to US Army forces.¹⁸ This framework exposes the gamut of operations from the armor-mech based armies of Iraq, to the metanational terrorist organizations of al Qaeda. The mechanized threat-based foundation of US Army force design has eroded as a model because the changing nature of global threats. These threats engender a greater degree of uncertainty characterizing US Army operations for the foreseeable future.

¹⁶ MacGregor. 176, and George F. Wieland, *Organizations: Behavior, Design, and Change* (Illinois: Richard D. Irwin Inc, 1976), 35. Structural responsiveness relates to abilities to design and implement new organizational structures as a result of stress or requirements.

¹⁷ Colin Gray, "Defining and Achieving Decisive Victory", (Carlisle, PA: Strategic Studies Institute, April 2002), 27. Gray's comments should be remembered when viewing the technologically superior U.S. forces' failures from the war in Vietnam and Germany's inability to maintain its control of Europe through the combination of technological and tactical dominance during WWII.

¹⁸ *TRADOC Pamphlet 525-5*, 3.

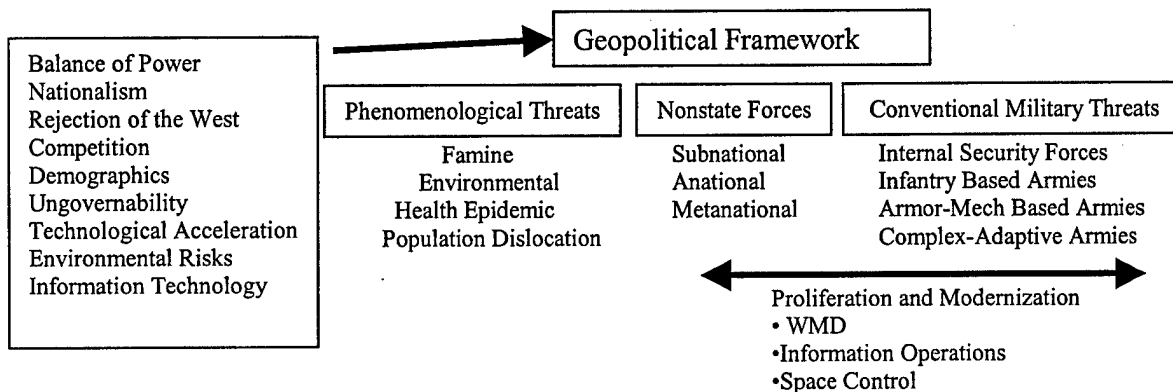


Figure 2

The elevated level of uncertainty characteristic of the current operational environment is exemplified by the September 11, 2001 attacks on the World Trade Center and the Pentagon. The uniqueness of these attacks by al Qaeda is not the level of planning or coordination, but their effects on national will, evaluation of victory, and the application of force as a tool. Carl Von Clausewitz, the classical theorist who wrote the enduring study *On War*, articulated these effects in Book Four:

“The outcome of a major battle has a greater *psychological* effect on the loser than the winner. This, in turn, gives rise to additional loss of *material strength*, which is echoed in loss of morale; the two become mutually interactive as each enhances and intensifies the other. So one must place a special emphasis on the moral effect, which works in opposite directions on each side: while sapping the strength of the loser, it raises the vigor and energy of the winner...So what happens is that the loser's scale falls much further below the original line of equilibrium than the winner's scale rises above it...It is possible to avoid repeating a mistake, and one can always hope that another day will bring a better deal from luck or chance, but the sum total of physical and moral strength is not so susceptible to rapid change. Therefore, the judgement pronounced by a victory seems to be of greater importance for the future.”¹⁹

The environmental factors identified in figure 1 are the manifestations of this immutable uncertainty of geopolitics now, and into the future. This uncertainty is analogous to sailing in a new direction without a map in a vessel you are not sure can get you to the destination. But this

¹⁹ Carl Von Clausewitz. *On War*, ed. Michael Howard and Peter Paret (Princeton NJ, Princeton University Press 1976), 253-4. The effects of Sept 11, 2001 include the elimination of any illusion of geographic isolation, internal tension over use of US power against international actors, loss of prestige and questioning US true interests in the Middle East and with Islamic community. The loss of material strength is the perceived inability of US forces to defeat adversaries such as the al Qaeda terrorist organization.

uncertainty, and its effect on national response options, is only one factor affecting the impetus for change. A second factor is rapid technological advancements.

The information revolution and technological proliferation force us to ask, "what will a given technology drive our adversaries to do?"²⁰ Current US Army doctrine clearly outlines the technological challenges confronting forces on the battlefield. The technological globalization characteristic of the contemporary operating environment has resulted in the proliferation of technologies, both commercial and military, irrespective of borders or boundaries or treaties.²¹ As with many commercial technologies such as the railroad, airplane or telegraph, their innovative uses demonstrably alter their importance.

The asymmetric response of adversaries like al Qaeda demonstrates that technological dominance does not prevent low-tech solution.²² On the contrary, asymmetric responses serve as an appropriate characterization of the current operational environment's complexity.²³ This is recognition that there may be relational predictabilities among some actors (nation-states), but that predictability is more problematic with nonstate forces (subnational, anational, and metanational). This complexity leads to the operational necessity for change inherent in the CSA's vision of the Objective Force where "emerging technologies promise a clear path to the future. The power of advanced technologies, especially information technologies, enables the

²⁰ Charles J. Dunlap Jr. "21st Century Land Warfare: Four Dangerous Myths". *Parameters* (Autumn 1997), 35.

²¹ *FM 3-0: Operations*, 1-13; and David Shukman, *Tomorrow's War: The Threat of High-Technology Weapons* (San Diego: Harcourt-Brace, 1996), viii. "Technologies of a bewildering variety...are suddenly on the loose and the competition to find new ways of putting them to military use is no longer the preserve of the most advanced industrial nations. There is now a free-for-all to acquire weapons which may allow even relatively weak countries the chance to leap-frog their way to battlefield superiority – at what could be a more uncertain or unstable time."

²² *TRADOC Contemporary Operating Environment White Paper*, 4. Asymmetric warfare is defined as an adversary's comparative advantage against another's relative weakness in strategy, tactics, technology, organization or culture which alters relative advantages within battlespace.

²³ *Ibid.*, 4. "The current operational environment for military forces is extremely fluid with continually changing coalitions, alliances, partnerships and new actors (both national and transnational) appearing and disappearing from the scene."

Army to achieve situational dominance and decisionmaking momentum to create a new construct for the application of force."²⁴

This new construct or paradigm contrasts with the overwhelming force paradigm of the industrial age. As an example, the 1990 Gulf War was not predictable in its outcome but it was in terms of strategic responsiveness, time phased force generation, and sustainment. This same scenario is being played out in 2003 in the Persian Gulf as US forces again conduct combat operations in Iraq. While the interactions among the actors are unique, like those of 1990, there is a predictability of the way of US operations. The alternative presented in the Objective Force Concepts White Paper is the information dominance paradigm where information age technologies and processes provide the US Army with the ability to shift away from the attrition dominate force.²⁵

The operational necessity generated by these threads of change drove the CSA to advocate the technology centric information dominance paradigm. Forces in this paradigm bridge the current gaps in full spectrum operations through pattern alterations in thinking, acting and operating within a system of system dominated by technology.

In summary, this chapter described the causes leading to the development of the Objective Force framework. The chief causes were the emergent threats associated with the collapse of the bipolar world and technological proliferation that lessened the advantages inherent in technology centric solutions. These causes have bifurcated threats into more complex issues, heightened uncertainty, and providing adversaries broader capabilities to directly impact US forces.²⁶

²⁴ U.S. Army White Paper: *Concepts for the Objective Force*, 1.

²⁵ The overwhelming force paradigm of the industrial age is characterized by formations applying mass creating dynamic impact resulting in compliance, coercion or defeat. The information dominance paradigm is dispersed integrated formations applying effects over space and time creating simultaneous synergistic impact resulting in compliance, coercion or defeat.

²⁶ US Department of Defense, *Joint Vision 2020* (Washington, DC 2000), 6. JV2020 states that "the asymmetric methods and objectives of an adversary and the psychological impact of an attack might far outweigh the actual physical damage inflicted."

As a recent US Army War College study articulated, the broad range of operations conducted since 1990, have not “fit within the cultural and operational framework developed to fight World War II and to deter World War III.”²⁷ This analysis matches the CSA’s views.²⁸ But are the capabilities outlined in the Objective Force Concepts White Paper so unique that they cannot be applied to the Legacy Force? Or is the only “means” to achieve these capabilities through technology? What other means can be used to achieve the desired capabilities? Is the time for radical change now or does the Army need to wait? These issues will be addressed below, but first an outline of the Objective Force is needed.

²⁷ Williamson Murray, *Army Transformation: A View from the US Army War College* (Carlisle PA: U.S. Army War College), 2.

²⁸ Eric Shinseki, “Army Transformation” (address presented at Association of the United States Army annual meeting in Washington, D.C., October 17, 2000).

Chapter Three

Defining the Objective Force

After identifying the foundations of change that led to the Objective Force proposal, it is appropriate to discuss the theoretical and conceptual threads within the Objective Force. This approach is necessary because a concise concept has not been fully developed. Even stating the above, in order to begin this theoretical and conceptual discussion, it is important to understand the basis of the Objective Force and its desired capabilities.

The Objective Force Concepts White Paper links desired capabilities with altering organizational patterns. These patterns include thinking, acting, and operating. These pattern alterations begin to emerge in the following:

The Objective Force is our future full spectrum force: organized, manned, equipped and trained to be more strategically responsive, deployable, agile, versatile, lethal, survivable and sustainable across the entire spectrum of military operations from Major Theater Wars through counter terrorism to Homeland Security. Objective Force Units will conduct maneuver from strategic distances, creating diverse manifold dilemmas for our adversaries by arriving at multiple points of entry, improved and unimproved...conduct forcible entry, overwhelm aggressor anti-access capabilities, and rapidly impose our will on our opponents...units arrive immediately capable of conducting simultaneous, distributed and continuous combined arms, air-ground operations, day and night in open, close, complex, and all other terrain conditions throughout the battlespace. Army units conducting joint and combined operations will *see first, understand first, act first and finish decisively* (original emphasis) at the strategic, operational, and tactical levels of operation.²⁹

Before exploring these patterns of alteration, one must examine their basis within the theoretical and conceptual basis of the Objective Force. There are several interconnected theories, which are fundamental to understanding the Objective Force: complexity theory, systems theory, and the complex adaptive system.³⁰ In addition, the notions of technological dominance, joint synergy, and process dominance provide linkages from theory to potential action. Embedded

²⁹ U.S. Army White Paper: *Concepts for the Objective Force*, v.

³⁰ U.S. Army White Paper: *Concepts for the Objective Force*, iv-v. Complexity with its implicit nonlinearity is evident in Joint Vision 2020, which serves as the building linkage document for US Army transformation and the Objective Force.

within these foundations are the pattern alterations of the Objective Force capabilities which allow the organization to predict, deal with and respond to its environment.

Complexity theory, characterized by unpredictability and nonlinearity, is at the heart of the contemporary operating environment. This theory asserts that expected outcomes, proportional responses and clear identification of cause and effect are obscured from understanding.³¹ An environment of constant unanticipated change, requires superior “flexibility, adaptability, dynamic change, innovation, and responsiveness...”³² This environment of seeming unpredictability, with numerous interactions among actors, places a premium on coping with future states rather than driving for specific end states. It is a mental model of the environment within which the Army should operate.³³ Leaders and planners will recognize that linear reductionism can not account for the myriad interactions inherent in complexity nor can they view operations through the lens of individual events without comprehending connectivity to other events. As the Objective Force Concepts White Paper states, leaders “...must be adaptive and self aware – able to master transitions in the diversity of 21st century military operations.”³⁴

But mastery of diversity is simply not achieved by recognizing the inherent complexity of the external environment because the essence of complexity is based on interactions cut across internal and external linkages within systems. The Objective Force Concepts White Paper articulates this idea stating, “The Army must be capable of simultaneously conducting

³¹ Thomas Czerwinski, “Coping with the Bounds: Speculations on Nonlinearity in Military Affairs” (<http://www.dodccrp.org/copind.htm>), 1-2. For example, extrapolation in a nonlinear world does not achieve replication of expected outcomes. “The lack of predictability frustrates planning and control, as we use the terms; and Dietrich Dorner, *The Logic of Failure* (NY, NY: Metropolitan Books, 1996), 38. Complexity is the name give to numerous independent variables in a given system. The greater the number of variables the greater the demand for a “capacity to gather information, integrate findings, and design effective actions”. It is somewhere between order and chaos.

³² Czerwinski, 1-3.

³³ Peter M. Senge, *The Fifth Discipline: The Art & Practice of the Learning Organization* (NY, NY: Doubleday Books, 1990), 8.

³⁴ *U.S. Army White Paper: Concepts for the Objective Force*, v

warfighting and stability operations and transitioning smoothly from one category of operations to the other and back again without any loss of momentum or operational focus.”³⁵

The nature of complexity in warfare is exemplified by Clausewitz’s metaphor that war is “more than a true chameleon”, ever changing and ever difficult to adequately describe.³⁶ The Objective Force seeks to become that chameleon, ever changing and adapting so that its adversaries can never adequately counter its capabilities. Complexity is only one thread running through the Objective Force concept.

In tandem with complexity, the proposed Objective Force will operate as a system within multiple systems, requiring a systems approach to operations. This identification is a conscious choice, which impacts employment strategies needed in developing the relational nature of components of the system to their environment.³⁷

Broadly speaking, a system is a regularly interacting or interdependent group of actors that form a unified whole. But seen through the lens of complexity, those interactions and interdependencies are not always obvious because of inherent nonlinearity. Systems thinking provide a “framework, a body of knowledge and tools” to aid in recognizing and effecting the interrelated actors within systems.³⁸

Modern organizational and behavioral theorists have come to recognize the inherent utility of viewing human actions within the context of a complex dynamic environment, and the interconnection of systems because of the limits of linearity and reductionism.³⁹ The Objective Force framework argues that technologically networked forces operating over dispersed distances can conduct decisive maneuver in all conditions.⁴⁰ This nonlinear system requires one to think

³⁵ Ibid., 4.

³⁶ Clausewitz, 89.

³⁷ C. West Churchman. *The design of Inquiring Systems: Basic Concepts of Systems and Organization* (New York, Basic books 1971), 42.

³⁸ Senge, 7.

³⁹ These theorists include Thomas Czerwinski, a researcher in complexity theory, Henry Mintzberg, an organizational theorist and behaviorist, Peter Senge, a management and organizational theorist, and Michael Hammer, a organizational and management theorist and behaviorist.

⁴⁰ *U.S. Army White Paper: Concepts for the Objective Force*, iv.

beyond reductionism, i.e. in "terms of (system) parts or aspects" analyzed separately, and recombine "in an attempt to describe the entire system."⁴¹ Reductionism is used in part to create models for patterns of behavior within systems. These patterns provide access to potential weaknesses within the system through the interactions of parts.

Patterns of Alteration

The Objective Force seeks to alter patterns of thinking, acting, and operating in order to mitigate the methodism that produced the perceived predictability characterized of the Legacy Force.⁴² These pattern alterations go to the heart of the Objective Force; they express its capabilities.

Operations will be characterized by developing situations out of contact; maneuvering to positions of advantage; engaging the enemy forces beyond the range of their weapons; destroying them with precision fires; and, as required, by tactical assault at times and places of our choosing. Commanders will accomplish this by maneuvering dispersed tactical formations of Future Combat Systems units linked by web-centric C4ISR capabilities for common situational dominance.⁴³

While the above observation is tactically based, it demonstrates the alteration from "act then decide" to "decide then act" of the systems based Objective Force.⁴⁴

The systems approach is designed to alter the patterns of thinking, for leaders and planners, from direct event causal linkages to those of linked processes. This is articulated in the Objective Force mantra: see first, understand first, act first and finish decisively.⁴⁵ It links the maneuver out of contact action with "decide then act". A decision construct such as the observe, orient, decide, act model easily fits this process.⁴⁶ Because the Objective Force is conceptually oriented toward

⁴¹ Czerwinski, 1. This is the crude look at the whole articulated by Murray Gell-Mann.

⁴² Dorner, 171. Methodism is the unthinking application of a sequence of actions we have once learned can have a significant impact in unintended areas; and Headquarters *TRADOC, TRADOC Pamphlet 525-66 Force Operating Capabilities, Final Coordinating Draft* (Fort Monroe: Headquarters TRADOC, 2002), 5.

⁴³ *U.S. Army White Paper: Concepts for the Objective Force*, 6.

⁴⁴ The "act then decide" is based on Legacy Force tactics of maneuver to meet the enemy, execute actions to compel based on this meeting through tactical art, techniques and procedures.

⁴⁵ *U.S. Army White Paper: Concepts for the Objective Force*.

⁴⁶ John Boyd, "Discourse on Winning and Losing" (Unpublished, April 1987), 128.

initiative superiority through “decide then act” it relies on the information dominance paradigm by default.

Knowledge will become the critical factor, allowing the Objective Force commander maximum application of agility and versatility to constantly confuse adversaries. This requires a thorough understanding of how adversary systems self-regulate, regenerate, reorganize, communicate, and interact. Inherent in this force is the notion of rapid adaptability, which allows commanders to maintain initiative superiority. The thinking pattern alteration will create knowledge as a force multiplier. The alteration of thinking patterns is particularly critical in support and stability operations where compulsion may not be achieved through deadly force.

Under the thinking pattern alteration, Objective Forces will be optimized for close combat through permanent combined armed forces at brigade level; enabled for quick transitions between engagements/operations through modular organizational design for rapid force tailoring; and able to perform battle command on the move through a networked infosphere.⁴⁷

The thinking pattern alteration provides the evaluation criterion of modeling. This criterion links organizational model, (i.e. forces optimized for close combat and modularly designed for rapid force tailoring) with mental models of interaction (i.e. forces enabled to quickly transition between engagements/operations and able to perform battle command on the move through a networked infosphere).

A second set of pattern alterations is through action tied to tempo and speed of operations in the “act first” portion of the Objective Force mantra. There are three pattern changes here: strategic responsiveness, lethality, and survivability.

First, tempo incorporates the rate of actions not from the initial line of contact or location of forces in a particular theater but the physical movement, tactical capacity, and theater situational

⁴⁷ *U.S. Army White Paper: Concepts for the Objective Force*, 3.

understanding (SU) available.⁴⁸ As an example, if adversaries conduct anti-access actions prior to forces embarking they can potentially control the tempo of actions.⁴⁹ Because of the time and space impacts of tempo on strategic and operational responsiveness, the application of physical force must be achieved with maximum speed, synchronized through joint operations to counter adversary efforts to minimize vulnerabilities. This compresses the distance between strategic and operational levels of war because it impacts operational design and force generation.

Dictating the tempo of operations will not in itself change operational actions for Objective Force units because strategic responsiveness incorporates more than simply rapid deployment. This pattern alteration specifically includes the arrival of combat ready forces fully integrated into the joint C4ISR structure able to conduct “enroute mission planning and rehearsals.”⁵⁰ The ability to immediately conduct combat actions is a radical departure from traditional transitions of force flow, combat power generation, and employment.

Second, lethality, as a pattern change of action, combines all the elements of combat power, but places a premium on information.⁵¹ But in the expanded battlespace characterized by the contemporary operating environment, the lethality of dispersed elements of the Objective Force, unlike the “phased, attrition-based, linear operations of the past” will simultaneously effect the entire system of the enemy through multiple mediums “rather than rolling his forces up sequentially.”⁵² It is the expanded battlespace, dimensionally larger in terms of size – depth, breath, and height – and in terms of domains, that threatens traditional platforms from longer

⁴⁸ *FM 3-0 Operations*, 5-12 and 6-12. Tempo is defined as the rate of military actions; controlling this rate through timing of actions, speed, avoidance of unnecessary combat, operational design and subordinate initiative. Richard Simpkin, *Race to the Swift* (London, Brassey’s Defense Publishers 1985), 106-7. Simpkin’s loosely describes tempo as the operational rate of advance, incorporating physical mobility, tactical rate of advance; quantity and reliability of information, and C3 timings.

⁴⁹ *TRADOC Contemporary Operating Environment White Paper*, 15.

⁵⁰ Headquarters TRADOC, *TRADOC PAM 525-66 Force Operational Capabilities (Final Coordination Draft)* (Fort Monroe: Headquarters TRADOC, 2002), 5.

⁵¹ *U.S. Army White Paper: Concepts for the Objective Force*, 7. Acting first, under the Objective Force framework, requires understanding preceded by observation. These prerequisites are based on data fusion systems that create the common operating picture. Data fusion, as the linkage within the mantra, places a premium on information as a combat power component; and *TRADOC PAM 525-3-90 O&O Operational and Organizational Plan for Maneuver Unit of Action*, 24; and *FM 3-0 Operations*, 4-4.

range systems (anti-access anti-ship missiles, anti-stealth multi-spectral sensors) and asymmetric threats. Because the Objective Force is a system, lethality, as a measure of effectiveness, is not simply the specific correlation of combat force ratios, but the holistic effects of the application of the Objective Force.

Survivability is the final action pattern of change. Its doctrinal basis is found in FM 3-0; and the altered pattern in the Objective Force Concept White Paper. Field Manual 3-0 states,

Survivability combined technology and methods that afford the maximum protection to Army forces. Lethality enhances survivability: lethal forces destroy enemies before they strike and can retaliate if necessary...Survivability requires an *astute assessment of operational risk*. In many operations, rapid offensive action may provide better force protection than massive defenses around lodgment areas.⁵³

This view of survivability contrasts with the White Paper,

The Objective Force will take advantage of technologies that provide maximum protection at the individual soldier level, on or off platform. The agility of our formations combined with the common operating picture is critical to maximize survivability. Ground and air platforms will leverage the best combination of low observable, reduced electronic signature, ballistic protection, long-range acquisition, early discrete targeting, *shoot first every time, and target destruction each time we pull the trigger*. Objective Force survivability will be linked to its inherently offensive orientation, as well as its speed and lethality...*soldiers will be physically and psychologically prepared for non-contiguous warfare, fighting in small units separated from their higher headquarters or sister units for days at a time.*⁵⁴

The most significant difference is the idea of non-contiguous warfare for dispersed networked forces, which has the potential effect of isolating friendly units, both logistically and for mutual support. This potential exacerbates operational risk for commanders planning operations with Objective Force units in non-contiguous warfare. The psychological implications for non-contiguous operations present tremendous challenges to Objective Force soldiers and has not been fully articulated.⁵⁵

⁵² U.S. Army White Paper: Concepts for the Objective Force, 12-13.

⁵³ FM 3-0 Operations, 3-4.

⁵⁴ U.S. Army White Paper: Concepts for the Objective Force, 14-15.

⁵⁵ Ibid.

The second evaluation criterion is engagement and focuses on the action pattern alteration. The object of this criteria is linking immediate force employment through integrated ISR, synchronized (near real-time) maneuver, and precise lethal overmatch.

The third pattern alteration is found in operations which link seeing, understanding and acting first. There are three pattern changes here as well: deployability, sustainability, and employment.

First, deployability is the only overtly quantifiable capability of the Objective Force.⁵⁶ The rapidity of deployability is directly related to strategic responsiveness and initiative superiority. This rapid deployability provides commanders greater operational and tactical flexibility. Yet, the requirements for C130 transportable Objective Force units deployable within 96 hours for a brigade, 120 hours for a division and 30 days for five divisions deployment do not exist. This capability will require changes in strategic transport, system and sustainment redesign to reduce requirements, as well as process modification to accommodate time compression requirements.⁵⁷

Second, sustainability of dispersed forces presents a particularly complex problem for Objective Force units. The patterns of predictable logistical support characteristic of operations such as Desert Storm provide decisive points for adversaries to effect the tempo of operations, both in time and depth of the battlefield. Logistical operations require throughput capability at the strategic and operational level, and a methodology of tactical sustainment over space and time. The Objective Force seeks to create efficiencies and effectiveness through joint logistics commonality in classes of supply, equipment, systems, as well as reach back capacity and fully automated processes.⁵⁸ Yet, efficiencies and effectiveness of fully networked forces can not eliminate the physical gaps between dispersed units. The linkage of survivability and force protection with sustainment over space and time is vital to operational flexibility. Just as non-

⁵⁶ Ibid.,9; and *TRADOC PAM 525-66 Force Operational Capabilities (Final Coordination Draft)*, 5. Specific requirements for Objective Force units are C130 transportability and the deployability requirements of 96 hours for a brigade after take off, 120 hours for a division and 30 days for five divisions.

⁵⁷ *TRADOC PAM 525-66 Force Operational Capabilities (Final Coordination Draft)*, 5.

⁵⁸ *U.S. Army White Paper: Concepts for the Objective Force*, 15.

contiguous warfare can potentially exacerbate survivability, sustainability compounds operational risk. The Objective Force framework has not eliminated space and time risks because units continue to rely on higher echelons for sustainment and ground lines of communication.

Third, employment is identified in organizational design and echelonment. Characteristic of the Objective Force framework, the names of forces are generic for experimentation, evaluation, and process assessment; but they are identified as the Unit of Employment (UE) and the Unit of Action (UA). The UE will be the element that links joint capabilities through a Task Force structure. The UA will be "the tactical warfighting echelons of the Objective force".⁵⁹

The Objective Force framework anticipates replacing the existing organizational structure with a flatter more decentralized design. This design accounts for the external pressures associated with complexity within the contemporary operational environment and the expansion of joint operations.

In the broadest sense organizations consist of divisions of labor to accomplish specific tasks and the coordination of those tasks.⁶⁰ For the US Army this labor is identified as combat, combat support, and combat service support coordinated through a command and control system. The Army divides labor along three lines: functional, skill and knowledge specialization, and standardized outputs. This labor is further controlled for its output through hierarchical organizations designed to accomplish specific tasks, such as vertical envelopment for airborne units, tactical and operational shock for mechanized infantry and armor units, tactical reconnaissance and surveillance from armored cavalry units, and specialized operations from Ranger and Special Forces elements. The Objective Force UA will aggregate this labor, with the

⁵⁹ *U.S. Army White Paper: Concepts for the Objective Force*, 18; and Headquarters TRADOC, *TRADOC PAM 525-3-90/O&O Objective Force Operational and Organizational Plan for Maneuver Unit of Action* (Fort Monroe: Headquarters TRADOC, 2002), 8. UE is expected to be capable of commanding Army, joint, and multinational forces, having the capability to assume the functions of an ARFOR, JFLCC, and JTF as well as effectively interact with multinational, interagency and NGO/PVOs, performing the functions historically associated with a field army, corps or division. The UA is equivalent to the Legacy Force brigade.

⁶⁰ Mintzberg, 2.

exception of Rangers and Special Forces, into a modular organic combined arms team composed of signal, military intelligence, reconnaissance and surveillance, aviation, direct and indirect fires, target acquisition, engineers, air defense, and sustainment support. This aggregation will create multiple identical organizations that can be tailored for specific missions, but are already optimized for close combat.⁶¹ The UE elements will augment the UA through force pooling, depending on specific mission requirements.⁶²

The employment of Objective Force units will incorporate a dramatic alteration designed to present adversaries with “non-linear patterns that may appear bewilderingly complex...”⁶³ These non-linear patterns are dispersed autonomous/semi-autonomous unit operations connected in time, space, and purpose through shared knowledge. These non-linear patterns place a premium on decentralized command.⁶⁴

The echelonment of the Objective Force, exemplified by the UE, is not focused on how many echelons are required for an operation but the “command capability” and “functional capabilities required to satisfy combatant commander’s operational needs.”⁶⁵ In practical terms this means that the traditional divisional and brigade fixed commands will be characterized by decentralized commands because formations can be creatively formed for specific missions.⁶⁶

The evaluation criterion for this pattern alteration is operate which links rapid deployment of semi-autonomous/autonomous forces with execution of enroute planning during alert, deployment, and employment.

⁶¹ TRADOC PAM 525-3-90/O&O *Objective Force Operational and Organizational Plan for Maneuver Unit of Action*, 24.

⁶² Headquarters TRADOC, *Objective Force Unit of Employment Concept (Final Coordinating Draft)* (Fort Monroe: Headquarters TRADOC, 2002), vi. Force pooling allows the UE to tailor the creation of larger formations from a pool of standing organizations under its command. The concept is designed to reduce turbulence within units from “slice” element detachment, which is the current practice.

⁶³ Headquarters TRADOC, *TRADOC Battle Command Draft (Version 3)* (Fort Monroe: Headquarters TRADOC, 2001), 3.

⁶⁴ TRADOC PAM 525-3-90/O&O *Objective Force Operational and Organizational Plan for Maneuver Unit of Action*, 24.

⁶⁵ Ibid. 10.

⁶⁶ This will requires a significant change in Army culture related to span of control, traditional chains of command and leadership.

These pattern alterations are executed through the concept of a complex adaptive system (CAS), which is critical to the Objective Force. Complex adaptive systems “are quite different from other system... They exhibit coherence under change, via conditional action and anticipation, and they do so without central control.”⁶⁷ If the Objective Force is viewed through the characteristics of a CAS (aggregation, nonlinearity, flows, and diversity, tagging, internal models, and building blocks) for example, soldiers form small organic tactical units aggregated into UA and UE. These multiple aggregations determine virtually every interaction within the Objective Force, and these interactions are under a constant state of change. The identification of units adds to these interactions, and recognizes their diversity and the flow of information between, among, and through them. Because these units can alter their organizations as required, acting autonomously/semi-autonomously, there is limited predictability to them. Each one develops internal models through simulations, rehearsals, procedures and adversary pattern recognition to identify adaptation points. The complexity of operations further requires innovative and situational training to dissect the composition of adversary systems.⁶⁸

Accentuating CAS is technological dominance, which threads continuously through the Objective Force. This dominance begins with the global information grid discussed in Joint Vision 2020, creating information superiority through a “global interconnected, end-to-end set of information capabilities” available in all joint operations.⁶⁹ Information superiority is the linchpin of the Objective Force qualities of firsts; it is “the way the UA commander sees through the fog of war...”⁷⁰

⁶⁷ Czerwinski, 1-3. The CAS has characteristics consists of four properties – aggregation, nonlinearity, flows, and diversity- and three mechanisms – tagging, internal models, and building blocks; and *U.S. Army White Paper: Concepts for the Objective Force*, v. The White Paper asserts Objective Forces will “arrive immediately capable of conducting simultaneous, distributed and continuous combined arms, air-ground operations, day and night in open, close, complex, and all other terrain conditions throughout the battlespace.”

⁶⁸ Czerwinski, 3-8.

⁶⁹ *Joint Vision 2020*, 12.

⁷⁰ *Ibid.* 10. Information superiority is defined as capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying and adversary’s ability to do the same; and

Information technology, such as the telegraph, radio, and computer, has often offered commanders the potential to achieve operational and tactical dominance, but this benefit has

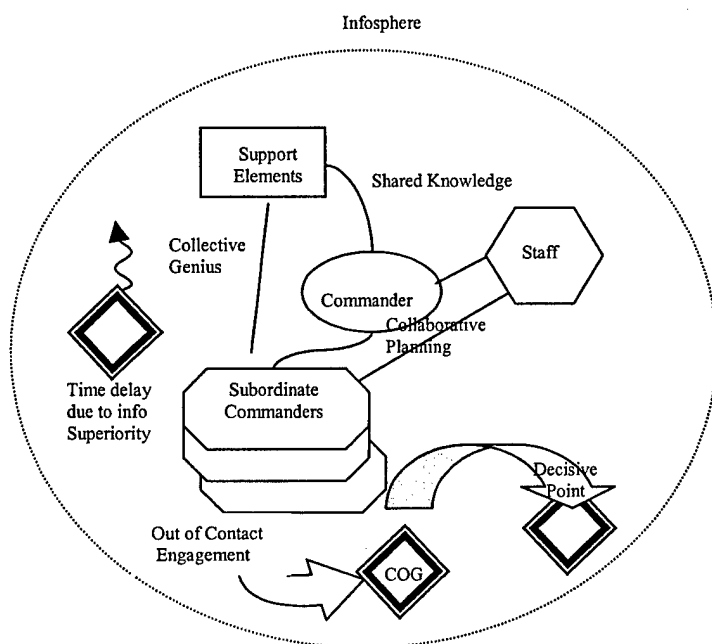


Figure 3

proven limited over time. The information dominance paradigm of the Objective Force seeks to achieve the advantages of technology by remaining one byte ahead of the adversary, providing the operational and tactical advantage in time and space to create chaos within the adversary's system. The distributive nature of UE and UA operations, and reliance on an "infosphere" (see figure 3) for external interaction

requires a level of information assurance and understanding which has historically been unattainable in war.⁷¹

As the infosphere diagram dramatizes, Objective Force units seek to achieve information dominance through networked systems, particularly C4ISR, to create a continuously shared view, "enabling us to see the enemy, both in whole and in part, as a complex, adaptive organization."⁷² This technological dominance covers all aspects of forces including extended range reconnaissance and surveillance, non-line of sight systems, unmanned and manned aviation systems, advanced planning and rehearsal systems. All of these systems feed into a common operating picture and are crucial to how the Objective Force will fight and function over a larger

James Hevel, "The Objective Force Battle Staff." (Monograph U.S. Army School of Advanced Military Studies, 2002), 23.

⁷¹ Van Creveld, 265; and *TRADOC PAM 525-3-90 O&O Operational and Organizational Plan for Maneuver Unit of Action*. Figure 3 is a representation of the infosphere discussed in chapter 4.

battlespace. This technological dominance will enhance “out of contact knowledge” of the enemy, enabling the Objective Force to gain greater resolution on enemy intentions. It will further allow a time and space advantage for Objective Force commanders, providing opportunities to alter patterns of behavior to confuse adversary decision-makers.⁷³

The Objective Force expanded battlespace and technological dominance will cause adversaries to further disperse their forces in an effort to limit technological overmatch. This dispersion provides the additional advantage that a technologically advanced system desires because it creates isolated battlefields for operational and tactical exploitation.

All of the theoretical and conceptual foundations of the Objective Force are linked to joint synergy, particularly at the operational level with the UE. The US Army, with few exceptions, will not operate as an independent service. The UE employment concept paper states that “joint interdependence is absolutely critical to joint force effectiveness.”⁷⁴ This interdependence includes sustainment, lift, indirect and direct fires, C4ISR, special purpose units, as well as linkage to interagency capabilities.

Technological dominance and joint synergy are linked through process dominance. For the Objective Force, process dominance is the compression of time and space from alert to deploy to employ. This is crucial in the Objective Force because of the demand to be able to transition to and from a variety of operations without providing adversaries exploitation opportunities. Process dominance creates quantum leaps in performance over incremental changes through redesigning how outcomes are developed.⁷⁵ It focuses beyond how work is done and incorporates why work is performed in a particular manner. This focus allows identification of

⁷² U.S. Army White Paper: *Concepts for the Objective Force*, 7.

⁷³ Headquarters TRADOC, *TRADOC PAM 525-3-91 Objective Force: Tactical Operational and Organizational Concept for Maneuver Unit of Action (Draft 6)* (Fort Monroe: Headquarters TRADOC, 2001), 11.

⁷⁴ *Objective Force Unit of Employment Concept (Final Coordinating Draft)*, 17.

⁷⁵ Hammer. 3.

the problems of existing processes, the rules that give rise to that process, and the assumptions that drive those rules.⁷⁶

The Objective Force critical process alteration is the conduct of operations, characterized by “decide then act”. Objective Force units will see the battlefield as systems interacting, they will then gain an understanding of enemy intent and possible actions through shared knowledge in the operational and tactical infoshpere, and through collaborative planning will create “collective genius” among the four critical elements of the Objective Force system – the commander, subordinate commanders and their units, staff, and supporting elements.⁷⁷

This collective genius will fuse information, understanding, and shared purpose. The infoshpere should allow commanders, at all levels, to not only know the intent and actions of their forces, but also provide a greater fidelity of adversary actions and intentions. The collective genius of the Objective Force organization will share an understanding of the adversary system in order to see their weaknesses or those that can be generated through direct purpose based actions. The shared knowledge, that permeates the force through collaborative planning, allows for decentralized synchronized operations in time and space utilizing rapid decision making more akin to traditional troop leading procedures than the traditional military decision making process.⁷⁸ Rapid decision-making is portrayed in Objective Force framework as critical because it allows commanders to act on information and make decisions faster than current capabilities. This execution centric battle command is framed on the premise that “plans adapt ahead of every contact with the enemy” because of information superiority.⁷⁹

⁷⁶ Ibid., 109.

⁷⁷ TRADOC PAM 525-3-91 *Objective Force: Tactical Operational and Organizational Concept for Maneuver Unit of Action (Draft 6)*, 11. The collective genius discussed in the O&O is the multi-level intellect, experience and tactical intuition of leaders to “identify enemy decisive points and conceptualize solutions...”

⁷⁸ TRADOC PAM 525-3-91 *Objective Force: Tactical Operational and Organizational Concept for Maneuver Unit of Action (Draft 6)* (Fort Monroe: Headquarters TRADOC, 2001), 15.

⁷⁹ TRADOC *Battle Command Draft (Version 3)*, 67.

There is an underlying notion within the Objective Force that technological dominance will mitigate the fog and friction of warfare through the systematized infosphere and information superiority. Yet, Carl Clausewitz, who developed the idea of friction, provides a nonlinear analysis of the inherent chaotic potential of complexity,

Friction is the only concept that more or less corresponds to the factors that distinguish real war from war on paper. The military machine...is basically very simple and therefore easy to manage. But we should bear in mind that *none of its components is of one piece every one of whom retains his potential for friction* (emphasis added). A battalion is made up of individuals, the least important of whom may chance to delay things or somehow make them go wrong...Friction as we choose to call it, is the force that makes the apparently easy so difficult.⁷⁹

A second process is the alert to employ process. Process reevaluation is required when the process in use no longer meets the needs of the organization. Based on the perceptions of the COE, senior leaders in the Army determined that the process of alert, train, deploy no longer provides sufficient flexibility for force generation.⁸⁰ This process will change in the Objective force to train, alter, deploy. The Objective Force is conceived as a force possessing capabilities to generate rapid combat power, providing combatant commanders flexibility to employ force near simultaneous to the intervention decision in order to "tip the balance from defense to offense and seize the initiative."⁸¹ The train, alter, deploy process will create forces ready for specific contingencies and joint integration of assets linked through the pattern alterations needed for mobility, joint synergy, lethality, sustainment, and survivability.

Patterns of Alteration Evaluation Criteria

The three pattern alterations provide evaluation criteria and allow a comparison of desired Objective Force capabilities with an actual unit deployment. This comparison allows a

⁷⁹ Clausewitz, 119-121. Friction encompasses the each domain within war. While Clausewitz used it metaphorically, relating it to resistance in physics, the human dimension is clearly the dominant realm of friction. The Objective Force infosphere and information superiority seeks to mitigate that human dimension through technology. Modern theorists, such as Martin Van Creveld in *Command in War* have demonstrated the chaotic potential of technological reliance as a method of managing friction.

⁸⁰ Eric Shinseki, "Army Transformation" (address presented at Association of the United States Army annual meeting in Washington, D.C., October 17, 2000).

⁸¹ *Objective Force Unit of Employment Concept (Final Coordinating Draft)*, 16.

determination to be made whether current Legacy Forces possess those proposed capabilities, and/or can be sufficiently adapted to meet the requirements specified in the Objective Force framework.

The thinking pattern alteration creates knowledge as a force multiplier, allowing commanders to maximize agility and versatility to constantly confuse and perplex adversaries. This requires a thorough understanding of adversary systems, i.e. self-regulation, regeneration, reorganization, communication, and interaction. Inherent in this pattern alteration is the notion of rapid adaptability, which further allows commanders to maintain initiative superiority. Under the thinking pattern alteration Objective Forces will be optimized for close combat, enabled for quick transitions between engagements, designed under a modular construct for rapid force tailoring, and able to perform battle command on the move through a networked infosphere.⁸² The evaluation criterion for this pattern is modeling. This criterion links an organizational model, (i.e. forces optimized for close combat and modularly designed for rapid force tailoring) with mental models of interaction (i.e. forces enabled to quickly transition between engagements/operations and able to perform battle command on the move through a networked infosphere).

The acting pattern alteration links tempo, speed, and information in operations, allowing Objective Force units to act first through greater responsiveness, lethality, and survivability. Under the acting pattern alteration Objective Forces will be able to enter austere theaters through multiple points, then deploy and employ an integrated combined arms formation immediately. These units then develop the situation with organic Army and joint ISR, synchronize fires, maneuver and ISR in near real-time, and provides lethal overmatch through precision fires, and survivability overmatch.⁸³ The evaluation criterion for this pattern alteration is engagement

⁸² *TRADOC PAM 525-3-90/O&O Objective Force Operational and Organizational Plan for Maneuver Unit of Action*, 148-164

⁸³ *Ibid.*

which links immediate force employment through integrated ISR to synchronize (near real-time) maneuver and precise lethal overmatch.

The operating pattern alteration links seeing, understanding, and acting first through organizational design, force employment, and echelonment allowing autonomous/semi-autonomous operations with organic combined arms UA. Under the operating pattern alteration, Objective Forces will be able to deploy a combat ready BCT globally in 96 hours after liftoff; a warfighting division on the ground in 120 hours; and five divisions in theater in 30 day. These forces will be transportable for intratheater movement in C-130 and able to integrate into Enroute Mission Planning and Rehearsal Systems (EMPRS) during alert, deployment and employment. Additionally, forces will have greater autonomy and a reduced sustainment footprint through organizational design.⁸⁴ The evaluation criterion for this pattern is operate and covers rapid deployment of semi-autonomous/autonomous forces able to execute enroute planning during alert, deployment and employment.

This chapter focused on the Objective Force framework; its theoretical and conceptual basis including the principle embedded capabilities. The threads of complexity theory, which link the COE's uncertainty, nonlinearity and unpredictability, to the perception that operations will remained decidedly harder to manage, form the initial picture of the Objective Force. Coupled with complexity, is the recognition that the US Army is a system operating within a larger system, and that a systems approach provides a framework for developing models and strategies for system interactions that seek to limit predictability. This framework seems to limit predictability by altering patterns of thinking, acting, and operating to create chaos for adversary systems. Technological dominance, joint synergy, and process dominance accentuate these pattern alterations.

The link between all of the theoretical and conceptual elements of the Objective Force is technology. It is the enabler for the infoshpere, joint C4ISR capabilities, shared knowledge and

the collective genius of the UA and UE. The concept of distributed non-linear operations is decidedly linked to technological dominance through assured information and assured connectivity. But if the linkage of systems and operations in time and space is simply technological, can the US Army accomplish this with the Legacy Force? Chapter Four will address this issue in a case study of Operation Joint Guardian to determine if pattern alterations of the Objective Force are compatible with the current force or if the current force can be sufficiently modified to provide these capabilities long before the Objective Force's full operational capability date.

⁸⁴ Ibid.

CHAPTER FOUR

Operation Joint Guardian

*"The Concepts being explored for the future Army are, in fact, being practiced by the Legacy Force in Kosovo, i.e. digitized force in the field, VTC as a C2 tool, and a logistics system that relies less on stockpiling material in the theater and more on strategic lift."*⁸⁵

The purpose of this chapter is to conduct a case study of initial US deployments in support of NATO's Operation Joint Guardian by the 1st Infantry Division (1ID) in Kosovo. This case study provides a point of comparison for proposed Objective Force pattern alterations. This case study will only discuss the first rotation of US forces from June-December 1999, because the force was an initial force not a rotational sustainment force. The three evaluation criteria will serve to compare proposed Objective Force capabilities with those of an existing Legacy Force unit. This comparison provides a focus for analyzing the utility of the Objective Force framework, its perceptions and potential alternatives. If the capabilities of the Legacy Force are able to achieve the pattern alterations of the Objective Force then there may be little need to dramatically alter organizational structures, but there may be alternate changes that can provide US Army forces enhanced capabilities.

History & Facts

The nature of the conflict in Kosovo exemplifies the contemporary operating environment: national, metanational, and anational elements interacted and clashed over ethnic, religious, nationalist, and cultural issues.⁸⁶ Identifying adversaries was complex; the uncertainty of linkages between actors in the region created a dynamic need for information; planning and preparation for this uncertainty was complicated by the unknown unknowns, which had significant impacts on the mission and eventual requirements for US Army forces.

⁸⁵ Headquarters U.S. Army Europe, *Operation Joint Guardian After Action Report* (Germany: Headquarters USAREUR, 2000), II-28.

⁸⁶ Ibid. A thorough overview of the international, regional and subnational competition within Kosovo can be found in USEUR Operation Joint Guardian AAR.

As a brief overview, the Kosovo Liberation Army (KLA), an Albanian separatist military force, fought Federal Republic of Yugoslavia (FRY) military and internal security forces as a result of FRY incursions and ethnic cleansing operations.⁸⁷ The massive number of displaced persons in the region, coupled with simultaneous US operations in Albania, Macedonia, and Bosnia-Herzegovina created a complex of independent operations that at the operational and strategic level demanded precise attention in Kosovo.⁸⁸ But Kosovo was not like other Balkan peace operations. Unlike the other Balkan operations, "...Kosovo never had an integrated civil structure and when Task Force Falcon entered Kosovo province, absolutely no government functions existed – no police, no postal system, no water, electric, or sewage services."⁸⁹

Following Operation Allied Force, NATO's air campaign to force the withdrawal of Serbian ground forces from the formally autonomous province of Kosovo, the UN adopted UNSCR 1124 on June 10, 1999, a political framework for the enforcement of peace.⁹⁰ UNSCR 1124 provided the vehicle for NATO to enforce the Military Technical Agreement (MTA) between the KLA and FRY forces through Operation Joint Guardian, the employment of the KFOR. While the FRY and KLA were parties to the MTA, the history of their operations demonstrated the need for a force capable of compelling compliance. Presidential Decision Directive-56 described Kosovo as a complex contingency operation, requiring coercion "to resolve conflict...through the

⁸⁷ U.S. Department of State, *Ethnic Cleansing in Kosovo: An Accounting*. (Washington, D.C. 2000) http://www.state.gov/www/global/human_rights/kosovoi/homepage.html. Accessed 15 February 2003. Ethnic cleansing in Kosovo characterized by forced displacement of Albanian civilians, looting and destruction of homes and property, detention, summary execution, mass killings, organizing raping of Albanian women, identity cleansing, and destruction of cultural and social infrastructure systems to destroy Kosovar Albanian population.).

⁸⁸ Ibid. The US State department estimated that at least 600,000 displaced persons were in Kosovo at the initiation of Operational Joint Guardian.

⁸⁹ U.S. department Army, *Law and Military Operations in Kosovo: 1999-2001 Lessons Learned for Judge Advocates* (Virginia: Center for Law and Military Operations, 2002), 89.

⁹⁰ U.S. Department of the Army, *FM 100-23 Peace Operations* (Washington, D.C., 1994), 6. Characterize peace operations into several categories; TF Falcon's mission was a peace enforcement mission. Defines a peace enforcement operation as one that applies force or its threatened used to "compel compliance with generally accepted resolutions or sanctions." The term clearly implies a willingness to use force. FM 100-23 is used in this instance because during 1999 these were the doctrinal references for commanders and planners.

enforcement of a peace plan.”⁹¹ This complexity became rapidly evident as forces entered Kosovo province.

Operation Joint Guardian divided Kosovo into five separate sectors.⁹² Initial requirements dictated inter-sector support for operations, but this proved politically sensitive and was never fully implemented between the five sectors, creating five semi-autonomous areas of operation (AO).⁹³ The US sector encompassed the Eastern most portion of the province, and was controlled by Multi-National Brigade East (MNB (E)) under Task Force (TF) Falcon.⁹⁴ TF Falcon was composed of joint and combined forces from the US 1ID and USMC, the 501st Infantry Battalion (Mech.) from Greece, the 18th Air Assault Battalion from Poland, the 13th Tactical Group from Russia, the 14th Squadron Helicopter Detachment and the 37th Support Company from the Ukraine, a composite platoon from Lithuania and a composite battalion from the United Arab Emirates.⁹⁵

As a NATO operation, military control of KFOR was under the Commander KFOR (COMKFOR) LTG Michael Jackson (UK) who was subordinate to the SACEUR, GEN Wesley Clark. TF Falcon was commanded by BG Bantz Craddock, ADC(M) 1ID, Commander USKFOR (COMUSKFOR), who was subordinate to the USEUCOM commander, who was also GEN Clark (see figure 4). BG Craddock, as the ADC (M) 1ID, further answered to the 1ID Commander based on the large number of forces originating from the 1ID.⁹⁶ TF Falcon also received administrative support through USAREUR. In addition, each of the national forces assigned to TF Falcon had a parallel national command structure.

⁹¹ Nardulli, Bruce and others, eds., *Disjointed War: Military Operations in Kosovo, 1999*. (Santa Monica: Rand, 2002), 10.

⁹² The five sectors were controlled by the US – MNB (E), UK MNB (C), France MNB (N), Germany – MNB (S) and Italy – MNB (W).

⁹³ *Law and Military Operations in Kosovo*, 89.

⁹⁴ Planning for possible ground operations in Kosovo began on 5 February, 1999 with the establishment of TF Falcon but actions to occupy Kosovo were dependent on politico-diplomatic actions within the UN and NATO, which were not resolved until near the conclusion of Operation Allied Force in mid 1999.

⁹⁵ *Law and Military Operations in Kosovo*, 88.

⁹⁶ *Operation Joint Guardian After Action Report*, II-28. TF Falcon was designed the JFLCC for JTF Noble Anvil.

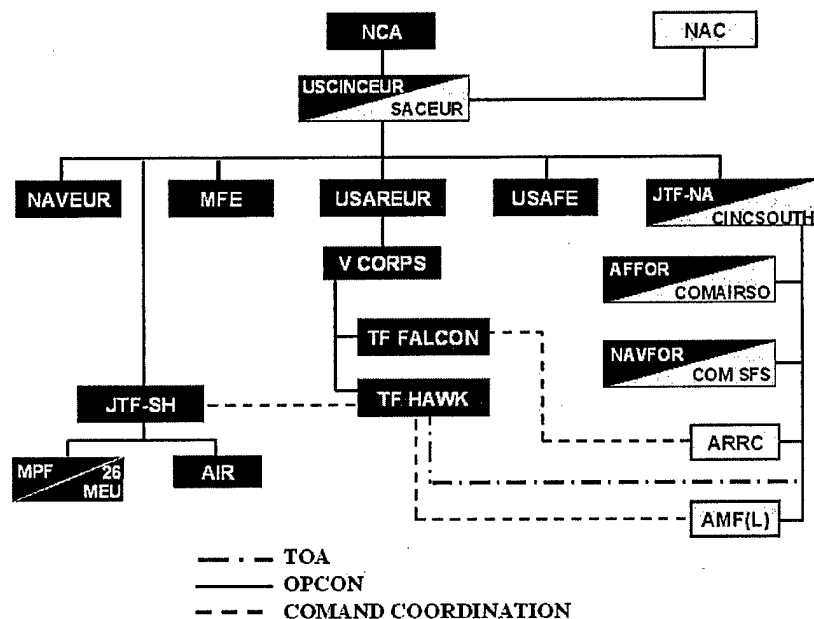


Figure 4 - Command and Control TF Falcon

US support to TF Falcon was composed of elements of the 1ID, 82nd ABN, and V Corps. Initially, joint entry forces flowed rapidly on 9 June 1999, consisting of the 26th MEU (SOC), from the USS Kearsarge Amphibious Ready Group; elements from the 1/26th IN (M), (2nd Brigade, 1AD), Echo Troop 1/4th CAV 1ID, and the 501st IN (M) from Greece. These forces moved into Camp Able Sentry outside Skopje, Macedonia, with immediate follow on into Gnjilane, Kosovo where Camp Monteith was established.⁹⁷ Elements of TF Hawk, deployed in support of operations in Albania, also moved into Gnjilane to reinforce the initial entry force.⁹⁸ These initial entry forces were tasked to: establish presence in the sector, protect the deployed force, establish a joint military mission, coordinate with KFOR and other contingencies, begin

⁹⁷ *Operation Joint Guardian After Action Report*, II-18. Elements from TF Hawk out of Albania included two light infantry companies, and AT company, engineers, MP, MI, SIG, CA, medical, EOD, AH-64 elements, UH-60s, OH-58, CH-47, M1, M2, M109, and M119 equipped elements. An example of the complexity of the environment is that Gnjilane is a city of 70,000 composed of Albanians, Serbs, Romas and Turks with equally diverse religious and political affiliations and burgeoning crime rate.

⁹⁸ TF Hawk was organized and designed as the ground component in support of TF Nobel Anvil (air operations TF of US support for NATO's Operations Allied Force. The forces deployed from TF Hawk were primarily AH-64 equipped units.

establishing a secure environment, begin engineer mobility and survivability tasks, prepare to receive follow on forces, and execute ASCC authority and responsibility.

In addition to MAGTF and Army ground elements, Hunter and Predator UAV elements, which were deployed in support of theater operations in Albania under TF Hunter, became OPCON to TF Falcon.⁹⁹ TF Hunter provided intelligence, target acquisition, damage assessment and reconnaissance to TF Falcon. The 12th AVN BDE and the 16th CSG, from V Corps, provided initial CSS support from Camp Able Sentry, TF Falcon's rear command post and logistics base.¹⁰⁰ By 20 June 1999, FRY forces had withdrawn from Kosovo as required by the MTA and TF Falcon established control of the MNB (E) sector.

Heavy forces from the 1ID departed Bremerhaven, Germany aboard the Large Medium Ship Roll On/Roll Off (LMSR) USNS Bob Hope and Sonderman. The USNS Bob Hope arrived on 29 June 1999 at Thessaloniki, Greece with 1,345 pieces of equipment, completing unloading operations on 1 July; the Sonderman arrived on 3 July, and completed unloading on 6 July, 1999.¹⁰¹ Figure 5 shows the deployment routes of major forces into Kosovo, which included initial 26th MEU (SOC) elements from the Adriatic, elements of TF Hawk and TF Hunter from Albania, air support from Aviano Italy, 1ID elements from Germany and CONUS based logistics.¹⁰²

⁹⁹ MAGTF composed of GCE – 3/8 Marines with LAV Det., AAV element, one btry M198 (DS); ACE – CH-46, CH-53E, UH-1N, AH-1N, AV-8B, KC130; CSSE – CSS, NMCB-3, motor transport, landing support, med/dental

¹⁰⁰ Camp Able Sentry served as a logistics base for operations in FYROM and Kosovo.

¹⁰¹ LTG John McDuffie J-4, Press briefing at Pentagon Tues June 29, 1999 2:00pm.

¹⁰² *Operation Joint Guardian After Action Report*, II-17.

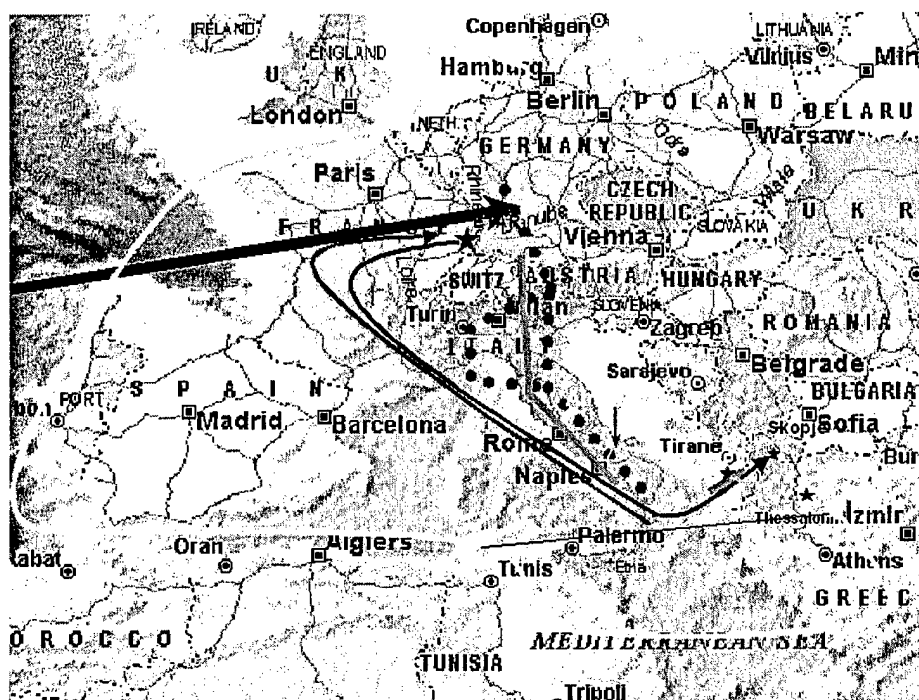


Figure 5 - Deployment Routes

With the arrival of 1ID forces, the 26th MEU (SOC) and 1AD elements conducted a relief in place, allowing 1ID to assume command of TF Falcon.¹⁰³

The initial entry force that moved into Kosovo arrived within 48 hours of the signing of UNSCR 1124, with reinforcing elements, from forward-deployed forces in Germany, arriving with equipment in 24 days of notification. These forward-deployed forces provided the combatant commander the flexibility of rapid deployment in order to set the conditions for KLA and FRY forces to meet and adhere to the MTA. USAREUR, as the ARFOR in USEUCOM used its Immediate Ready Force (IRF) modular force package for rapid deployment in concert with the Deployment Processing Center (DPC) at Rhine Ordnance Barracks under the 21st TSC to rapidly flow forces into the AO.¹⁰⁴ While US Army pre-positioned floating stocks were available in Italy on APS-2, they were not used because deployment planning times negated their advantage

¹⁰³ TF Falcon units included 2nd BCT O & I, 2/505th PIR, 1/26 IN (M), E/1/4th CAV, 1/77th AR, 1/7th FA, 9th EN, 94th CEB, 501st IN (M) (Greece), 18th AASLT BN (Poland), 13th Tactical Group (Russia), B/2/10th SFG (A)+, 101st MI, 2/1st AVN, 299th FSB, 121st SIG, 510th PSB, 106th FIN, and 67th CSH.

¹⁰⁴ *Operation Joint Guardian After Action Report*, III-3. The DPC "provided structured process that prepares USAREUR organizations for successfully loading at their designate POE...providing interface with USAFE aerial deployment community" for joint requirements.

as compared to the deployment of forward positions forces.¹⁰⁵ Additionally, augmentation of TF Falcon from EAD and EAC elements included the functional areas of psychological operations, Special Forces, civil affairs, information operations, JFACC support, as well as multi-spectral intelligence resources.¹⁰⁶

TF Falcon's mission consisted of four essential tasks, whose execution, implementation and assessment of effectiveness would not become evident until forces had been on the ground. The tasks were: monitor, verify, and enforce as necessary the provisions of the MTA and the undertaking to create a safe and secure environment; provide humanitarian assistance in support of UNHCR efforts; initially enforce basic law and order, transitioning this function to the to-be-formed designed agency as soon as possible; and, establish/support resumption of core civil functions.¹⁰⁷

While the organic equipment of TF Falcon, consisting principally of M1 Abrams tanks, M2/M3 Bradley's IFV, and M109A6 Paladin howitzers, would be useful in the event of further escalation of ethnic violence, the limited maneuverability and psychological effect of these systems caused planners to incorporate additional armored HMMWVs into equipment requirements prior to deployment.¹⁰⁸ These additional maneuver force capabilities became critical when the true nature of the demanding law enforcement mission became apparent soon after TF Falcon assumed control.

The departure of FRY forces by 20 June 1999 was the impetus for a large number of displaced persons, principally Kosovar Albanian, to return to Kosovo. But FRY operations in the province, designed to destroy ethnic Albanian culture and identity, created several law enforcement and security requirements for KFOR, as well as increased ethnic conflict with

¹⁰⁵ McDuffie.

¹⁰⁶ *Operation Joint Guardian After Action Report*, III-5. The multi-spectral intelligence support included Commando Solo fights, P3 Orion video collection and surveillance, Guardrail common sensor, Enhanced Tactical Radar Correlation from San Vito, Italy, USEUCOM Joint Analysis Center and National Intelligence Support Teams from interagency organizations.

¹⁰⁷ *Law and Military Operations in Kosovo*, 95-96.

remaining Serb civilians.¹⁰⁹ The rapidly escalating ethnic tensions resulting from the reintegration of displaced persons caused a change in initial tasks given to all MNBs from KFOR headquarters within the first two months of the operation. As this situation developed, very precise tasks were assigned by KFOR to TF Falcon that were not contained in the original KFOR OPLAN.¹¹⁰

These tasks included expanded law enforcement and protection for ethnic minorities, specifically Serbs. These requirements caused TF Falcon to alter operation from random patrolling and presence, to the establishment of a permanent presence in 27 satellite camps and 89 fixed security locations. "The TF leadership in these communities, often company grade and non-commissioned officers, simultaneously were acting as the mayor, the police chief, and judge and jury."¹¹¹ These semi-autonomous operations required a command structure that was decentralized in execution but centralized in organization and function. This operational and tactical adaptability of TF Falcon was also evident in their augmentation and incorporation of non-organic staff functions and personnel based on the expanded mission requirements of law enforcement and coordination of joint, multi-national, interagency, and NGO/PVO interactions.¹¹²

These adaptations were a requirement for situational understanding (SU), evident in the technological and human dimensions of TF Falcon operations.¹¹³ In support of these SU requirements, TF Falcon was designed prior to deployment to operate as a digitized force able to

¹⁰⁸ *Operation Joint Guardian After Action Report*, II-23.

¹⁰⁹ *Law and Military Operations in Kosovo*, 94. FRY forces in their efforts to destroy ethnic Albanian identity destroyed schools, churches, organizations and associations, as well as public and personal records, including marriage and death certificates, and property and title records for land, business and estates.

¹¹⁰ *Operation Joint Guardian After Action Report*, III-2.

¹¹¹ *Ibid.* II-20.

¹¹² *Ibid.*, II-18. TF Falcon's staff eventually grew to 350 personnel owing to the complexity of the mission, including the fact that operations were conducted in two separate nations, Macedonia and Kosovo, that had limited diplomatic interaction at best.

¹¹³ *Ibid.*, II-20. This situational understanding included daily contact with Serb and Kosovar Albanian leaders, and elements aligned with each. Also, the contact included lethal and non-lethal instances including mortar, small arms, and angry crowds, thrown rocks or verbal assaults. The semi-autonomous operations inherent in dispersed multiple satellite camps required rapid decision making from lower echelon leaders.

support a broad bandwidth of information flow and intelligence collection, analysis, and dissemination.

Planners recognized the robust requirements for communications and intelligence capabilities. These requirements were realized through a combination of reach back linkages and modular connections resident in a network capable of performing the full range of typical operations found in any garrison or commercial environment. This network included flyaway packages (FAPs) that increased "the throughput of the 7th Signal BDE's tactical EAC communications systems" expanding organic capabilities by 200%.¹¹⁴ In addition to initial FAPs into Camps Bondsteel and Monteith, "Dragon packages" linked to the Global Broadcast System (GBS) provided TF Falcon "reliable high-capacity commercial communications" with SIPRNET, NIPRNET, voice, VTC, and intelligence systems.¹¹⁵

Legacy Force units are designed to conduct sustained combat operations with organic systems, but are always task organized and augmented to meet unique mission requirements. TF Falcon units were no exception. In two critical areas, intelligence and logistics, the broad nature of the mission and organizational make up of the task force, required capabilities pushed down from EAD and EAC. Within the intelligence realm, essential intelligence on regional demographic and ethnic composition was vital to maintaining SU, force protection, and accomplishment of specific mission requirements on minority security and law enforcement. These requirements were met with a combination of intelligence reach back capabilities and organic systems, thus reducing the requirement for personnel assigned to TF Falcon and their sustainment requirements. In light of the force cap of 7000 personnel, planners expanded the use of reach back to overcome organic limitations while optimizing the capabilities of these systems

¹¹⁴ Ibid., III-96. When TF Falcon was preparing to enter Kosovo, decision makers assumed for planning purposes that bandwidth demands and capabilities that existed in German prior to deployment would be needed and required for TF Falcon elements. This capability included 1200 phone line capacity.

¹¹⁵ Ibid., III-97. Dragon packages were developed by CECOM, acquired by USAREUR as a result of lessons learned from previous regional contingency operations.

through the digital network established throughout TF Falcon.¹¹⁶ These systems linked to the GBS provided TF Falcon the capacity to use national and regional assets without the physical presence of those systems or personnel. This capability also allowed enhanced command and control of initial MNB (E) operations and coordination with KFOR.

The digital network within TF Falcon was equally evident in sustainment operations. The operational nature of logistical support from Camp Able Sentry in Macedonia to TF Falcon's AOR in Kosovo demanded a level of information on required and in-transit sustainment which was not possible at the beginning of the decade.¹¹⁷ At EAC, sustainment was organized to account for simultaneous contingency operations in the region, which required joint logistical support to accommodate limited air and sealift, both inter and intra-theater.¹¹⁸ Finally, in-transit visibility through the Global Transportation Network (GTN) provided TF Falcon operators, as well as joint and combined liaisons, critical logistical information particularly with the dispersed nature of TF Falcon's force.

TF Falcon's operations beginning on 9 June, 1999 with the joint initial entry force provided the combatant commander immediate combat ready entry forces with rapid follow on forces coinciding with FRY withdrawal from Kosovo. This rapid deployment process was made possible by the use of the theater Deployment Processing Center, EUCOM's IRF modular force packages, LSMRs, the Global Transportation System, and a robust theater information network.

Forces were tailored through specialized personnel and equipment augmentation and regional and national information systems interface to account for planned mission requirements.

¹¹⁶ Ibid., III-25 The intelligence reach back included the V Corps ACE and Intelligence Processing Facility, the EUCOM Joint Analysis Center, and the Enhanced Tactical Radar Correlator in San Vito, Italy.

¹¹⁷ The Global Transportation Network and networked C4, in-transit visibility through radio tagging and other process, management and C2 mechanisms were not available during Operation Desert Storm in 1991.

¹¹⁸ *Operation Joint Guardian After Action Report*, III-36. USAREUR DCSLOG coordinated with TRANSCOM for joint support on CONUS in-transit logistics. For example US Army palletized material from New Cumberland, PA was trucked to Norfolk, VA loaded onto Navy channel flight to Sigonella NAS. Subsequently, cargo was transloaded to intra-theater C-130 for follow on into Camp Able Sentry in Skopje, Macedonia.

Additionally, intelligence and logistical requirements were met through reach back process capabilities linked through the theater information network that enhanced SU.

The complex nature of operations in Kosovo forced TF Falcon to rapidly adapt to changing mission requirements and the environment through organizational and operational changes. The organic capabilities of Legacy Forces were not an impediment to adaptability because it was not equipment or technological adaptation that was critical but human adaptation augmented by the technologies and training that created the conditions for transition from offensive warfighting to stability operations.

Comparison

The operations in Kosovo existed within the context of the COE. This context defined operational and tactical perimeters and impacted the methods and outcome of operations. It further set the conditions for how planners and operators conceived and managed complexity and uncertainty. The proposed pattern alterations of the Objective Force – thinking, acting and operating - are not unique to the technological capabilities of a force as postulated in the Objective Force Concepts White Paper. These alterations are embedded in a soldier/leader centric force. In addition, the capabilities of information dominance, process dominance, and joint synergy characteristic of the Objective Force notion are also not unique, but exist and can be created in Legacy Force units.

The aforementioned is concluded from an analysis using the evaluation criteria outlined in Chapter Three. The three criteria are: modeling which links an organizational model (i.e. forces optimized for close combat and modularly designed for rapid force tailoring) with mental models of interaction (i.e. forces enabled to quickly transition between engagements/operations and able to perform battle command on the move through a networked infosphere); engagement which links of immediate force employment through integrated ISR to synchronize (near real-time)

maneuver and precise lethal overmatch; and, operate which links rapid deployment of semi-autonomous/ autonomous forces with execution of enroute planning during alert, deployment, and employment.

Task Force Falcon consistently demonstrated the evaluation criterion of modeling, by creating modular forces optimized for combat, able to rapidly transition from offensive engagements to peacekeeping and humanitarian assistance. This was possible through a networked infosphere.¹¹⁹ First, TF Falcon and its US contingent (2nd Brigade, 1ID and elements from TF Hawk) were already optimized for close combat. The availability and rapid employment of integrated armor, mechanized infantry, artillery, and attack aviation forces provided the means for close combat. The organization of maneuver battalions within TF Falcon was further optimized not only for close combat but also for non-combat close operations with civilians and disputing forces.¹²⁰ Second, this optimization provided commanders the capacity to transition from stability through coercion, compliance, and persuasion to offensive operations.¹²¹ Third, TF Falcon planners adapted to the changing nature of their contingency operation. This adaptation was evident in the rapid transition from initial planning assumptions based on historical Balkan experiences and the realities of Kosovo as a unique region within the FRY. The evolving nature of tasks necessary to achieve stability in Kosovo transitioned from security patrols to law enforcement, ethnic minority protection and dispersed semi-autonomous operations. The realization that SU was the critical force multiplier for dispersed semi-autonomous operations was evident in the application of enhanced communications and intelligence capabilities in the form of FAPs, Dragon packages, reach back EAD and EAC intelligence, and the GBS. These capabilities established an infosphere within TF Falcon.

¹¹⁹ There are portions of the pattern alteration, based on mission requirements, will not require the full suite of capabilities. Kosovo serves as a useful example because the complexity of peace enforcement operations.

¹²⁰ The disputed force included the KLA and pro-FRY paramilitary elements.

The second evaluation criterion of engagement was also evident in TF Falcon.¹²² Elements of TF Falcon entered the theater through several entry points – Albania for elements of TF Hawk and TF Hunter, Macedonia for initial entry Joint forces of the 26th MEU (SOC) and 1AD, and Greece for 1ID. Additionally, all logistical support for the TF support was funneled to Camp Able Sentry in Macedonia, and entered the AO of MNB (E) through multiple points as a result of the dispersed nature of forces.

As part of engagement, TF Falcon executed immediately responsive force employment by maintaining information superiority in Kosovo.¹²³ The ability to access and use a broad spectrum of information on intelligence, logistics, and command and control was only a portion of the information superiority equation. The remainder dealt with understanding the dynamic nature of the operational environment and incorporating transitioning information requirements accordingly. This was achieved through an information network linking assets over an extended battlespace from CONUS, EUCOM, NATO, UN, and the JTF.

The third evaluation criterion of operating focuses on the capability to provide a combat ready BCT globally in 96 hours after liftoff; a warfighting division on the ground in 120 hours and five divisions in theater in 30 days.¹²⁴ These forces must be transportable for intratheater movement in C-130 and able to integrate into the Enroute Mission Planning and Rehearsal Systems (EMPRS) during alert, deployment and employment.¹²⁵

¹²¹ These civil support forms were employed to enforce the MTA between the KLA and FRY elements. The transitions within this environment from peace enforcement (stability) to offensive actions are equivalent to transitions in engagements.

¹²² The pattern alteration postulates that forces will be able to enter austere theaters through multiple points, immediately employ integrated combined arms formation, develop the situation with external and organic ISR, and synchronized fires, maneuver and ISR in near real-time, providing lethal overmatch through precision fires with scaleable effects, and survivability overmatch. The initial deploying force of TF Falcon did not conduct offensive operations. This severely limits comparative analysis of the lethal and survivable overmatch capabilities of the Objective Force.

¹²³ *Joint Vision 2002*, 8. Defines information superiority as the capability to collect, process, and disseminate an uninterrupted flow of information while exploiting or denying an adversary's ability to do the same and in a non-combat situation or one in which there are no clearly defined adversaries, friendly forces have the information necessary to achieve operational objectives.

¹²⁴ *TRADOC PAM 525-66 Force Operational Capabilities (Final Coordinating Draft)*, 15.

¹²⁵ EMRPS is not currently fielded.

Legacy Forces do possess capabilities for rapid deployability, particularly light and airborne elements. At the other end of force design heavy forces are hampered by the limitations in strategic lift capabilities necessary to rapidly deploy significant forces within the above parameters. The Army is responsible for only one of three corrective actions embedded in enhanced deployability, organizational redesign.¹²⁶ The remaining two corrective actions, enhanced strategic lift capacity and streamlining deployment processes are Air Force/Navy and Joint responsibilities respectively. The Objective Force Concepts White Paper uses assumption-based analysis to develop these parameters, which may not be fully supported by the other services.

TF Falcon mitigated the physical requirements of deploying forces by modifying the deployment process. The processes developed by USAREUR to rapidly deploy forces were through the Deployment Processing Center and the Immediate Ready Force. This process provided forces immediately available with a mechanism for rapid deployment. Coupled with these capabilities were the availability of LSMR and joint and combined logistics, both intra and inter-theater, which kept the total force within cap requirements.¹²⁷

The most significant operations alteration of the Objective Force is organizational flattening exemplified by the multi-functional UE with force pooling and the UA base-line tactical unit. But Objective Force documentation does not empirically analyze the merits of flattening vertical structures over traditional military design.

Multi-echelonment is designed to provide both effectiveness and efficiency in organizations that by their employment and output experience degradation, disintegration, and destruction. Unlike commercial organizations that focus on efficiency or effectiveness, military organizations must focus on both variables. These variables require a level of decentralization that allows

¹²⁶ *Objective Force Unit of Employment Concept (Final Coordinating Draft)*, 17.

¹²⁷ *Operation Joint Guardian After Action Report*, III-36. Joint and combined logistical support was authorized in Kosovo through the Acquisition and Cross-Serving Agreement (ACSC) which provided the

adaptability while maintaining system cohesion and utility. TF Falcon conducted this adaptability, which is embedded in the interaction of the UE and UA, through its infosphere. Coupled with technological innovations, logistical and intelligence reachback capabilities have in fact evolved Legacy Force organizational redesign for rapid mobility and strategic responsiveness outlined in the Objective Force Concepts White Paper.

legal basis for inter-service logistical support, such as 26th MEU (SOC) class I, III, and VIII support from TF Falcon, and support to and from other nations with KFOR.

CHAPTER FIVE

Conclusion

GEN Shinseki was correct in his assessment that the Army needs to change, but the prescription for that change does not need to be a radical alteration driven by to-be-developed technologies. The Army's challenge is not adaptation but the tempo of adaptation. Leaping ahead technologically to gain an advantage or capability assumes one has correctly identified mature technologies that provide required capabilities. Developing forces based on such assumptions further assumes that the time selected to conduct this leap ahead is right.

Perceptions

The analysis of the Objective Force and the Kosovo case study indicates that the lack of clearly measurable capabilities and systems does not provide sufficient definition to the Objective Force. So is the Objective Force anything more than a technological focus in the overall scheme of change? The assumptions of radical alteration, future technologies, and timing are crucial because they are the perceptions of the future. For the Army, these perceptions are based on the notion that future warfare is inherently nonlinear and complex.¹²⁸ Further, that relational predictabilities are no longer understood, future-states not end-states measure outcomes, and technology is the dominant force of future warfare.¹²⁹ The methodism of the Legacy Force Army, with its linear focus on overwhelming force supposedly fails to account for this complexity leaving forces vulnerable as a result. To counter this vulnerability, the recommended solution is the Objective Force.

¹²⁸ These perceptions are evident in the TRADOC COE White Paper, JV2020, Objective Force Concepts White Paper, and the UE Concepts paper all previously cited in this monograph.

¹²⁹ Relational predictability is the notion that neither linearity nor its opposite, nonlinearity, dominate a system or process, rather they operate within an environment that is both complex and unpredictable and simple and predictable. But they do not operate on the same level. Predictability implies that there is an understanding that we can expect an outcome or a repeated outcome based on experience or comprehension of the processes involved in outcome generation. Unpredictability is related to the level of uncertainty, such that the greater the level of chaos within a system, the greater the uncertainty. Even complex systems have levels of predictability, which may require a level of understanding that one may not currently possess.

But what is wrong with the Objective Force solution? First, the lack of an operational concept that incorporates the fundamentals of complexity, systems theory and the combined technological and process dominance of the Objective Force into a joint integrated battle leaves the US Army unable to cogently link strategic goals and tactical capabilities within the realm of full spectrum operations and the COE. The Objective Force Concepts White Paper articulates the necessity of forces capable of dominating the transitions between operations, i.e. offense to stability and back again, but it does not offer any concepts, methodologies or models to accomplish this objective.

The current operational concept, Airland Battle, is limited in its applicability across the current strategic environment. It was conceived to fight Soviet forces in Europe with known capabilities within an established operational framework.¹³⁰ The fact that US Army forces successfully used this concept during the 1991 Gulf War against Iraq does not mitigate this limitation.¹³¹ The Airland Battle concept recognized the complex nature of the operational environment and used a reductionist tool, battlefield framework, to mark its boundaries. It created a deep, close and rear battlefield framework in order to reduce to a manageable level battlefield complexity. However, this battlefield framework was designed to fight a system whose building blocks were echeloned forces in depth. The principle limitation of the concept was its failure to reflect the current battlespace dimensions and therefore limited options for employment of forces, because the processes designed to support the concept had become

¹³⁰ Shimon Naveh, In *Pursuit of Military Excellence: The Evolution of Operational Theory* (Portland: Frank Cass, 1997), 287-305. The development of the Airland Battle concept were based on historical analysis and an understanding of the operational framework of Soviet echeloned forces in Central Europe. The conceptual integration of deep, close and rear operations, and synchronization allowed planners and commanders to link strategic goals and tactical capabilities into campaigns and battles that effected not simply first echelon forces but those critical exploitation second echelon forces.

¹³¹ U.S. Department of the Army, *FM 100-5: Operations*. (Washington, D.C., 1986), Air-Land Battle was the doctrinal basis of Army operations during the 1991 Gulf War.

limitations themselves.¹³² Even the extended battlespace of Force XXI did not account for the dimensional expansion of the battlespace within the COE.¹³⁴

Second, the perception that the COE is a true reflection of future warfare implies that we have created an accurate picture of a future-state. Yet, we can no more discern the nature of future war than predict a strategic paradigmatic shift, such as that which occurred in 1990. GEN William DuPuy articulated this argument in 1979 saying,

“...people aren’t smart enough to see what we’ll need in the year 2000. The reason we aren’t smart enough to do that is the people we ask in 1979, for instance, to look at the shape of the Army in the year 2000, possess a 1979 mentality. So, the Army they see out there is simply a reflection of the 1979 Army with some gimmicks. They’ll say, “By then we’ll have more lasers, and we may have atomic energy, and we may have this, and we may have that. But the concept is all based on 1979 consciousness and information.”¹³⁵

Carl Von Clausewitz *was* accurate in describing war as a chameleon, ever changing its appearance without changing fundamentally. The recent history of US military operations is sufficient to demonstrate this truism.¹³⁶ The chameleon is a metaphor for the complexity and uncertainty of the future, which is accurately reflected in both the COE and the Objective Force Concept White Paper. Simply recognizing a condition of warfare, however, does not provide a sufficient framework for understanding the nature of future war. The Objective Force fails to develop a framework for understanding future war. However, its embedded systems approach

¹³² *FM 100-5: Operations*. These processes include the battlefield framework of deep, close, and rear; a reliance on forward deployed forces which no longer exist; the conduct of current warfare in small scale continuances, and the reality of the current force cap and daily operational requirements of forces.

¹³⁴ *TRADOC Pamphlet 525-5 Force XXI Operations*, Glossary, 3-7. “Battlespace involves the ability to visualize the area of operations and the way that forces interact, be it in combat or in a humanitarian relief...” This extended battlespace, in terms of depth, breath and height, compresses the strategic, operational and tactical divisions of warfare; and Robert J. Bunker. “Advanced battlespace and Cyber maneuver Concepts: Implications for Force XXI”. *Parameters* (Autumn 1996), 10. Force XXI extended battlespace concepts enlarges the physical dimensional of the battlefield does not fundamentally change it. But the most significant attribute of Force XXI battlespace is empty battlefield, which described the dispersal of forces for survival purposes, “... is significant because it most clearly depicts the breakdown of some of the fundamental assumptions...of warfare dominated for several centuries by Western philosophies.”

¹³⁵ Senior Officer Oral History Program, *Changing an Army: An Oral History of General William E. DuPuy*, interviewed by LTC Ronnie L. Brownlee and LTC William J. Mullen III, Carlisle Barracks, PA; US Army Military History Institute, 1986. 181.

¹³⁶ The five-year time frame from 1990 to 1995 witnessed significant changes in the conduct of US warfare from rapid attrition in the Gulf War to complex contingency in Bosnia-Herzegovina.

may provide a methodology for managing this complexity through the development of simple models.¹³⁷

The third perception is that quantum leaps in technology will provide information dominance. The notion that technological innovation will achieve this desired outcome ignores the history of military innovation.¹³⁸ It further ignores the compounding impact of technology by adversaries, particularly in an environment of proliferation. The see first and understand first of Objective Force units is realized through the supposed infosphere and collective genius. These requirements dictate a capability to locate the enemy, and rapidly distribute that information throughout the infosphere. There is an inherent complexity to the Infosphere. "But reliance on technology may provide more information, it also makes the system more complex. By making the system more complex, it makes the system more chaotic. By making the system more chaotic, these new technologies make what happens in the system more unpredictable."¹³⁹ The conceptual foundation of information superiority is that it directly drives "decide then act" by providing commanders useful, time sensitive information. Anecdotal and historical analysis, however, demonstrates that often the result is information overload at the time of decision, creating confusion and uncertainty for the decision-maker.¹⁴⁰

¹³⁷ Czerwinski, 5-4. Simple models may be sufficient to describe complex systems as a method of reducing potential chaos and thus limiting understanding of system interactions. The development of tools that go beyond the achievement of concrete results may further aid in understanding how complex systems operate and how they can be affected. It is the future-state concept over the end-state. Recognizing the limitations of human capacity to account for complexity and the multiple interactions and connections between agents in a CAS, we use a level of reductionism to gain an understanding of the possible without losing sight of the whole system.

¹³⁸ Martin Van Creveld, *Command in War* (Cambridge: Harvard University Press, 1985), 261; and Jacob Kipp and Lester Grau, "The Fog and Friction of Technology," *Military Review* (Sep-Oct 2001), 2.

¹³⁹ Mark Pfaff, "Chaos, Complexity and the Battlefield," *Military Review* (Jul-Aug 2000), 86.

¹⁴⁰ Kipp, 2. The information requirements generated by modern systems provide a constant feed of data that overwhelms commanders and staffs. Human processing capabilities are not matched by those of modern machine processing. Van Creveld, 264. Van Creveld discusses certainty as the product of two factors, the amount of information available for decision-making and the task to be executed. It is the quest for certainty that drives information demands.

Recommendations

When the Objective Force concept was introduced in 1999, the Army was not at war. The events of 11 September 2001, the subsequent Global War on Terrorism, and the potential for simultaneous war with Iraq compounded by the increased tensions with North Korea have altered the parameters of the discussion on US Army transformation, but the need for change, as outlined in chapter two remains.¹⁴¹ The solution is a departure from the current path.

The proposed capabilities of the Objective Force, particularly complexity and its systems approach, integrated infosphere, and rapid mobility is critical for managing complexity in the COE. But these proposed capabilities could be incorporated into the Legacy Force allowing the Army to efficiently change through an evolutionary rather than a revolutionary process.

There are specific changes the Army can incorporate now. The most critical is the need to develop an operational concept that accurately reflects the current operational environment in terms of most likely threats using a systems approach.

The systems approach provides the contextual basis for looking at warfare less in terms of overwhelming force dominance and the associative linear methodologies used in Airland Battle, to one that focuses on how systems function: how they organize, adapt, their building blocks, and interactions. Future doctrine must focus on creating the joint integrated battle, linking multi-dimensional operations to create chaos within adversary systems and limiting adaptive options. Until the Army adopts a new operational concept, there are several fundamental changes it can institute that will maximize its warfighting capabilities within the COE. However, several assumptions are needed for any discussion of recommendations. There are three assumptions: the demands on Army forces as a result of the current operational environment will remain high;

¹⁴¹ The focus of Army transformation was the relevance of ground combat forces in joint operations, which were dominated by extended range precision capabilities characterized by Operation Joint Force in Kosovo. The Global War on Terrorism, with simultaneous operations in Afghanistan, the Philippines, Columbia, the CENTCOM AOR as well as potential concurrent operations against the Iraqi regime of Saddam Hussein have changed the debate from relevance to adaptability, supportability, sustainability. None of the current

forces will remain committed to peace operations throughout the decade with additional requirements as a result of current and potential operations increasing; and the Army's current structure will remain unchanged as a result of budgetary and political constraints resulting in fewer forces available for unexpected operations as a result of the first two assumptions. The recommended areas for change include organizational, processes, and equipment.

First, operations envisioned over extended battlefields create a need for forces capable of operating as continuously integrated semi-autonomous organizations. Yet, planners must be mindful of the limited number of specialized elements, such as extended range ISR, attack aviation, and indirect fires, within the total force.¹⁴² The objective of organizational redesign is to increase interdependency among units while accounting for their need for autonomous actions over a dispersed battlefield.

Fixing the organization requires permanent combined arms organizations below the brigades. This reorganization eliminates the artificiality of task organizing thus creating greater cohesion. It further cuts across the current divide of light, medium, and heavy forces by creating tactical units that possess greater versatility by virtue of their combined capabilities. They can also be integrated into larger organizations based on modularity, while maintaining their cohesion as an integrated combat team. This reorganization further enhances the lethality and survivability of forces operating on a dispersed battlefield through integrated capabilities.¹⁴³

This modularity of combined battalions creates the core of tactical combat units at the lowest level. In addition, information networks link the brigade vertically and horizontally across the battlefield through a tiered system that enhances information flow and provides redundancy to

operations, short of the offensive combat portion in Iraq, are focused on rapid decisive operations with clearly defined end-states.

¹⁴² These specialized elements include high value assets line intelligence, MP, signal, CSS, as well as SOF.

¹⁴³ Modularity for light, medium, and heavy forces specifically means create light/medium and heavy/medium forces that reduce strategic lift requirements, enhance versatility in full spectrum operations and provide operational and tactical flexibility over the full suite of environmental forces will enter.

maximize connectivity.¹⁴⁴ High value assets such as ISR, attack air (manned and unmanned), sustainment, and information systems become critical vulnerabilities in the dispersed battlefield and must be integrated at the lowest echelon for force protection and enhancement of the commander's visualization of the joint integrated battle. Technological countermeasures to robust UAV and sensor coverage will always establish a level of risk the commander must calculate, which requires organizational redundancy for mitigation.

Modularity of brigade and below combined arms systems does not eliminate the need for intermediate level C2. Divisional organizational design is effective because it encourages efficient allocation of resources, trains leaders and planners for the conduct of more complex operations, mitigates risk by dispersing tasks and effects over the battlefield, and is responsive to modification.¹⁴⁵ Echelons above Brigade (EAB) C2 in the expanded battlefield is not just for apportioning allocable assets, tailored to mission requirements (i.e. such as indirect fires, engineers, extended range ISR, and attack air systems); most critically it ensures that dispersed forces are focused on the joint integrated battle through actions in time, space, and effect. In addition, controlling and securing LOCs, managing dimensional coordination, providing the cohesion between operational and tactical commands, and coordinating sustainment and future operations are functions above the brigade.¹⁴⁶

Additionally, the drive for efficiency implicit in flattening organizational structures must be balanced with the effectiveness of those organizations to operate in a complex environment of interacting friendly and enemy complex adaptive systems. This is achieved by creating

¹⁴⁴ This enhanced system includes the tactical radio networks, digital and voice systems as well as integrated intelligence systems. It is both formal and informal. The adaptability is provided through a pull push system that allows lower echelon commanders to operate as autonomously as feasible. There is no system that provides assured connectivity. Systems must be designed for adaptive enemies that mitigate technological advantages through idiosyncratic responses.

¹⁴⁵ Mintzberg, 230.

¹⁴⁶ *Objective Force Unit of Employment Concept (Final Coordinating Draft)*, 17. The UE concept articulated by TRADOC is designed to detach a C2 element from the parent UE staff and serve as a subordinate "divisional" C2 node. But this concept assumes too many variables and does not account for the complexity of the dispersed battlefield. Dimensional coordination involves deconflicting operations in time within the same space or domain, i.e. air, ground, electro.

permanent staffs to meet the needs of the expanded battlefield. Current methods create ad hoc organizations based on mission requirements. These ad hoc organizations create mission specific effectiveness but are inherently inefficient owing to the very nature of ad hocary.¹⁴⁷ This inefficiency is expressed in a lack of cohesion and continuity. Planning must focus on current and future operations as well as future planning. Permanent standing cells – operations and plans based on time and events – which are modular in design would allow commanders the flexibility to organize and reorganize staffs to meet mission requirements while maintaining cohesion and functionality.

The expanded battlefield characterized by greater uncertainty, complexity and nonlinearity will require more not less staff support to analyze and execute the joint integrated battle. The experiences of TF Falcon in Kosovo are an indication of staffing requirements that will demand reach back through virtual staffs linked through the GIG, as well as traditional vertical and horizontal staffs linked through modular coordinating and planning cells to conduct collaborative planning. The virtual staff provides the commander the capability to task and access information, systems, and products outside his organic staff. Based on mission requirements, the virtual staff may be a portion of his organic staff, i.e. modular cells, or an augmentation staff. The experiences in Kosovo demonstrated the need to augment organic staffs as well as provide virtual staffing for intelligence, reconnaissance, and logistics. These experiences further demonstrated that these capabilities can be established in the Legacy Force now.

Using reach back and virtual staff capabilities reduces personnel, equipment, logistical, and infrastructure requirements for deployment, while enhancing responsiveness and maintaining lethality, survivability, and force protection. The increased demand for staffing does not require a requisite increase in personnel. Altering the processes of staffing through modular cells, automated planning tools, and integrated collaboration focuses less on traditional staff method without altering expected outcomes. The benefits of these staff changes mitigate transitional

¹⁴⁷ Mintzberg, 263.

friction and fog resulting from ad hoc staffing and ad hoc organizational coordination, as well as provide continuity linkages in current and future operations.

In tandem with staff changes, control of organizations must be more flexible based on the characteristics of uncertainty resident in the COE. The execution centric model of the Objective Force, can be a useful tool so long as it is not reliant on information superiority. Emphasizing technological solutions has not resolved the tension between timely relevant information and SU with information overload. Martin Van Creveld argues this point cogently,

Taken as a whole, present-day military forces, for all the imposing array of electronic gadgetry at their disposal, give no evidence whatsoever of being one whit more capable of dealing with the information needed for the command process than were their predecessors a century or even a millennium ago.¹⁴⁸

But one should not be fooled into a notion that simply having information and an understanding of an adversary's system will provide the capability for victory. This is a weakness of the Objective Force. Forces must possess the capability to concentrate overwhelming combat power while maintaining protection against enemy actions, in order to account for unpredictability.¹⁴⁹

The organic modular maneuver units, optimized for semi-autonomous close combat, and augmented with specialized capabilities from EAB, will provide superior and subordinate commanders the means to visualize operations. The level of uncertainty within the COE can be mitigated through simpler models than information superiority, such as minimal guidance imaging which provide commanders essential information and allows them to pull relevant information through an inquiry and demand-based network.¹⁵⁰ Minimal guidance imaging links supported to supporting commanders allowing adaptability and coordination. Minimal guidance imaging provides intent through symbolism. It describes task and purpose allowing the commander and staff to use their situational understanding of the immediate battlespace and

¹⁴⁸ Creveld, 265.

¹⁴⁹ This adaptability and unpredictability is synonymous with asymmetry.

¹⁵⁰ See Kahan, viii, for a discussion on the inquiry-based demand-pull information system.

problem solving techniques applicable to their circumstances to achieve the desired end-state. The benefits of this operational process are the linkage of SU and the influence of superior commanders while maintaining execution flexibility for subordinate commanders. Technology becomes an enabler instead of the creating chaos through added complexity.

In addition to the specific organizational redesign changes, altering the current process of

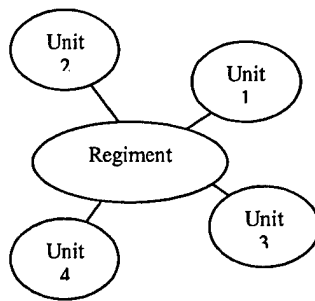


Figure 6

manning units will enhance redesign through greater unit cohesion.

An alternative to the current individual replacement process is the creation of regimental affiliations that allow soldiers and leaders to move within a larger connected organization, which maintains a broader cohesion and shared experiences. Using this approach

exemplified in figure 6, soldiers would move within their regiment

among four units located in various locations, CONUS and OCONUS. These units are linked not only by function, but also by soldiers within the regiment. The benefits of this process can be shared experiences and progressive mutual maturing of leadership and skills, which are critical in the expanded battlefield. The “collective genius” of the UA is not the shared knowledge of the battlefield, but the shared knowledge of long-term experiences that come from soldiers and leaders maturing together.

Second, while modernization has occurred in some instances, such as the 4th ID (Force XXI division) and the SBCTs, this has been a relatively small portion of the total force.¹⁵¹ The remainder of the force, particularly active forces, have seen very limited modernization over the past decade. Efforts to expand the capabilities of heavy forces through enhancement have been limited in an effort to take advantage of leap ahead technologies. As GEN DuPuy argued,

¹⁵¹ The total force includes active, reserve, and national guard forces.

however, the ability to see beyond the current horizons far into the future is beyond the capacity of human beings.¹⁵²

Army field forces need an immediately functional, integrated information system that takes advantage of current technological capabilities, the skills of soldiers, and outline information to provide a more relevant concept for decision-making. This is both an equipment and process change. The information backbone, linked to manned and unmanned ISR systems, including tactical and operational reconnaissance forces, allows extended range system optimization in the joint integrated battle.¹⁵³ Redefining information in terms of process and not content, subordinates technology to decision-making.¹⁵⁴ This requires a combination of tools such as minimal guidance imaging and integrated planning focused on output not process. It will provide commanders a system for displaying tactical information and the method for collaboration and coordination less deterministic with simple models that focus managing complexity and less on mitigation.

Dominating the information dimension does not eliminate the need to compel, coerce, or impose ones will through physical dominance. This is accomplished with lethality, shock, physical intimidation and the certainty of death. These requirements go to the core competency of close combat and land dominance of the Army. A threat analysis is critical for equipment modernization requirements but specific equipment requirements accentuate how forces fight. In the expanded battlefield of the COE forces will operate as dispersed semi-autonomous elements and therefore have a need for maximum lethality, versatility, survivability, and mutual support.

¹⁵² Enhanced capabilities include extended range accurate rapid-fire artillery in the Crusader, lighter armored gun systems in the AGM, and enhanced ISR/attack capabilities in the Camanche.

¹⁵³ The extended range systems include cannon or rocket launched UAV; deception, collection, and capabilities extension sensors.

¹⁵⁴ Information superiority is a misnomer, particularly as defined in Objective Force writings and JV2020, because it assumes one inherently has greater knowledge than the enemy. But there is a wide gap between known and unknown knowledge. The anecdotal evidence from TRADOC's 2003 C4ISR information superiority capabilities studies demonstrated that information superiority did not eliminate unknowns or the ability of adversary forces to severely attrit US Army forces in conventional offensive operations.

The recommendations in this monograph focus on conceptual and process changes to enhance existing capabilities of the Legacy Force. GEN Shinseki took a significant step toward addressing the operational and tactical demands for change in his 1999 Transformation speech. His vision of change was predicated on the relevant circumstances existing in 1999. In the four years since that speech the impetus for change remains, but the Army needs to adjust its course. There are several enduring needs which will continue to stimulate change: the strategic dynamic, the demand for a joint operational concept, and Army global requirements. The Army needs conceptual and process change now in terms of organizational redesign and can achieve this through modular sub-brigade units with light/medium and heavy/medium capabilities, an alternate unit manning process that integrates leader and skill maturity, modular multi-faceted staffs, and a redefinition of information superiority focused on process and not content.

Appendix 1

Acronyms

ABN	Airborne Division
ACE	Analysis and Collection Element
AD	Armor Division
ADC (M)	Assistant Division Commander (Maneuver)
AO	Area of Operations
AOR	Area of Responsibility
APS	Army Prepositioned Stocks
ARFOR	Army Force
ASCC	Army Service Component Command
BDE	Brigade
C4ISR	Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance
COMKFOR	Commander Kosovo Force
COMUSKFOR	Commander US Kosovo Force
CSA	Chief of Staff of the Army
CSG	Corps Support Group
CSSE	Combat Service Support Element
EAB	Echelon Above Brigade
EAC	Echelons Above Corps
EAC	Echelons Above Division
EUCOM	European Command
FAP	Fly Away Package
FOC	Fully Operational Capability
FYROM	Former Yugoslav Republic of Macedonia
FRY	Federal Republic of Yugoslavia
GBS	Global Broadcast System
GCE	Ground Combat Element
GPS	Global Positioning System
GTN	Global Transportation Network
HMMWV	High Mobility Multi-wheeled Vehicle
ID	Infantry Division
IFV	Infantry Fighting Vehicle
JFACC	Joint Forces Air Combat Command
KFOR	Kosovo Force
KLA	Kosovo Liberation Army
MAGTF	Marine Air Ground task Force
MEU (SOC)	Marine Expeditionary Unit Special Operations Capable
MTA	Military Technical Agreement
NATO	North Atlantic Treaty Organization
SACEUR	Supreme Allied Commander Europe
SU	Situation Understanding
TF	Task Force
TSC	Theater Support Command
UN	United Nations
UA	Unit of Action
UE	Unit of Employment
UNSCR	United Nations Security Council Resolution

UNHCR

United Nations High Commissioner for Refugees

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