Apportion Everything: A New Joint Force Organization and Employment Construct

A Monograph

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If the United States is to provide viable options to its civilian leaders, it must change the way it organizes and employs its military power. Its current construct revolves around functional specialization where services provide self-contained and vertically integrated capabilities. While successful in the past, this framework produces duplications of capabilities and artificially restricts the ability of combatant commanders to provide a variety of alternatives to civilian leaders, regardless of whether the opponents are conventional military enemies or unorthodox, asymmetric adversaries. This monograph presents and assesses an alternative framework for organization and employment of joint forces. It is a construct for command, control, and employment of joint forces that is flexible and adaptive. The underlying premise, apportionment, applies to any joint unit, force or capability. By apportioning packages or sub-units of capabilities to functional component commanders who integrate those capabilities to achieve operational and strategic effects, commanders can produce more flexible and adaptive options for civilian leaders than are possible with the current approach. . Supporting evidence for the claim comes from a feasibility, acceptability, and suitability analysis of the proposed construct which simultaneously entails comparing and contrasting the alternative with the current method.

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Abstract

APPORTION EVERYTHING: A NEW JOINT FORCE ORGANIZATION AND EMPLOYMENT CONSTRUCT by Major Gregory S. Zehner, United States Air Force, 87 pages.

If the United States is to provide viable options to its civilian leaders, it must change the way it organizes and employs its military power. Its current construct revolves around functional specialization where services provide self-contained and vertically integrated capabilities. While successful in the past, this framework produces duplications of capabilities and artificially restricts the ability of combatant commanders to provide a variety of alternatives to civilian leaders, regardless of whether the opponents are conventional military enemies or unorthodox, asymmetric adversaries. This monograph presents and assesses an alternative framework for organization and employment of joint forces. It is a construct for command, control, and employment of joint forces that is flexible and adaptive. The underlying premise, apportionment, applies to any joint unit, force or capability. By apportioning packages or sub-units of capabilities to functional component commanders who integrate those capabilities to achieve operational and strategic effects, commanders can produce more flexible and adaptive options for civilian leaders than are possible with the current approach. Supporting evidence for the claim comes from a feasibility, acceptability, and suitability analysis of the proposed construct which simultaneously entails comparing and contrasting the alternative with the current method.

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INTRODUCTION

If the United States is to provide viable options to its civilian leaders, it must change the way it organizes and employs its military power. The current construct, first codified in the 1948 Key West Agreement, revolves around functional specialization where services provide self-contained and vertically integrated capabilities. While successful in the past, this framework produces duplications of capabilities and artificially limits the ability of combatant commanders to provide a variety of alternatives to civilian leaders. This outcome occurs regardless of whether the opponents are conventional military enemies or unorthodox, asymmetric adversaries.

The need for change results from technological advances that have revolutionized aspects of warfare. The military has instantaneous worldwide communication, the ability to direct precision strikes with incredible accuracy, and can minimize adverse environmental effects like darkness and bad weather. While the U.S. has capitalized on many of these advances, the same technology the U.S. uses is often available to its adversaries, allowing them to leap ahead with their own capabilities and forgo expensive, time consuming, research and development.[1] One way to succeed against these foes is to employ new operational concepts for twenty-first century warfare. This monograph presents and analyzes an alternative concept that changes the conventional military organization and employment construct in a way that provides military and civilian leaders with a smorgasbord of options instead of a limited menu of capabilities.

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[1] Using off-the-shelf technology allows the adversary to increase its military effectiveness in a manner that can deny the U.S. sufficient time to adapt to its use. The result is the U.S. must constantly work to remain ahead in the measure/counter-measure/counter-countermeasure race, actively and rapidly exploiting new technologies. James R. Fitzsimonds and Jan M. Van Tol, "Revolutions in Military Affairs," *Joint Force Quarterly* (Spring 1994): 24-31; Colin S. Gray, "RMAs and the Dimensions of Strategy," *Joint Force Quarterly* (autumn/winter 1997-98): 98-102; Williamson Murray, "Thinking About Revolutions in Military Affairs," *Joint Force Quarterly* (Summer 1997): 103-110. Michael Howard highlights the difficulty in achieving innovation in a rapidly developing military science environment. Michael Howard, "Military Science in an Age of Peace," *RUSI, Journal of the Royal United Services Institute for Defense Studies* 119 (March 1974): 3-9.

There are two main schools of thought on organizing and employing joint forces: "specialists" and "synergists."[2] Specialists adhere to a toolbox analogy where individual services create functionally specialized capabilities or "tools" that they provide to the joint force commander (JFC), producing a bevy of the right tools for the right place at the right time. The JFC then can choose the best available tool for the task. Synergists, while also using the toolbox analogy, argue JFC's should combine available capabilities to custom build a tool for the task instead of making do with less than optimal options. Both viewpoints have their deficiencies. The specialist's "tool" is often a single-service capability that limits its applicability across the wide variety of situations commanders face.[3] Conversely, the synergist tool creates additional friction through its requirement to integrate operations among disparate participants that are often unable to operate together as smoothly as a single service can.[4]

While Defense policy already directs services to make procurement decisions based on joint interoperability, until Defense Secretary Donald Rumsfeld took office and put his mark on the 2001 *Quadrennial Defense Review* and 2003 *Defense Planning Guidance*, the U.S. military

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[2] See Major General John L. Barry, U.S. Air Force, and James Blaker. "After the Storm: The Growing Convergence of the Air Force and the Navy," *Naval War College Review* LIV, No. 4 (Autumn 2001): 129-130.

[3] An example of capabilities that did not fit requirements was the need for rapidly deployable but long-term sustainable ground forces in Operation Enduring Freedom. The Army was unable to rapidly deploy to Bagram, Afghanistan. Although the Marines could rapidly deploy, they lacked the long-term sustainability the Army had. Neither force in isolation was ideal for the task.

[4] In this case, friction comes primarily from the lack of peacetime joint training opportunities due to operations tempo, lack of suitable training ranges and airspace, money, etc. The situation existed in the most recent conflict because friction between joint forces was still significant. While military leaders declared Operation Iraqi Freedom was the most joint operation ever mounted, the Marines and Army continued a trend begun in Operation Desert Storm by largely conducting jointly deconflicted operations. In Operation Iraqi Freedom, they used the natural barriers provided by the Tigris and Euphrates Rivers to separate their activities. The proof friction still existed came when the two forces met near Baghdad and were unable to communicate with each other as their lower echelons merged. David Zucchino, "Unfriendly Communications Process Raises Risk of 'Friendly Fire,'" *Los Angeles Times* (April 13, 2003), as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

has largely operated in the specialist mode.[5] Any customization that occurred was at high organizational levels or took place with unconventional units like Special Operations Forces. This is a legacy of Operation Desert Storm where the Marine ground component, Army land forces, Air Force, Navy, and Marine Corps aircraft, Naval and Marine amphibious forces, and Special Operations Forces fought a jointly deconflicted instead of a jointly integrated operation. Future operations will revolve around unity of effort and persistent precision effects instead of unity of command and mass.[6] Therefore, proposing and assessing a different approach is essential.

U.S. military organization and employment of joint conventional ground units normally includes durable task organizations that occur at high echelons, usually at or above division levels. Subordinate units rarely task-organize across service boundaries because each service component retains self-sufficient logistics capabilities at higher levels.[7] In a politically charged and resource-constrained environment, a significant issue for military and political leaders is whether the U.S. can continue to maintain duplicate capabilities that are simultaneously ill suited to respond to a broad spectrum of operational and strategic requirements. In Operation Enduring

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[5] Support for the this comment comes from doctrinal discussions of apportionment, the key component of the alternative construct presented in this monograph and of the synergist school of thought. Joint Publication (JP) 5.0 *Doctrine for Planning Joint Operations* discusses apportionment only with respect to Joint Strategic Capabilities Plan (JSCP) apportioning of resources for deliberate planning. Although the December 2002 second draft revision changes the apportionment definition to include apportionment of forces instead of just resources, it retains the older version's focus on strategic apportionment. JP 0-2 *Unified Action Armed Forces* directs a commander "to organize forces to best accomplish the assigned mission based on the concept of operations," however the contextual focus remains on apportioning only air forces. No doctrinal publication addresses apportioning ground units. U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication (hereafter cited as JP) 0-2, *Unified Action Armed Forces (UNAAF)* (Washington DC: GPO, 10 July 2001), V-2, V-4, V-5; JP 5.0, *Doctrine for Planning Joint Operations* (Washington DC: GPO, 13 April 1995); JP 5.0, *Doctrine for Planning Joint Operations*, Second Draft (Washington DC: GPO, 10 December 2002).

[6] Rear Admiral John G. Morgan, Dr. Anthony D. Mc Ivor, and the Secretary of the Navy's Action Team, "Rethinking the Principles of War," *Proceedings* 130, no. 10 (2003):34-38.

[7] In Operation Iraqi Freedom, Marine and Army units retained organic maneuver and fire support elements and operated independently in their own sectors. Although an Army armored company worked with special forces, the only large scale force apportionment across service boundaries occurred with fixed

Freedom, a mixture of Marine rapid deployable and Army long-term sustainable forces would have been the ideal force to follow up on the success Special Forces and air power had achieved. Instead, planners had to deploy two separate forces and coordinate a relief in place between the groups because neither force adequately fit the commander's requirement.

It is important to determine whether an customizable, apportionment alternative is better than a functionally specialized approach. An alternative would have to be a more efficient, effective, and flexible use of capabilities. If proved so, it would also be important to determine what other actions must occur to make adoption successful. In order to answer these questions, this monograph presents and assesses an alternative framework for organization and employment of joint forces. The alternative revolves around apportioning units and capabilities at lower levels than currently occurs. It also involves forces not currently apportioned.[8] The analysis presented in this monograph shows apportioning joint forces to functional component commanders optimizes joint capabilities and allows commanders to more successfully achieve operational effects in a complex and varied strategic environment. It is a better method of joint force organization and employment than the specialization method currently used. Supporting evidence for the claim comes from feasibility, acceptability, and suitability analysis of the proposed construct which simultaneously entails comparing and contrasting the alternative construct with the current, functionally specialized method.

The monograph begins by presenting some definitions and the analysis methodology. The next section provides more detail on the two alternative organization and employment

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wing air assets (strike, reconnaissance, etc) and special operations forces. These units regularly operate for other functional components and do so at their lowest echelons (flights and detachments/teams).

[8] The important aspect of the new construct is applies to units and capabilities at low levels (i.e. below corps, divisions, brigades, etc.). It also tasks supported commanders to use with those apportioned forces to achieve various degrees of performance in several operational effects areas. Currently, forces tasked to achieve an operational effect are from the service or functional components the joint force commander deems best qualified (e.g. conventional land warfare, air superiority, area denial, etc.).

schools, including historical examples of each, and concludes by presenting the alternative construct. Assessment of the alternative construct follows. Throughout the analysis, areas requiring further study and analysis emerge. The conclusion includes those areas in its recommendations section.

DEFINITIONS AND METHODOLOGY[9]

A key term in this analysis is apportionment. Two doctrinal definitions exist. One is the Joint Publication (JP) 1-02 *Department of Defense Dictionary of Military and Associated Terms* definition, last modified by JP 3.0 *Doctrine for Joint Operations*, and the second is a slightly different version in the December 2002 second draft revision of JP 5.0 *Doctrine for Planning Joint Operations*. This monograph uses the latter definition since it is a more thorough and accurate definition and because it allows for apportioning forces in addition to resources which is at the center of the alternative construct[10]

Another term with significant impact on the subject and which appears throughout the paper is transformation. In this case, the official Defense Department term is sufficient. The primary focus of this work addresses the concepts part of the definition. Besides the term transformation, the acceptability methodology uses other terminology found in policy directives.[11] Additionally, a key aspect of acceptability analysis is organizational resistance to

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[9] This section outlines some key definitions necessary to both understand major concepts and for use with the analysis methodology section. See the Glossary in Appendix 2 for more detail.

[10] For instance, examples of air apportionment categories include, but are not limited to strategic attack, [air] interdiction, counterair, maritime support, and close air support (CAS). Maritime support apportionment includes those sorties supporting naval/marine operations e.g. amphibious operations before changeover to joint force land component commander (JFLCC) command, certain naval littoral operations, some naval SOF etc. It also includes other operations like aerial mining, anti-surface warfare, anti-submarine warfare, etc. U.S. Department of Defense, Joint Publication 3-30, *Command and Control for Joint Air Operations* (Washington DC: GPO, 5 June 2003), III-21.

[11] Examples are *Joint Vision 2010* and *2020*, Rapid Decisive Operations, the 2001 *Quadrennial Defense Review*, and the *Defense Planning Guidance*. Also, the Joint Requirements Oversight Council

change which involves the impact of ethos and culture. Because there is sufficient overlap between the definitions of ethos and culture and any further refinement brings no benefits to the paper, both terms appear interchangeably.

To acknowledge the fact functional component capabilities are not service-specific, this paper does not refer to fixed wing aircraft as "Air Force aircraft," ground troops as "Army forces," etc. unless the situation warrants specificity.[12] The paper also refers to aircraft supporting ground operations as "fixed-wing air," "air power" etc. instead of simply "close air support (CAS)."[13] The reason for this position is it encourages readers to think beyond narrow concepts e.g. air power is simply bigger, longer range, airborne artillery or ground troops are always the central focus of every operation. The distinction in the former example is important if the reader is to accept the possibility of employing air as a supported maneuver force with supporting, apportioned, land maneuver units. The significance of the latter distinction is, by definition, maneuver forces are not fire support forces and therefore other forces can support them. The joint doctrine publication on fire support, however, includes close air support in its list

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(JROC) recently published a list of terms in a joint operational framework document which provides an overarching operational concept framework for its capstone and operational requirement documents.

[12] This disturbing tendency is widespread among the services. General Wesley Clark, for instance, erroneously credits the aerial support Task Force Hawk would have received to "Air Force assets" even though Marine and Navy aircraft were present in force. General Wesley K. Clark, *Waging Modern War: Bosnia, Kosovo, and the Future of Combat* (New York: Public Affairs, 2001), 279. In this Army general's mind, every aircraft working with the Army comes from the Air Force. While General Clark surely knows the truth, the fact it appears in print hints at his ingrained cultural bias. Three services provide fixed-wing strike aircraft to the joint force commander, special forces teams have Air Force personnel assigned to command and control airstrikes, and both Army and Marine Corps units operate under the land component umbrella. Cultural bias and its influence over the development of new concepts is an essential aspect of this paper's analysis. Also, the use of incorrect terms (like using "CAS" to include all sorties apportioned to the land component commander) is an important element of the acceptability analysis in this monograph.

[13] "CAS" is an overly specific and restrictive term and is normally incorrect because the sorties are usually *not* CAS but air interdiction or some other doctrinally indefinable tactical mission. Office of the Secretary of Defense, *Joint Close Air Support Interim Report*, Pamphlet with CD-ROM, Prepared by the OSD Joint Close Air Support Joint Test Force (Eglin Air Force Base, FL, October 2000). See also Robert Wall, "Eyes in the Sky: Marines will gain real-time intel they had been lacking, as targeting pod video capability is added to AV-8Bs," *Aviation Week & Space Technology* (March 31, 2003): 57, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; Christian Lowe, "Air Power Increasingly Useful in Urban

of fire support components but does not include ground maneuver forces. In the alternative construct, distinctions between fire support, maneuver, and other units disappear as effects and the capability to produce them become primary.[14]

The analysis methodology this monograph uses is the "FAS" (feasibility, acceptability, and suitability) test. The FAS test is a U.S. Army technique used in course of action analysis during its military decision making process. The FAS test focuses on advantages and disadvantages of the construct based on specific criteria. Throughout the monograph, the analysis incorporates historical evidence, primarily from the last fifteen years. In the feasibility analysis section, it uses criteria from doctrine on mobility and agility, command and control, and logistics. The analysis also addresses the effects budgetary influences have on materiel procurement.

Acceptability is the longest analysis section because it produces the biggest obstacle to acceptance of the alternative construct. The acceptability analysis uses two major criteria. The first is whether the construct is acceptable to higher-level commanders. Higher-level commanders include the joint force commander/theater commander, senior service leaders, the joint chiefs of staff, the secretary of defense, and the president. Within this section, there are sub-criteria like history, ethos/culture, and service transformation. Transformation's influence appears throughout this section. The second criterion is whether the alternative is acceptable to the service component organizations themselves. Before these analysis sections appear, however, there are three segments addressing theory, organizational and individual behavior, and the historical influences on the two analysis criteria. While the paper analyzes these two areas to

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Fights," *Marine Corps Times* (April 21, 2003): 15, as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

[14] The definition declaring air power a maneuver force appears U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 3-0, *Doctrine for Joint Operations* (Washington DC: GPO, 10 September 2001). The references to air as a maneuver force are pp. IV 13-17 but the concept appears throughout the publication. For a sample of other instances, see also pp. III-11, III-27, IV-9-10. See also U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 3-09,

some depth, there are other criteria that impact the acceptability analysis but are beyond the scope of the paper. These areas for further study include U.S. military interaction with other instruments of U.S. power (diplomatic, information, economic, and judicial),[15] its coalition partners and allies, and non-governmental organizations (NGOs), private volunteer organizations (PVOs), etc.

Suitability analysis revolves around defense policy guidance and the construct's overall suitability for warfare as foreseen in transformation documents. Specific policy guidance documents and concepts include *An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution In the 21st Century, Joint Operations Concepts,* and *Joint Vision 2010* concepts such as Rapid Decisive Operations (RDO). The analysis uses these documents for its criteria because they are mutually agreed-to and formally published policy guidelines. They also are products of civilian policy guidance issued over two administrations, which suggests the policy has durability and is not a faddish course of action. Alternative views of future warfare appear but are not analysis criteria because they do not represent an accepted view of future warfare.

ORGANIZATIONAL AND EMPLOYMENT OF JOINT FORCES

ORGANIZATIONAL AND EMPLOYMENT OPTIONS

In joint warfighting, there are two general options for organizing and employing joint forces: functional specialization and integrating or combining capabilities. The two options revolve around differing command and control relationships. Advocates of functional specialization (also known as specialists) believe the best way to conduct joint operations is to

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Doctrine for Joint Fire Support (Washington, DC: GPO, 12 May 1998) for discussions of what capabilities joint fire support includes.

[15] Acronyms for the various instruments of power include DIME or DIME-J, where J includes judicial actions by individuals or states against financial assets of countries, corporations, and individuals.

assign functions to individual services best able to conduct the task. Supporters of the alternative option (synergists or "customizers") prefer the synergistic effects produced from the combination and integration of operational and tactical forces in manners producing greater effects than possible from using a single service component's specialized option.[16] The alternative apportionment construct developed in the monograph is a component of the combining capabilities category.

FUNCTIONAL SPECIALIZATION (SPECIALISTS)

Historically, functional specialization has been at the heart of U.S. joint operations conducted below functional component levels. There are numerous examples of this trait of fighting separate wars. In Operation Desert Storm, Army, Marine Corps, and Air Force fought jointly deconflicted "wars." In World War II, there were two separate and distinct Army and Navy campaigns fought by General Douglas MacArthur and Admiral Chester Nimitz in the Pacific. In Vietnam, the Air Force and Navy divided the airspace over North Vietnam into service-controlled Route Packs where each group stayed out of the other's territory.

With functional specialization, joint commanders choose from an array of fully developed tools similar to how a mechanic or craftsman operates: chose the "right tool, at the right time, for the right job." At its extreme, this approach maintains separate command and control relationships among service components where each service maintains distinct and clear authority to perform tasks for which it is best suited without concern for the other services. Success occurs only if each service's operations are fully deconflicted. In actual operations, specialized forces benefit from efficiencies created by habitual working relationships developed

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Alternative but more descriptive acronyms for the instruments of power include DIME-FIL or MIDLIFE which includes finance, intelligence, and substitutes legal for judicial.

[16] The basic terminology and definitions come from Barry, "After the Storm," 129-30.

from training within service doctrine, culture, traditions, etc. A downside is it produces redundancy among service capabilities.[17]

Jointly deconflicted operations use a variety of planning, coordination, liaison, deconfliction and control measures to minimize friction between units and reduce fratricide. Examples include command and control of ground sectors, airspace, joint force targeting, and elaborate relationships for command, control, communications and computer (C4) systems. The structure revolves around a service-based, joint task force (JTF) headquarters that controls forces within its two-dimensional area. In this construct, different services may operate in the same airspace, attack the same targets, or use the same C4 systems etc. but they must deconflict their actions.[18]

While this arrangement reduces friction by avoiding inter-service command, control and coordination requirements, it has its disadvantages. By law, joint force commanders are unable to procure their own, personalized military capabilities. Instead, service components provide the JFC with what the former thinks the JFC needs rather than what the commander actually wants.[19] For example, combatant commanders may request specific capabilities in small packages like a unit of Apache or Chinook helicopters or theater missile defense capabilities. The force-provider, however, often responds with a larger force, saying the small capability requires deploying significant division or corps assets to support it. This response is a legacy of a Cold War

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[17] Ibid., 129-30.

[18] U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Requirements Oversight Council, *An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution In the 21st Century* (Washington, DC: Joint Chiefs of Staff, Directorate of Management Printing Office, 28 January 2003), 22.

[19] This situation has also occurred within concepts like the Future [Objective] Force where the Army has determined it must be able to deploy a maneuver brigade in 24 hours. That capability may not be what joint commanders want or need, especially when that capability competes for limited lift assets with other forces. Elaine M. Grossman, "Army is Split Over Beefing Up Brigades Vs. Making Them Smaller," *Inside the Pentagon* December 11, 2003, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; "Warfighters Increasingly Influencing Acquisition Process, Officials Say," *Aerospace Daily* (February 19, 2004), as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

necessity to manage large and diverse forces in the NATO/European theater and is what dictated the specialist service organization and deployment force structures.[20]

A significant fact of functional specialization in conventional operations is joint integration begins and ends at the functional component (three-star general) level.[21] Below that level, service stovepipes exist that produce inefficiencies and create seams between functional components.[22] In the past, this lack of integration has driven functional components to plan, prepare, and execute operations using only those capabilities organic to the component since any supporting joint forces were "not fully trustworthy." This attitude is the result of historically supported cultural beliefs that commanders can only rely on forces he owns (i.e. operational control/OPCON) to provide supporting capabilities.[23]

INTEGRATING OR COMBINING CAPABILITIES

Advocates of combining capabilities, synergists or "customizers," believe in the same toolbox analogy specialists use. The difference is they believe the commander should create an on-site, customized tool fully optimized for the situation. This allows the JFC to combine

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[20] Grossman, "Army is Split."

[21] As already noted, Special Operations Forces (SOF) are an exception.

[22] Michael P. Noonan and Mark R. Lewis, "Conquering the Elements: Thoughts on Joint Force (Re)Organization," *Parameters* 33, no. 3 (Autumn 2003): 35-36.

[23] In Operation Desert Storm Army corps commanders accused the Joint Force Air Component Commander (JFACC) of ignoring their requests for air interdiction targets and for apportioned sorties the commanders felt were essential to planning ground operations. In reality, the JFC's guidance directed re-tasking of the apportioned sorties the corps felt it "owned." In the same war, U.S. Marine Corps commanders withheld sorties from JFACC use because the Marines wanted to use them to support operations in Kuwait. Michael R. Gordon and General Bernard E. Trainor, *The Generals' War* (Boston: Little, Brown and Company, 1995), xii-xv, 330-31, 463-65, 472. An alternative to withholding assets would have been providing its longer-range strike aircraft for JFACC missions in trade for more specialized close air support capabilities. Actions that helped the Marine effort potentially harmed the overall joint effort because the Marines withheld sorties immediately before the ground offensive that could have been used in other, higher priority missions to shape the overall joint fight or to decisively attack higher priority targets.

available forces to create effects greater than functional specialization could produce.[24] It also allows the JFC to avoid collateral fallout that can occur with inappropriate specialized tools.

Custom building of the right tool for the job is not a new concept. Napoleon Bonaparte crafted a similarly flexible organization when he employed his four corps diamond formation consisting of an advance guard, left and right flanks, and a reserve. Each component was almost identical in capability, was only a one-day march to its closest corps, and only two to three days from its diagonal unit. In Napoleon's approach, whichever corps gained contact with the enemy became the advance guard and the others flexed to the appropriate remaining roles in the diamond formation. The result allowed Napoleon to avoid enemy attempts to force battle in situations unfavorable to Napoleon based on an initial force array. He was able to flexibly adjust his force to any enemy iteration[25]

The concept of flexibly organized forces existed in U.S. military history, too. Formalized task organization of modern forces began as early as World War II when Lieutenant General Lesley J. McNair reorganized U.S. armored divisions to mirror German Panzer divisions. As such, each battalion was a self-contained entity which allowed commanders to assign units to either of the division's subordinate commands. This arrangement also extended to "non-divisional battalions" which commanders could attach to existing divisions. McNair's intention was to provide an almost infinitely adjustable force capable of addressing a variety of situations.[26]

A similar synergistic approach to land forces existed in the Israeli Army. In the 1956 Suez Crisis, the IDF created the *ugdah* system consisting of a basic command and control framework for two or more brigades but one that lacked any organic forces. The framework

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[24] Barry, "After the Storm," 129-30. Functionally specialized tools may be an inexact fit, much like metric and English tools are different. Each can work but at reduced efficiency. Finally, the adage "if the only tool available is a hammer, everything starts to look like nails" is also appropriate.

[25] David G. Chandler, *The Campaigns of Napoleon* (New York: Scribner, 1966), 151-54.

allowed commanders to arrange any combination of brigades, battalions, and other units into a tailor-made force. Despite its failure during the war, it was a conceptual success in that it showed the advantages gained by abandoning traditional divisional command and control structure. The reason it succeeded was the units involved were modular and participants had trained to work together in various combinations.[27]

Defense Department reformers are pushing for similar modular forces that can provide a cafeteria-like smorgasbord of options to the commander. The move to modularity should provide joint commanders the ability to integrate available forces into "golf bags of varied military capabilities."[28] The commander can create customized capabilities by arranging available assets like Lego's to produce the variety of tools.[29] These options are already available to commanders but are rarely used.[30] The alternative construct expands upon the ideas of Napoleon, McNair, and the Israelis.

THE ALTERNATIVE CONSTRUCT

The alternative construct is a framework for command, control, and employment of joint forces that is flexible and adaptive. The underlying premise of apportionment applies to any joint

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[26] Russell F. Weigley, *Eisenhower's Lieutenants: The Campaign of France and Germany, 1944-1945* (Bloomington, IN: Indiana University Press, 1981), 9, 18-19.

[27] Edward N. Luttwak and Daniel Horowitz, *The Israeli Army, 1948-1973* (1975; reprint, Lanham, MD: University Press of America, 1983), 176. These two characteristics, modularity and training, figure into the assessment section of the alternative construct.

[28] Michael Evans, "From Kadesh to Kandahar: Military Theory and the Future of War," *Naval War College* Review 56, no. 3 (Summer 2003): 142. A "golf bag" analogy seems to suggest a specialist approach. On the contrary, a professional golfer can use a variety of grips, hand placements, swings, stances, etc. to make the same shot but achieve different effects. In addition, club makers customize clubs to fit the particular golfer instead of making one club that fits all. Military services, however, are unable to fully customize military "golf clubs" for every commander since each commanders' needs are different and services can only produce limited quantities of clubs.

[29] Grossman, "Army is Split."

[30] In fact, Title 10 of the U.S. Code provides the combatant commander with the authority for "organizing commands and forces within that command as he considers necessary to carry out missions assigned to the command." U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 4-07, *Joint Tactics, Techniques and Procedures for Common-User Logistics During Joint Operations* (Washington DC: GPO, 11 June 2001), III-1.

unit, force or capability. By apportioning packages or sub-units of capabilities to functional component commanders who then integrate those capabilities to achieve operational and strategic effects, commanders can produce flexible and adaptive options for civilian leadership than are possible with the current approach. Table 1 shows a strategy-to-task breakout of the construct.[31]

Analyzing the concept from the bottom up makes it easier to see the strategy-to-task integration involved. At the lowest levels, tactical units perform military tasks (destroy, defeat, halt, interdict, disrupt, etc.) that support tactical missions (movement to contact, attack, pursuit, interdiction,[32] close air support, etc.). In turn, tactical missions support joint operational functions (JOF)[33] counterland, countersea, counterair, counterspace, counterinformation and counterstrategy[34]. Functional component commanders (air, land, maritime, space,[35] special operations, and transportation and logistics[36]) use JOFs to achieve joint operational effects: superiority in land, maritime, air, space and information realms.[37] Joint operational effects support the JFC's effort to achieve strategic objectives.

The benefit of an apportionment concept that applies to all joint forces is it gives commanders at much lower levels the ability to select and employ the most effective joint

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[31] More information including definitions and explanations of newly derived terms appears in Appendix 1 and the Glossary, Appendix 2.

[32] Interdiction is unique because it is both a tactical task and a tactical mission.

[33] Joint operational function (JOF) is a term created by the author to incorporate joint functions that normally have operational impact or effects.

[34] See Appendix 1 for definitions

[35] In order to show its adaptability to future operations, this construct assumes the presence of a separate joint force space component commander (JFSCC) in the theater architecture, a function performed by the joint force air component commander in Operation Iraqi Freedom.

[36] In order to show its adaptability to future operations, this construct incorporates a transportation and logistics functional component commander (JFTLCC), an option possible should US Transportation Command and the Defense Logistics Agency merge and develop "fort-to-foxhole" logistics command and control capabilities. Full development of this concept is an area for further study. Thanks to Major Keith "Toaster" Teister for proposing the idea of a seamless deployment/logistics function.

[37] Joint operational effect (JOE) is a term created by the author to incorporate higher-level, effects-based conditions produced by joint operational functions e.g. counterair operations produce air superiority.

capabilities available. Commanders can custom-build the best tool and incorporate flexibility requirements and efficiency constraints.

Functional Component Commander	Joint Operational Effects (JOE)	Joint Operational Functions (JOF)	Tactical Missions	Tactical Mission Tasks
JFACC	Air Superiority	Counterair	Area Defense	Block
JFLCC	Land Superiority	Counterland	Attack	Canalize
JFMCC	Maritime Superiority	Countersea	Close Air Support	Capture
JFSCC	Space Superiority	Counterspace	Offensive Counterair	Contain
JFSOCC	Information Superiority	Counterinformation	Defensive Counterair	Cover
JFTLCC		Counterstrategy	Offensive Counterinformation	Deceive
			Defensive Counterinformation	Delay
			Offensive Countersea	Defeat
			Defensive Countersea	Degrade
			Offensive Counterspace	Destroy
			Defensive Counterspace	Disrupt
			Interdiction	Exploit
			Land Attack	Fix
			Mobile Defense	Guard
			Movement to Contact	Halt
			Exploitation	Influence
			Pursuit	Interdict
			Retrograde	Isolate
			Strategic Attack	Neutralize
			Strategic Defense	Persuade

Table 1 Alternative Framework Strategy-to-Task Breakout

Critics of the alternative framework might suggest forces that operate better under centralized control, like airpower, may become "penny-packeted" in this arrangement.[38] This fear is unwarranted because in the construct the JFC issues direction to the functional component commanders on the overall conduct of the war. The JFC also provides direction concerning the weight of effort each component must give to achieve various JOEs. This extra guidance is essential to achieving unity of effort but also succeeds in preventing situations like penny-packeting of forces.

The construct's force organization structure is similar to combined arms task-organization except it uses tactical control (TACON) or SUPPORT as its primary command

[38] "Penny-packeting" is a term originating from the air power experience in North Africa during Operation Torch when commanders allocated distinct quantities of air power to lower echelon units,

relationships instead of OPCON. As opposed to task-organization along OPCON lines, the construct more effectively leverages joint capabilities and allows rapid and adaptive capability re-organization to occur without the friction associated with the current structure.[39] Functional component commanders will still have to integrate intra- and inter-functional operations to achieve objectives. The difference is the tasks occur within a more flexible and adaptive organizational and employment structure.[40]

There are obvious examples where different functional component commanders would have different weights of efforts for the same JOF. Theater wide air superiority, for instance, requires counterair functions over a wide area. Because a land or sea component may not cover the entire theater, it might be less suited for the task than the air component. Where the two surface components would still provide supporting capabilities to the JOF is in anti-air and missile defense, suppression of enemy air defenses (SEAD), etc. In the countersea functional area, a land component commander may have little or no countersea JOF priorities.

Similarly, JOF tactical mission areas may occur across functional components.[41] This next level, tactical missions, incorporates recognizable definitions with new terminology.[42] Tactical mission tasks is the lowest level. These are familiar tasks to ground forces. Within a joint capabilities construct, however, each component has the capability to perform every task but

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creating within each subordinate its own mini-air force. This prevented the massing of air power in areas that needed more air capabilities than their organic forces could produce.

[39] See the acceptability analysis for examples of friction related to both constructs.

[40] For example, ground commanders directly contribute to air superiority effects when they suppress enemy air defenses in order to support CAS attacks, seize airfields to gain forward aircraft basing, or protect friendly forces or installations with air defense assets. They contribute to land superiority when they seize geographic objectives or attack ground forces. Finally, ground commanders achieve maritime superiority effects when they suppress or destroy land-based anti-ship missile systems threatening shipping.

[41] In this case, the air component commander performs air interdiction and close air support tactical missions as subsets of the counterland JOF. The ground commander does the same but uses attack aviation, long-range missiles, artillery, or ground forces.

[42] Subsets of the attack mission include land attack, sea attack, air attack, etc. In the alternative construct. For example, both M-1's and A-10's perform land attack missions. When the A-10 attacks

at varying degrees of effectiveness.[43] The lesson the construct reinforces is functional component commanders already perform these functions, missions, and tactical mission tasks. The construct simply recognizes that fact and it allows commanders to better assess current efforts while simultaneously providing a venue for new approaches to situations. It is important to note this alternative construct does not advocate reorganizing the services, merging them into a "purple" force, or changing primary functions to organize, train, and equip. Conversely, it does not suggest every service or component must participate in every conflict. Instead, it is an alternative framework for employing joint forces focused on maximizing positive effects, minimizing negative effects, and providing leaders with more options. Apportionment of joint forces is a key element.

Doctrine instructs U.S. commanders to be flexible and to conduct operations with "combinations of forces tailored for missions across the range of military operations" [44] but the historic obstacle to joint force apportionment has been the difficulty in rapidly shifting surface forces. The Army's Stryker Brigades and its Future Force, however, provide more maneuverable and agile forces that are also more mobile and, therefore, become apportionable.[45] The next step in the construct involves the actual apportionment of forces. This requires developing new apportionment categories (see table 2).

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targets in close proximity to friendly forces requiring detailed integration, however, it is close air support. The M-1 performs close ground support missions when conducting support-by-fire tactical mission tasks.

[43] What may be a new concept for many is air forces can and do perform all these tasks. While neutralize or destroy are the usual tasks associated with aircraft capabilities, they also interdict, isolate, screen, guard, suppress, delay, and occupy. Operations Northern and Southern Watch were air occupations of Iraq that enforced no-fly and no-drive zone directives.

[44] JP 3.0 *Operations* directs the joint force to "be flexible to react to changes in the strategic environment, adversary changes, and fluid operational conditions [and] must be able to conduct prompt, sustained, synchronized and integrated operations with combinations of forces tailored for missions across the range of military operations throughout the battlespace." JP 3.0 *Operations*, III-7.

[45] Regardless, the fact future forces will be more mobile should not be an obstacle to apportioning current surface forces.

Air Component Commander Forces (ACCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Air Component Commander (JFACC) in order for the JFACC to accomplish his tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.
Land Component Commander Forces (LCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Land Component Commander (JFLCC) in order for the JFLCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.
Maritime Component Commander Forces (MCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Maritime Component Commander (JFMCC) in order for the JFMCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.
Space Component Commander Forces (SCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Space Component Commander (JFSCC) in order for the JFSCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.
Special Operations Component Commander Forces (SOCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Special Operations Component Commander (JFSOCC) in order for the JFSOCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.
Transportation and Logistics Component Commander Forces (TLCCF) The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Transportation and Logistics Component Commander (JFTLCC) in order for the JFTLCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

Table 2 Joint Force Apportionment Categories

Current apportionment categories are inadequate because they fail to provide clarity for command relationships or employ incorrect terminology or definitions. For instance, the close air support apportionment category includes sorties or the weight of effort the joint force air component commander (JFACC) provides to the joint force land component commander (JFLCC). The problem with this apportionment category is it does not define the command

relationships involved and fails to disclose the majority of those sorties perform missions other than close air support.[46]

In the alternative construct, those sorties or that weight of effort appears as land component commander forces or LCCF. To show those capabilities are from a specific functional component, replace the trailing letter "F" with the first letter of the supporting functional component i.e. air assets become LCCA (land component commander - air), land assets are LCCL (land component commander - ground), maritime assets are LCCM, etc. This new terminology explicitly delineates the supported commander, the supporting commander, and what the basic framework for command relationships is between the two (TACON or SUPPORT). It also more clearly acknowledges the reality that because they are apportioned forces, higher headquarters priorities can supercede these arrangements. With OPCON command relationships, that option is also apparent but due to its more rigid correlation, it is less likely to occur. The construct simply provides more precise terminology to the apportionment process and places the activity in a more flexible framework than currently exists.

ASSESSING THE ALTERNATIVE

FEASIBILITY

The feasibility assessment of the joint force apportionment construct focuses primarily on its relationship to current doctrine. If the construct is a realistic, feasible alternative concept that

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[46] Close air support is "Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces." U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 1-02, *Doctrine of Defense Dictionary of Military and Associated Terms* (Washington, DC: GPO, 12 April 2001, as amended through 17 December 2003), http://www.dtic.mil/doctrine/jpreferencepubs.htm. Concerning command relationships, CAS assets may be OPCON to the supported unit with the JFACC only exercising TACON. Examples include Marine aircraft provided to the JFACC for tasking that fly close air support for Marine units and air force aircraft supporting airbase ground defense operations.

exists within established doctrinal boundaries, it stands a better chance of acceptance by the participants. Where the apportionment construct fits within conventional doctrine is it takes existing doctrinal guidance for air, SOF, and intelligence, surveillance and reconnaissance (ISR) assets and simply extends it to cover the rest of the armed forces. The concept supports doctrinal guidelines allowing commanders to organize their forces as necessary to accomplish objectives. It is similar to the way organizations task-organize but it injects the flexible benefits TACON or SUPPORT command relationships provide to highly mobile, modular forces. Finally, although it may be a doctrinally feasible option for modular forces, other issues like the requirements of effects based operations, command and control, logistics, budgetary and Title 10 U.S. Code responsibilities, joint experimentation, education, and the doctrinal development process have an impact on the assessment.

A hypothetical scenario illuminates the limiting scope current doctrine has over military operations while simultaneously extolling the benefits the alternative construct produces. In the scenario, Army air assault forces launched from a Navy aircraft carrier attack inland but littoral targets. The Army units are working with special operations forces that are finding and fixing targets for Air Force fixed wing aircraft using global positioning system guided weapons. In the scenario, a Marine joint task force commander is a thousand miles away yet has constant contact with subordinates and has situational awareness of all activities. Meanwhile, transportation and logistics elements operate to resupply the forces, moving materiel from fort to foxhole. While hypothetical, the scenario has many similarities to operation in 1994 in Haiti and 2001 in Afghanistan. The limited applicability doctrine exerts over the scenario is because each functional and service component conducts operations across environmental and functional divisions. The Army forces are simultaneously conducting land, maritime, air, and possibly space operations. In the scenario, if a Marine unit conducts a mission to interdict the insertion of enemy commandos carrying surface-to-air missiles and who plan to shoot down transport aircraft from a nearby airfield has equally diverse and complex effects. When either Army or Marine

units use naval gunfire to suppress enemy air defenses in support of helicopter re-supply operations, they further blur distinctions. The interesting point is these multi-environment, cross-functional scenarios are not new concepts. The Doolittle Raid on Tokyo in 1942 involved Army Air Force bombers launched from Navy aircraft carriers toward an enemy capital city in order to achieve strategic effects.[47] The alternative construct allows commanders to grasp the intricacies involved in this scenario without facing many of the limitations found in doctrine.

OVERVIEW OF DOCTRINAL ISSUES

There are doctrinal concepts that support feasibility analysis of the alternative construct. As discussed in the previous paragraph, a major issue arises when military operations transcend artificial service and environmental boundaries[48] yet joint and service doctrine retain a narrow focus on operations.[49] Apportionment is a prime example. In the capstone document Joint Publication 3.0 *Doctrine for Joint Operations,* the term appears twenty-one times but every operational example except one addresses air apportionment.[50] The unfortunate byproduct of this treatment is apportionment becomes synonymous with air capabilities. In reality, all forces

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[47] Gerhard L. Weinberg, *A World At Arms: A Global History of World War II* (Cambridge: Cambridge University Press, 1994), 329, 332, 346.

[48] Noonan, "Conquering the Elements," 36.

[49] For example, there is no joint publication for land superiority, direct land support, or maritime attack operations yet publications exist for close air support, rear area operations, space, airlift, and fire support. Even the interdiction publication focuses on air and maritime interdiction. In the publication, the only land component forces which conduct interdiction are "fixed- and rotary wing aircraft, missiles, artillery and those forces capable of conducting conventional airborne, air assault, and amphibious operations" which includes special operations forces. In fact, the entire document focuses on the need to integrate interdiction efforts with maneuver forces. While the publication neglects to specifically identity the type of maneuver forces, it is readily apparent it refers to land combat forces. There is no mention of integrating interdiction efforts with maritime/naval or aerial maneuver forces. The problem with this situation is land forces actually perform interdiction. See U.S. Department of Defense, Chairman of the Joint Chiefs of Staff, Joint Publication 3-03, *Doctrine for Joint Interdiction Operations* (Washington, DC: GPO, 10 April 1997), especially p. vii , III-2 and chapter V.

[50] The other operational-level example addresses ISR assets. The only other use of apportionment is in the Joint Strategic Capabilities Plan (JSCP) and addresses strategic apportionment of forces to combatant commanders for use in deliberate planning. JP 3.0 *Operations*, IV-17.

conduct a form of apportionment when they task organize. Creating teams or task forces involves combining different modular capabilities into one unit. Doctrine, however, ignores this fact.

The benefit of doctrine, however, is it is neither inviolate nor fixed: commanders can violate it and/or change it. During Operation Allied Force in Serbia, U.S. actions violated service and joint doctrine as well as historical experience. In fact, there were significant enough doctrinal departures to merit a General Accounting Office report to Congress. For example, in the operation, there was no requirement to introduce friendly ground forces early in the conflict. Additionally, although air power operated independently, it often failed to achieve its potential.[51] Another example is the operation ran for thirty days without having a defined endstate and for six weeks without formal commander guidance on how to conduct the operation. Also, strategic attack, effects-based planning and operations, mass and parallel operations, air interdiction and target approval all operated in frameworks outside formal doctrinal boundaries. Finally, even the joint task force structure and organization violated doctrinal directives. The GAO report, however, found the deviations were necessary and "largely the result of need to maintain alliance cohesion."[52]

Operation Allied Force also showed how individual experience and doctrinal foundations make it difficult for many senior military leaders to accept alternative approaches, especially when they involve political implications of military action.[53] This institutionalized behavior, partially a by-product of Vietnam experiences, produced commanders colored by service ties.

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[51] Benjamin S. Lambeth, "Lessons from the War in Kosovo," JFQ: Joint Force Quarterly no. 30 (Spring 2002): 17.

[52] U.S. General Accounting Office (GAO), *Kosovo Air Operations: Need to Maintain Alliance Cohesion Resulted in Doctrinal Departures* (Washington, D.C.: GPO, 2001), 6-10.

[53] Kosovo is a prime example, especially when looking at the activities of both Generals Wesley Clark and Michael Short. General Clark pushed for a ground war against President Bill Clinton's publicly stated wishes while General Short sought an air strategy that was equally politically untenable to a NATO audience. Alan J. Stephenson, "Shades of Gray: Gradual Escalation and Coercive Diplomacy," in *Essays 2002: Chairman of the Joint Chiefs of Staff Strategy Essay Competition* (Washington, D.C.: National Defense University Press, 2002), 12. See also Clark, *Waging Modern War*.

They had become resistant to political realities and continued trying to force tactical square pegs into operational and strategic round holes.

The lesson derived from this general analysis is doctrine already gives commanders the ability to determine the best method of approaching a situation. Nothing in joint doctrine

> shall infringe on the authority of the geographic combatant or subordinate JFC in the exercise of OPCON to assign missions, redirect efforts . . . [but fundamental principles and guidance do] not replace or alter a commander's authority or obligation to determine the proper course of action for a specific operation or battle."[54]

Doctrine directs component commanders to provide forces or capabilities to the JFC for tasking necessary to support the achievement of joint force objectives.[55] This requirement to provide forces applies to all joint forces and capabilities, even those normally withheld by services.[56] In summary, general doctrinal principles support the alternative construct's feasibility.

COMMAND AND CONTROL

The greatest feasibility obstacle to the apportionment construct, however, involves command and control because doctrine addressing employment of flexible and adaptable command relationships for surface forces is sparse or absent. The conflict revolves around command relationships and, most importantly, who is supporting and who is supported. Doctrine directs the joint force to "be flexible to react to changes in the strategic environment, adversary

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[54] "A JFC has the authority to organize forces to best accomplish the assigned mission based on the concept of operations. The organization should be sufficiently flexible to meet the planned phases of the contemplated operations and any development that may necessitate a change in plan. The JFC will establish subordinate commands, assign responsibilities, establish or delegate appropriate command relationships, and establish coordinating instructions for the component commanders." JP 0-2 *UNAAF*, V-2, V-4 to V-5. See also GAO, 4-5. While the block quote appears in the GAO report, the preface of every joint publication contains similar language, allowing deviations only "when, in the judgment of the commander, exceptional circumstances dictate otherwise."

[55] JP 3.0 *Operations*, III-29.

[56] Doctrine allows the JFC to reapportion and/or reallocate any MAGTF TACAIR sorties the JFC determines are required for higher priority missions. JP 0-2 *UNAAF* V-4.

changes, and fluid operational conditions"[57] Of note, doctrine does not raise one component above another in importance and acknowledges any component can be decisive.[58]

Command relationships have an impact on the new construct's feasibility because twenty-first century military operations require agile, dynamic, and mobile forces and capabilities. Conventional U.S. land force command relationships, however, have become too inflexible to feasibly operate within the alternative construct. The relationship normally used in task-organizing, assigning or attaching forces is OPCON.[59] Air component command relationships, the basis for apportionment, are more flexible and normally involve TACON or SUPPORT relationships.[60]

A benefit of apportionment command and control relationships is they allow services to retain core competencies. A disadvantage is forces from different services already have few opportunities to train together and the situation is likely to remain unchanged. Lack of training creates friction in battle. Until units train together more often, applying the alternative construct to current operations will only create additional friction that is currently absent in specialist organizations. However, technology, especially modern, interoperable, information systems, reduces friction between and among friendly forces while doing the opposite to the adversary.[61]

A short study of apportionment within the air component can provide insight into its flexible command relationships and the effectiveness the alternative construct can bring to a joint force. In joint operations, the air component commander does not have OPCON over all the air assets in theater. Regardless, he retains the ability to rapidly adapt to changing situations by

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[57] JP 3-0 *Operations*, III-7.
[58] This fact is becomes significant during the organization and individual behavior analysis below.
[59] JP 0-2 *UNAAF*, III-7.
[60] Ibid., III-8. Special operations forces command relationships fall somewhere in the middle – they are inherently flexible in organizing themselves for operations but prefer habitual if not personal relationships with outside forces.

shifting the weight of effort from one unit, mission or area of the theater to another. For instance, a JFACC can rapidly shift the allocation of close air support sorties to other ground units in direct response to changing battlefield tempo.[62] The air component commander can also shift sorties among other apportionment categories. For example, with JFC concurrence, the JFACC can change air interdiction sorties to close air support or close air support sorties to strategic attack, etc., depending on situational requirements.[63] This example of the flexibility inherent in the air component's command and control of its assets provides a strong baseline for further conceptual development of apportionment. It is not a great leap from this point to expand apportionment's influence to include other forces and capabilities.

Where the new construct will have its greatest impact on command and control feasibility analysis occurs when ground forces, historically unable to rapidly move long distances, can quickly move and maneuver as modular brigades or units of action.[64] Aircraft, on the other hand, have always had rapid mobility and can range across an entire theater in a short time. That flexibility, however, requires equally adaptable command relationships like TACON or

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[61] Williamson Murray, "The Evolution of Joint Warfare," *JFQ: Joint Force Quarterly* no. 31 (Summer 2002): 36.

[62] The JFACC accomplishes this through coordination with the Battlefield Coordination Detachment (BCD) in the joint air operations center, the air support operations center (ASOC) or direct air support center (DASC) at corps or equivalent levels, as well as through the air component coordination element (ACCE) in the land component commander headquarters. For a discussion of the ACCE concept, first used in Operation Iraqi Freedom, see Daniel P. Leaf, *Kuwait CFLCC Air Component Coordination Element (K-ACCE), Operation Iraqi Freedom, After Action Report (FOUO)* version 2(1).0., U.S. Central Command Air Forces, 28 April 2003, 4-5.

[63] David E. Sanger and Eric Schmitt, "C.I.A. Tip Led to Strike on Baghdad Neighborhood," *New York Times* (April 8, 2003): 1, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; "B-1 Bomber Being Used In A Variety Of Missions During Iraq Air War," *Inside the Air Force* (March 28, 2003): 1, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; Lorenzo Cortes, "B-1 Crews Moved Quickly with JDAM Loads During Iraqi Freedom, Pilot Says," *Defense Daily* (April 22, 2003): 1, as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

[64] For example, World War II U.S. ground units fighting in Italy were unable to rapidly move across the theater to France should the need have arisen. Therefore, there was no need to develop flexible command relationships among and between land units. Combatant command authority (COCOM) or OPCON were sufficient. This relationship did not apply to all ground units e.g. artillery could incorporate more flexible command relationships because its capabilities produced the effect of rapid mobility over

SUPPORT to exploit fully its strengths. Detailed examination of the optimal command relationships for all aspects of the alternative construct, however, remains a subject for further study. The fact air power successfully employs flexible command relationships, however, provide feasibility analysis support for the construct's applicability to ground maneuver units. Where the construct faces different feasibility scrutiny is in logistics.

LOGISTICS

Doctrine for logistics and supportability provides a variety of support for and evidence against the doctrinal feasibility of the alternative construct. This is most apparent within the logistics category "common user logistics." The drive behind of common user logistics is to provide "prompt, efficient and unified logistic support that enhances the deployability [sic] and combat effectiveness of the joint force." As with organizing and employing joint forces, there are two organization and employment options for common user logistics. The first option, Single Service Logistic Support, is analogous to functional specialization. The second, Lead Service/ Agency, is similar to combining capabilities. Much like the flexibility, effectiveness and efficiency effects the alternative construct provides, common user logistics produces efficiencies by eliminating duplication, streamlining command and control relationships, and integrating the diverse efforts by the services, DOD agencies, host nation services, and contract support into a concerted whole.[65] Expanding the logic behind common user logistics to support the alternative construct is similar to extending well-established apportionment procedures to other joint forces.

There are, however, logistical difficulties that argue against the construct's feasibility. The difficulties arise with attempts to make smaller units self-containable, which is the goal of the

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long ranges, a capability absent from infantry or armor units. Another factor that obviated the need for flexible command relationships is the U.S. had sufficient troops to man both theaters.

many modular concepts appearing in policy documents. Self-containment of subordinate units helps simplify planning by reducing the time and effort spent on overall coordination.[66] The potential for increased risk exists, though, when efforts to make smaller units self-containable forces them to grow into mini-divisions and corps, losing any advantages gained from the rapid deployability of small units.

BUDGETS

Within the budget process, the alternative construct faces many political, cultural, and doctrinal obstacles to its adoption that suggest it may not be a feasible option. These budgetary obstacles can rise in times of peace or war. Political influence over budget funding and strategic policy, for instance, occurred during Operation Allied Force.[67] Additionally, peacetime legislation serves to codify service doctrinal positions entrenched by culture and history. Also, in eras with tight budgets, services resist organizing, training, and equipping for missions where they lack legislative funding. [68] Political and cultural influence over budgets subsequently evolves into formal doctrinal positions.[69] Alternative concepts and constructs that conflict with

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[65] JP 4-07, *Common-User Logistics*, x. Although it does not appear in an overt statement, a cursory reading of the publication shows the Lead Service option is preferable. The clear majority of vignettes, pro/con analysis, etc support this view. Ibid., Ch III.

[66] Critics offer an alternative viewpoint. While centralized control and apportionment of limited resources can maximize cost-effectiveness, distributing the resources to among subordinates may be more effective at achieving cost-effectiveness. Van Creveld, Martin, *Command in War* (Cambridge, MA: Harvard University Press, 1985; reprint, 2002), 271. While Van Creveld addresses ground forces in his critique, his alternative does not work for forces with theater wide responsibilities like air power.

[67] General Clark suggested Secretary of Defense William Cohen of opposing a ground war in Kosovo because it would threaten the overall Defense program. Clark, *Waging Modern War*, 306.

[68] This is not always true. When money flows more freely as it did during the early 1980s, services are likely to pursue independent procurement policies which may produce redundant joint capabilities and inefficiencies Frederick W. Kagan, "The Art of War," *The New Criterion* 22, no. 3 (November 2003), 3, 14, http://www.newcriterion.com/archive/22/nov03/kagan.htm; Murray, "Evolution of Joint Warfare," 36; William A. Owens, "The Once and Future Revolution in Military Affairs," *JFQ: Joint Force Quarterly* no. 31 (Summer 2002): 57.

[69] An example is close air support. If a joint force commander tasked his apportioned Army helicopter assets to do CAS, it would violate Army policy because the mission is not in the Army's Title 10 U.S. Code responsibilities. Army attack helicopters do not perform CAS even though the service admits its

long-established legislative and budgetary priorities or which may challenge established concerns are often unfeasible options.

OTHER ISSUES

Joint experimentation is largely unable to support feasibility assessments of the alternative construct because exercise events normally focus on improving current practices instead of assessing new issues.[70] Recent examples, however, signal a potential course change. *Millennium Challenge '02* explored changes to organizational and structural approaches. It was only a small step forward because tests of new concepts occurred only in small sections of the whole event. Most of the exercise followed the historical trend of focusing on improving the efficiency of existing structures. Its main goal was to address principles from *Joint Vision 2020* and Rapid Decisive Operations[71] but neither of those contains proposals for organizational changes to existing forces as central tenets.

Military education also fails to support the alternative construct. The rationale is military education fails to develop leaders who can rapidly adapt to employ new concepts. A DOD report on the discriminate use of force recognized this situation. It directed the Defense Department make a concerted effort to change its professional military education and personnel practices to

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helicopters perform CAS-like functions like close combat attack, over-the-shoulder support, etc. The service formally re-stated this position at the first draft meeting of the Joint Publication 3-09.3 *Joint Tactics, Techniques, and Procedures for Close Air Support (CAS)* Joint Working Group held at the USMC Marine Corps Doctrinal Development Command, Quantico MCAS, VA 9-10 January 2001. The author attended as the USAF Air Staff's representative. See also Robert M. Cassidy, "Renaissance of the Attack Helicopter in the Close Fight" *Military Review* (July-August 2003): 38-45.

[70] Owens, 61; Jeremy Feiler, "Speed, Unpredictability Led To Victory In Iraq, Defense Officials Say," *Inside the Pentagon* (March 4, 2004), as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

[71] U.S. Department of Defense, Joint Forces Command, *Millennium Challenge '02*, http://www.jfcom.mil/about/experiments/mc02.htm

develop leaders more able to incorporate new concepts like the discriminate use of force and effects-based operations.[72]

Other criticisms of the military education system spring from historical failures to correct the lack of trust commanders have with capabilities of another service. Support for the lack of trust attitude has many roots. In World War II, the Navy refused to give General Douglas MacArthur any fast carriers because it feared he would misuse them. In Kosovo, the Army assigned a three-star general to command the helicopter detachment in Albania in order to ensure full representation of Army equity. In both instances, the service providing the forces did not trust the supporting commander to properly employ the capability. "If joint officer development was sophisticated, capabilities and personality would decide the joint commander, not uniform color."[73] These examples suggest that since there already exists a need to change the military education system and personnel practices, the feasibility of incorporating the alternative construct into doctrine would be equally challenging.

Concurrent with the experimentation and education factors is the impact the construct would have on the Joint Requirements Oversight Council (JROC). The JROC has lost the oversight influence it had in the middle 1990s and has instead become a key element of what has evolved into an anti-transformation Thermidor.[74] Instead of overseeing requirements and choosing from competing projects in accordance with joint directives, it has become the "Joint Requirements Council." The dilution of the JROC oversight process is so great that subordinate

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[72] U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, *Report of the Defense Science Board Task Force on Discriminate Use of Force* (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, July 2003), iv.

[73] Another reason for the three-star Army officer in Kosovo was because a corps had to deploy to support the twenty four helicopters. Robert C. Rubel, "Principles of Jointness," *JFQ: Joint Force Quarterly* no. 27 (Winter 2000-1): 49.

[74] Crane Brinton, *The Anatomy of Revolution*, rev. & exp. ed. (New York: Vintage Books, 1965), 205, 207-8. A Thermidorian Reaction is "a convalescence from the fever of revolution." It refers to the

panel meetings, working to achieve consensus before a project reaches the council, water down projects to the extent that true oversight is gone because hard decisions never appear before the council.[75] Joint Forces Command is attempting to change this situation.[76] Introducing to the JROC a construct that favors changes to service procurement can become an impotent act if the services act to neuter any oversight power.

Finally, a different aspect of doctrine that works against the construct's feasibility is the service and joint doctrine development processes. They are slow and unresponsive to integration of new concepts.[77] For example, if joint doctrine is to accurately reflect "fundamental principles that guide the employment of [joint] forces"[78] or if Army Field Manuals (FMs) are to reflect "the Army's collective wisdom regarding past, present, and future operations"[79] the development process must become more responsive. Responsiveness is only possible by reducing the time required to revise old or create new publications and manuals. This is an area requiring further study.

Having addressed doctrine, logistics, budgets, experimentation, and education, it is apparent the construct is doctrinally feasible, although the feasibility is not without difficulty. Doctrinally, it is a viable option because the air and ISR apportionment processes provide an

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unconstitutional rise to power of Napoleon Bonaparte, Oliver Cromwell, and Joseph Stalin, all of whom followed a revolution but instituted autocratic or tyrannical rule in an attempt to control revolutionary zeal.

[75] Owens, "Once and Future RMA," 61. In this case, the JROC's effective transformation to a "joint requirements council" with no true oversight is a Thermidorian Reaction to the joint revolution initiated by the Goldwater-Nichols Defense Reorganization Act of 1986.

[76] Feiler, "Speed."

[77] It can take as few as three years three months or as long as five years and six months to revise a joint publication, assuming there are no critical objections from participants. U.S. Department of Defense, Joint Publication 1-01, Joint *Doctrine Development System* (Washington DC: GPO, 5 July 2000), chapter III. As an example of the unresponsiveness, since Operation Desert Storm, there have been only two versions of JP 3.0 *Operations*, the primary joint doctrine publication addressing joint operations, yet the strategic environment is markedly different.

[78] JP 1-01, *Doctrine Development System*, I-1.

[79] U.S. Department of the Army, Training and Doctrine Command (TRADOC), Regulation 25-36 *The TRADOC DOCTRINAL LITERATURE PROGRAM (DLP)* (Fort Monroe, VA: TRADOC,

existing model and serve as a baseline for reference in applying it to other force components. Command and control issues, however, make construct adoption more difficult because of the complexity and flexibility required by forces operating with new or unfamiliar command relationships. An area for further study that could provide more insight to this area is analyzing command relationships involved in the air apportionment process. Concerning logistics, a doctrinal framework already exists in the field that supports customization. Customized logistics capabilities built around a lead agent is the preferred method instead of using the fixed functional specialization capabilities of one or more services or agencies. Budgetary issues, however, impose feasibility barriers through legislative directives involving roles and missions. In addition, money for new or altered force structure necessary to support modular apportionment faces competition from other programs. A positive outlook is legislation can always change. The 1947 and 1986 Defense Department changes are proof. Finally, there are other but smaller obstacles to the feasibility of employing the alternative concept. They exist within joint experimentation, education, and the doctrinal development process. Regardless of these obstacles, the conclusion from this section is the alternative construct is a feasible fix for current and future operations.

ACCEPTABILITY

In order to assess the acceptability of the alternative construct, analysis involves evidence from theory, organizational and individual behavior, and military history. These three areas provide support to the two analysis criteria higher commanders' requirements and service culture and ethos. Other criteria like the requirements of other instruments of power, coalition

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electronically published on the TRADOC homepage, http://www.tradoc/army.mil under 'Publications,' 5 April 2000), 11.

governments, NGOs, PVOs etc. are beyond the scope of this paper and are subjects for further analysis.

THEORY

A central issue involving acceptability of a new concept is the belief there first needs to be a fully developed theory that incorporates a new concept's use before an organization should adopt the change. There are many problems with this approach, least of which is in military operations there is no scientifically accurate theory of war. The human element involved has always confounded analysis.[80] The difficulty involves a cognitive tension among three areas: what data is scientifically measurable, the impact of a limited number and widely varied spread of data points over time, and the immeasurable impact psychological and moral factors have. Any military theory that claims to contain the detail required to assess new concepts either ignores this tension or acknowledges it is unable to fully account for it.[81] Potential for theoretical analysis of military theory exists is in the social sciences that address individual and organizational behavior. The social science field operates without theories that can accurately predict or explain human activity or are suitable for traditional scientific experiment. [82]

Regardless, the alternative to abandoning change in order to wait for a comprehensive military theory is unacceptable. The primary rationale for this position is "theory begets theory"

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[80] For additional support for how military theory resists strict mathematical analysis or certainty, see Carl von Clausewitz, *On War* ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1976), especially 86; Book Two, Chapter Two "On the Theory of War" 133-47, Book Two, Chapter Four, "Method and Routine," 151-55; and Book Two, Chapter Five "Critical Analysis," 156-69.

[81] Statistical analysis in sports, for instance, ignores the psychological impact scientifically derived decisions have on the individuals, team , opponent, or fans. Michael Lewis, *Moneyball: The Art of Winning an Unfair Game* (New York: W. E. Norton & Company, 2003). When Clausewitz realized he had to revise his work to incorporate the political character of war, he added yet another layer to the human dimension in war. Clausewitz, *On War*, *22*-25.

[82] Judea Pearl, "The Art and Science of Cause and Effect" (lecture presented at the UCLA 81st Faculty Research Lecture Series, 29 October 1996), slides 15, 18; http://bayes.cs.ucla.edu/LECTURE/ lecture_sec1.htm. Accessed 16 January 2004.

so it is acceptable to proceed without a comprehensive theory. Each attempt at a theory that ultimately fails is still an improvement over stagnation.[83] Galileo's maxim to describe first and explain second ("the how precedes the why") gives a second chance for theorists to analyze the human element.[84]

Since a comprehensive scientific theory of warfare does not exist, analysis of the alternative construct in a purely scientifically measurable sense is not possible. Instead, the next section uses social science theories on organizational and individual behavior to provide data to support acceptability analysis.

INDIVIDUAL AND ORGANIZATIONAL BEHAVIOR

Central to any analysis of acceptability of a new idea or concept is a study of individual and organizational behavior. Whether in business or war, enacting change creates resistance and the alternative construct requires somewhat significant changes for the military. Successful change occurs when proponents focus on "functional interactions and synergy" and avoid "domains, service roles, responsibilities, or requirements" i.e. an organization's deeply held beliefs or its reason for being.[85] A significant aspect of organizational behavior, institutionalized learning, creates a self-populating institution where knowledge about domains, roles,

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[83] Rubel, "Principles of Jointness," 49. For a thorough analysis of the potential for "social theory," the attempts to scientifically portray human activity, see Paul Davidson Reynolds, *A Primer in Theory Construction* (Boston, MA: Allyn and Bacon, 1971), especially chapter 8.

[84] A teleological approach, applying an ultimate purpose to explain human phenomenon in warfare, has ingrained human bias and can be equally damaging. The normal developmental process for military doctrine begins with hard-earned lessons learned on the field and ends when those lessons are brought to the schoolhouse. "Experience from the mud, blood, and beer" becomes doctrine but may require further research to provide details required to define the problem. In this case, the physical leads to the intellectual, as Galileo suggests. General Montgomery C. Meigs, retired. E-mail with author, 30 November 2003. Based on author's notes from classroom discussion, U.S. Army, Advanced Military Studies Program, School of Advanced Military Studies, Seminar 1, Fort Leavenworth, KS, 4 November 2003.

[85] Owens, "Once and Future RMA," 57-58.

responsibilities, etc. becomes self-sustaining.[86] The drawback of institutionalized learning is the organization can become sluggish and unable to adapt rapidly to change.[87] There are benefits, however. If agents of change continually repeat statements or provide proof supporting new ideas and concepts, the changes quickly become conventional wisdom. An example where repetition of a new idea has become common knowledge is the belief revolutions in military affairs (RMAs) involve more than just technological advances. [88]

When institutional learning is pervasive, it supports the creation and perpetuation of a culture of certain behaviors. While elements of cultural beliefs may be true in isolation, taken together, if the organizational ethos resists change, those beliefs can appear as hubris, especially in a highly charged, politicized defense landscape. They can also be, more sinisterly, accurate representations of unconsciously held positions. Regardless, while pride in one's organization is commendable and often essential, it can create internal obstacles to improvement through institutionalized learning and offend other institutions (i.e. services).

Another organizational behavior aspect that can impact acceptability of new ideas involves the dynamic tension between cohesion and diversity. It is especially present in joint operations. Cohesion within an organization encompasses synchronization and integration. Synchronization, especially when done internally within tactical units, is a central tenet of military operations. Integration can mean task-organizing units from one service to another. That, however, creates problems with training and logistics.[89] In this case, the alternative construct can unintentionally increase friction within an organization.

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[86] Lewis, *Moneyball*, 241.
[87] Ibid., 17.
[88] Owens, "Once and Future RMA," 59.
[89] Rubel, "Principles of Jointness," 46-47. Integration only emerged as a central doctrinal concept with the 2001 release of JP 3.0 *Operations.*

An organizational behavior trait that can spell disaster for the acceptance of new ideas is the cognitive tension that exists between cohesion and diversity within an organization.[90] The U.S. has historically managed this tension to success in its free-market based economy and its legal system. Cohesion exists because all participants adhere to laws and regulations yet diversity survives through the competitive and adversarial relationships between merchants or among lawyers. In this light, any monism, centralized suppression new ideas goes against the American ethos. To a military's hierarchical system, however, radical thought or action involved with diversity can spell disaster. The disaster new ideas face with this behavior comes from the friction agents of change face within an organization that must tolerate dissent and criticism yet maintain discipline and obedience.[91]

Along with the existence of cognitive tension between cohesion and diversity, the influence an individual can have on both individual and organizational behavior is significant. This human characteristic reinforces a propensity to rely on traditional approaches to issues at the expense of change. Only scientific analysis using unbiased statistics can help counter this human tendency.[92]

The way people make decisions also creates theoretical barriers to accepting new ideas. The recognition-primed decision model (RPD), evaluating situations based on individual merit instead of rational decision-making that involves choosing among various options, is a well-

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[90] Interestingly, the levels of cohesion and diversity in organizations operate in an inverse relationship to each other over the levels of command. Cohesion is less important at higher echelons while diversity is deadly at the lowest tactical levels. Where this construct nominally applies is at the nexus of the two, the operational level. Ibid., 47.

[91] Harold R. Winton and David R. Mets, eds., *The Challenge of Change: Military Institutions and New Realities, 1918-1941* (Lincoln, NE: University of Nebraska Press, 2000; Nebraska paperback printing, 2003), xiv.

[92] There are many examples: an individual's tendency to generalize based on personal experience; the tendency to believe individual experiences are common to the group; the trend to let individual observations override known truths; and the tendency to discard historical analysis in favor of extrapolation based on recent experience. Lewis, *Moneyball*, 18-19, 37-38, 241.

known method of crisis decision-making.[93] The important aspect of this type of decision-making is people who operate in this manner fail to gain usable experience in rational decision-making, especially if they operate in a chaotic environment where uncertainty is prevalent and the experience sample size is small.[94] Military commanders operate within this environment.[95]

By acknowledging the human tendency to be creatures of experience and having a tendency to avoid rational decision making in stressful situations, it is understandable why senior leaders tend to resist new concepts or approaches. This trait is especially evident with "old-timers;" senior leaders or retired officers who retain significant influence over military activities. Over time, they become the keepers of the organization's culture but retain the negative aspects of the task, becoming its Greek chorus.[96] Young members of an organization are less likely to be afraid to test new concepts but, conversely, they lack the power to influence decision-making.

This resistance to change, otherwise known as behavioral conservatism, compels adherents to react predictably to new concepts, not wishing to abandon proven success for unproven potential.[97] Correspondingly, individuals who have gained power or status often become paralyzed by the very framework used to reach that level and are then unable to react or adapt to changes.[98] Clausewitz recognized this trait. Referring to it in book two chapter four "Method and Routine," he shows how inexperience or the absence of intelligent analysis of war, "routine methods will take over even at the highest levels." Leaders revert to techniques their

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[93] Firefighters, police officers, and the military often operate this way. RPD involves choosing the first feasible option instead of "ordering from a menu" or performing "comparative evaluation" between two or more options. Gary Klein, *Sources of Power: How People Make Decisions*, 2nd MIT Press paperback ed. (Cambridge, MA: The MIT Press, 1999), 10-11, 15-30.

[94] Ibid., 284.

[95] When a person uses RPD but has few experience data points and generalizes or extrapolates based on personal experience, it can inject additional risk into situations.

[96] This is a situation analogous to the old scouts in major league baseball. Lewis, *Moneyball*, 30.

[97] For a thorough analysis of theory-then-research versus research-then-theory, see Reynolds, *Primer* "Strategies for Developing a Scientific Body of Knowledge," chap. 7.

[98] Lewis, *Moneyball*, 65, 257-58.

experience has developed, usually a conservative approach to the issue.[99] Modern psychological studies confirm Clausewitz's assessment, proving "people's range of action is limited by their tendency to act in accordance with pre-established patterns."[100]

Thus, it becomes evident individual and organizational behaviors have the most significant influence over this section of analysis. The two behaviors combine to muddle any scientific or rigorous analysis of the acceptability of new ideas. Historical analysis provides many examples of this organizational and individual behavior.

HISTORICAL INFLUENCES

History produces one of the most profound influences over man's attempts to learn. Thus, it figures extensively into any acceptability of new ideas because it sets the foundation for further analysis of an individual and organization's ability to accept change. While history supports both statistical analysis and RPD decision making, its effect on each is equally varied. Historical knowledge, especially if it is born of a shared, historical cultural experience, becomes a keystone in the effort to develop knowledge. This is good, as long as the information used is and remains accurate. If it is not, if the analysis was in error, or if the environment changed sufficiently, the cultural knowledge instead creates immense friction that resists attempts to see situations in a different light.

This is especially true with military organizations that are historically conservative and resistant to new ideas because the risk of failure is so personal and violent. Continuing with a successful status quo is always a tempting option. For example, it took decades for the tank, the premier weapon on the modern conventional battlefield, to supplant the individual soldier and his

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[99] Clausewitz, *On War*, 151-55.

[100] Dietrich Dorner, *The Logic of Failure: Why Things Go Wrong and What We Can Do to Make Them Right*, 1st American ed., Trans. Rita and Robert Kimber (Germany: Rowohlt Verlag, 1989; New York: Rowohlt Verlag, Henry Holt and Company, Inc., Metropolitan Books, 1996), 45.

horse in importance. For the first two decades of the tank's life a culture that above all else supported the celebration of the soldier or the soldier and his horse consistently retarded the tank's institutional development and adoption.[101]

In 1947, the U.S. reorganized its armed forces into three service departments under a Department of Defense. In addition, President Harry Truman issued the "Functions of the Armed Forces and The Joint Chiefs of Staff" otherwise known as the 1948 Key West Agreement. It delineated each services' primary and collateral responsibilities, missions, and tasks and directed each "to support and supplement the other in services in carrying out their primary functions."[102] Although seemingly a big change for the military, the Key West Agreement represented little more than a compromise between the Army and Navy over roles and missions. The Army had pushed for strong, formalized, joint ties, having just lost its organic air force. The Navy and the Marine Corps resisted because they were historically used to operating in areas far from command oversight and enjoyed wide latitude, initiative and independence. They sought to retain service independence. The newest service, the Air Force, sought to show its relevance with the established services and focused on the merits of strategic nuclear bombing in place of naval and ground forces.[103] While the Agreement was a watershed in military reorganization, it was the

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[101] Evidence of this cultural resistance to change is widespread. As early as 1919, Army leaders felt "aviation – like artillery and armor – was an auxiliary of the infantry." The 1920 National Defense Act codified that view, stating tanks were "incapable of independent decisive action" because they "should be recognized as an infantry supporting and accompanying weapon." The Army's 1923 Field Service Regulation, which remained in effect until 1939, acknowledged the importance of combined warfare but still placed the infantry as the center of the Army's mission with tanks and airplanes "[existing] solely to support the ground infantry battle." Major General John K. Herr, the U.S. Army cavalry branch chief from 1938-1942, stated, "as always, Cavalry's motto must remain: When better roller skates are made, Cavalry horses will wear them." Winton, *Challenge of Change*, 168, 171, 173, 180-181, 188. See also Allan R. Millett and Williamson Murray, *Military Effectiveness Volume II: The Interwar Period*, paperback ed. (Boston: Unwin Hyman Ltd., 1990), 82-83.

[102] Richard I. Wolf, *The United States Air Force Basic Documents on Roles and Missions* (Washington, D.C.: Office of Air Force History, 1987), 160, 165.

[103] U.S. Department of Defense, Joint History Office, *The History of the Unified Command Plan: 1946-1993* (Washington, DC: Office of the Chairman of the Joint Chiefs of Staff, 1995), 11-16; Murray, "Evolution," 35.

byproduct of inter-service organizational behavior that institutionalized and served to codify that friction.

Although the Key West Agreement seemed to be a strong, forward moving step toward applying lessons from the recent world war to future operations, the military quickly moved away from introspection and analysis and grew accustomed "to the routines of the garrison."[104] Change no longer seemed so imperative when forces are re-imbued with peacetime habits. This contented attitude toward change continued through Korea and affected the U.S. approach to Vietnam. Resistance to change pervaded the services, especially the Army.[105] Throughout the Vietnam War, the Army as a whole remained focused on conventional, European, tank-oriented warfare where the Army was the center of effort. This focus around heavy forces and land power as the center of strategy continued through the 1990s and continues to influence service culture.

Individual and organizational behavior like the focus on European tank warfare conspired to create friction in Operations Desert Shield and Storm produce another example of the U.S. specialist approach to warfare. In the war, Army General H. Norman Schwarzkopf neglected to fully integrate his service and functional component commanders' activities. Instead, he allowed each commander to independently plan operations while he, as JFC, only intervened at very high levels. In addition, because he simultaneously acted as the joint force land component commander, he denied his corps commanders input to and feedback on his air apportionment decisions made as the JFC. The result was the greatest failure of the war: Schwarzkopf's leadership style led to individual, non-integrated Army, Marine Corps ground plans as well as

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[104] Roger J. Spiller, introduction to *"Lucky War" Third Army in Desert Storm*, by Richard M. Swain (Fort Leavenworth, KS: U.S. Army Command and General Staff College Press, 1994), xxix.

[105] The "Army Concept" of war during the Vietnam War was little removed from the way the Army fought in its last year in Europe during World War II. Andrew F. Krepinevich, *The Army and Vietnam*, Paperback ed. (Baltimore, MD: The Johns Hopkins University Press, 1988), xii-xiii. This rigidity created friction which eradicated any command flexibility that might have existed in trying to fight an unconventional enemy who retained total flexibility and adaptability. "Specialization, instability,

separate land and air component operations. "Each service fought its own war, concentrating on its own piece of the conflict with a single-minded intensity, and the commanders . . . failed to fully harmonize the war plans."

> The way the war was planned, fought, and brought to a close often had more to do with the culture of the military services, their entrenched concept of warfare, and [Chairman of the Joint Chiefs of Staff General Colin] Powell's abiding philosophy of decisive force than it did with the Iraqis or the tangled politics of the Middle East. [106]

While the effort was successful in removing Iraqi forces from Kuwait, it also reinforced specific historical perceptions as well as certain organizational and individual behavior qualities that both resist change. The cultural behavior would re-emerge during Operation Allied Force in 1999, the "air war" against Serbia and Slobodan Milosevic. Operation Allied Force is probably the best example of how competing service cultures manifest themselves in negative ways during military operations. In addition to a politicized conflict over the use of ground forces, this war witnessed a semi-public feud between an Army and Air Force general over the best course of action for the operation. Both sides held firm to their service-derived concepts. In reality, a united effort tailored to Milosevic's particular situation and vulnerabilities was a better approach rather than "canonical land or air warfare solutions for all seasons." [107]

Many of the disagreements revolved around the means, effectiveness, and necessity of targeting Serb forces in Kosovo.[108] One option was to introduce attack helicopters, in this case, a battalion of twenty-four AH-64 Apaches. Task Force Hawk's concept was "to fly across the border into Kosovo, using artillery, rocket fire, and Air Force assets to suppress any enemy air

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centralization, complexity and the resulting information pathologies" conspired to slow the planning, preparation, and execution of Vietnam operations. Van Creveld, *Command*, 249.

[106] Gordon, *Generals' War*, xii-xv, 330-31, 463-65.

[107] Lambeth, "Lessons," 16.

[108] "Apparently, [Washington] didn't believe that the Serb forces there were in any way a center of gravity for Milosevic and saw no connection between the destruction of these forces and the successful conclusion of the campaign." Clark, *Waging Modern War*, 303. Clark's continued lobbying to introduce ground forces which could conventionally attack Serbian forces directly conflicted with public Presidential statements ruling out the use of ground troops.

defenses that might threaten the Apaches as they flew past, and then attack Serb forces.[109] The force never went to battle, though, because influential persons in the Clinton Administration believed the operation would destroy nearly half the helicopters. Supreme Allied Commander – Europe, General Wesley Clark, vehemently disagreed with this assessment.[110] A synergistic approach in accordance with the alternative construct's framework would have integrated forces in a combined operation similar to joint air attack team tactics where each element compliments the other and allows the platform capable of producing the greatest effects with the least risk to become the center of the operation.

Any lasting impact of the lessons from Operation Allied Force would have to wait for two other military operations, Operations Enduring and Iraqi Freedom, a presidential election, and a renewed Defense Department emphasis on transformation. In Operation Enduring Freedom, one battle highlights the impact culturally-based organizational and individual behavior still held over military operations. Planning for Operation Anaconda revolved almost entirely around U.S. Army 10th Mountain Division forces, to the exclusion of other joint players. When the air component realized the progress and extent of the operation, it quickly cobbled together liaison personnel, airstrike command and control assets, and shifted fixed wing assets to help with

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[109] Ibid., 279.

[110] "After the war I learned that the White House was told that eventually half of the Apaches would be destroyed. I wondered if the White House wondered where these figures came from. There was also a plain lack of knowledge. At least one of the top Army leaders hadn't realized that the Apaches were equipped with a system to defeat some of the Serb antiaircraft missiles." Ibid., 289, 320. This statement is significant because doctrine and personal experience combined to create his biased assessment of the situation. It is noteworthy that "Air Force assets" were only there to support helicopter ingress and egress, *enabling* the helicopters to attack Serbian forces. The correct approach would have integrated each asset into a whole where the best component would be the primary striking force. Clark seems to rationalize many of the risks involved in his approach like having helicopters traverse ten thousand foot mountain passes. Most helicopters have difficulty operating at these altitudes, as seen in Afghanistan, let alone doing so while having to maneuver to defeat surface-to-air fires. Also interesting is the Marine Corps was able to deploy twenty-four F/A-18C fixed-wing aircraft to Hungary with significantly less difficulty than the twenty-four Apache helicopters and were flying operational missions only days after arrival. Benjamin S. Lambeth, "Task Force Hawk" *Air Force Magazine Online* 85 no 2 (February 2002), http://www.afa.org/magazine/Feb2002/0202hawk.asp.

the rapidly disintegrating situation. Ultimately, the military labeled the operation a success, despite some initial setbacks that were avoidable through better initial planning.

The cultural ethos that led the Army to plan the operation within its own capabilities and without input from or integration with external joint elements spilled out after the battle in a series of professional journal articles where the Army commander lashed out at the conduct of and the overall deficiency of "Air Force" support he received.[111] It is possible the commander's approach to the battle was due to a desire to prove his Service's relevance following the successful Taliban regime change that required only air power and a small contingent of special operations forces. It is also possible it was the result of a historically reinforced ethos where supporters avoid planning for situations where one service has to rely on another service. Of course, both explanations could be wrong and the reason for planning in isolation was due to a third cause or even to a combination of reasons. Regardless of the true answer, though, the incident remains a reflection of historically reinforced inter-service rivalry in joint operations that creates its own friction. A deeply ingrained ethos like inter-service conflict that is resistant to change suggests any acceptance of the apportionment construct proposed in this paper will be difficult.

In its most recent conflict, Operation Iraqi Freedom, U.S. forces finally showed potential for fully integrated operations. In the west, Special Forces groups on the ground worked with aircraft overhead to flush Iraqi forces into the open where aircraft could freely engage the

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[111] For more details on the controversy, see Robert H. McElroy with Patrecia Slayden Hollis, editor, "Afghanistan: Fire Support for Operation Anaconda," Interview with Major General Franklin L. Hagenbeck, *Field Artillery* (September-October 2002): 5-9: Christopher F. Bentley, "Afghanistan: Joint and Coalition Fire Support in Operation Anaconda," *Field Artillery* (September-October 2002): 10-14; Sean D. Naylor, "Officers: Air Force Policy Left Ground Troops High and Dry," *Army Times* (September 30, 2002): 10; Rebecca Grant, "The Airpower of Anaconda," *Air Force Magazine* 85, no. 9 (September 2002): 61-68; Rebecca Grant, "The Clash About CAS," *Air Force Magazine* 86, no. 1 (January 2003): 54-59; and Elaine M. Grossman, "Army Eyes 'Joint Fire Control Teams' To 'Enable' Lighter Ground Troops," *Inside the Pentagon* January 29, 2004, as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

targets.[112] Although this situation was not a perfect example of relationships suggested by the alternative construct, it was a situation where services planned to rely on each other's capabilities. The overall commander of the operation General Tommy Franks remarked, "for the first time, we had reliant operations, where one service is reliant on the performance of another service. I believe that is transformational.[113] However, when the Army persisted in conducting insular planning for single-service missions, it relearned the lessons it took from Operations Allied Force and Enduring Freedom. An example involves the first massed use of Apache helicopters in a deep strike role, a mission similar to what General Clark proposed in Operation Allied Force. The first deep strike by an air cavalry unit near Baghdad resulted in nearly 100% battle damage to the helicopters. In fact, the unit would not regain combat effectiveness for weeks. A subsequent operation fully integrated with air component assets was significantly more successful.[114]

Where Operation Iraqi Freedom was different from the 1991 Gulf War was in external restrictions imposed on the military by Secretary of Defense Donald Rumsfeld. The existence of such restrictions bodes favorably for the new construct. In Iraq, the Army had to fight with only 2.5 divisions and with well below the normal artillery complement for a comparable sized force. The decision forced the Army to rely on aerial maneuver forces to achieve the effects the missing artillery would have provided. This had a two-fold benefit: it reduced the logistical burden

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[112] Noonan "Conquering the Elements," 42.

[113] Ibid., 35.

[114] Of note, General Clark's post Operation Allied Force optimistic assessment of helicopter survivability in deep strike operations proved markedly different from experiences in Iraq. Of the thirty helicopters involved in the 11th Attack Helicopter Regiment's attack, twenty-nine returned with an average of fifteen to twenty bullet holes in each helicopter. See Mary Beth Sheridan, "Ground Fire Repels Copter Assault," *Washington Post* (March 25, 2003), 1, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; Mary Beth Sheridan, "Copter Unit Retools Tactics After Fight," *Washington Post* (March 26, 2003), 22, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; Rowan Scarborough, "Apache Operation a Lesson in Defeat," *Washington Times* (April 22, 2003) 1, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; Steve Liewer, "Iraq War: Tank-Killing Apache Copters Found New Task After Early Setbacks," *European Stars and Stripes* (May 27, 2003), as found in the AFIS Early Bird, http://ebird.afis.osd.mil; "AH-64 Apache's Deep Strike Role Under Army Review, Keane Says," *Aerospace Daily* (August 6, 2003), as

involved with the artillery units[115] while the Army benefited from other latent capabilities fixed wing aircraft contain which artillery units lack. These capabilities include aerial reconnaissance, three-dimensional maneuvering against targets that produce greater and more efficient effects, an increased ability to conduct precision targeting and post-strike assessment, and the capability to discriminately target Iraqi forces during the sandstorm that temporarily immobilized and blinded friendly ground units.[116] Fixed wing aircraft acting to "shape" the battlefield for the ground forces in the place of the missing artillery actually destroyed the Republican Guard armor ringing Baghdad.[117] This situation has significance in a construct that arrays capabilities in manners that achieve effects without arbitrarily pre-determining shaping or decisive roles.

In addition to imposing limits on the size of the ground component, Secretary Rumsfeld forced the services to operate in am ore integrated fashion instead of in separate, jointly deconflicted lanes. A byproduct of the Secretary's influence that added to the advances in integration and cooperation begun in Afghanistan was the situation in western Iraq. There, an

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found in the AFIS Early Bird, http://ebird.afis.osd.mil; "Army Studies Lessons of Iraq," *USA Today* (February 18, 2004), 8, as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

[115] Peter A. Wilson, John Gordon IV, and David E. Johnson, "An Alternative Future Force: Building a Better Army," *Parameters* 33, no. 4 (Winter 2003-4): 36.

[116] Elaine M. Grossman, "Critics Question Air-Ground Slowdown Amid Bad Weather In Iraq," *InsideDefense.com* (March 25, 2003), as found in the AFIS Early Bird, http://ebird.afis.osd.mil. The "immobilization" was due partly to the need to refuel after a long, fast thrust (hence, the "operational pause") and to the severity of the sandstorm. The ground units were blind because they were unable to gain or regain contact with Iraqi units due to their halt to refuel and because of the zero visibility caused by blowing sand. Aerial platforms, however, were able to find, fix, track, target, and engage Iraqi units in the middle of the sandstorm because the sand did not blind air to surface radars nor affect weapons like the global positioning system (GPS) guided joint direct attack munition (JDAM).

[117] "'I find it interesting when folks say we're softening them up,' Air Force Lieut. General T. Michael Moseley, the air-war commander, said on April 5, the day the U.S. Army entered Baghdad. 'We're not softening them up. We're killing them.'" Although many of the soldiers may have survived, their tanks and other vehicles did not. Terry McCarthy, "What Ever Happened To The Republican Guard?" *Time* (May 12, 2003): 38. Iraqi units dispersed eighty percent of their ammunition, equipment and people in an unsuccessful attempt to avoid air attacks. Feiler, "Speed." See also Gordon Trowbridge, "Air Power Paves Way," *Air Force Times* (April 28, 2003): 8, as found in the AFIS Early Bird, http://ebird.afis.osd.mil; Stephen J. Hedges, "Air War Credited In Baghdad's Fall: Strikes paved way in defeating Iraq's troops, officers say," *Chicago Tribune* (April 22, 2003), as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

Army ground unit worked for an Air Force colonel. Another result, also in the west, was Special Forces working with an armored platoon of M1 Abrams tanks and using close air support.

Despite Secretary Rumsfeld's efforts and the assertion Operation Iraqi Freedom was the most jointly fought war in history, the U.S. managed to actively reinforce some of its longstanding, jointly-deconflicted, warfighting practices. For example, Army and Marine Corps units still fought in geographically separate sectors, a joint deconfliction of operations similar to their actions in 1991, and were unable to communicate laterally with each other at lower echelons.[118] In addition, Marine aviation remained focused on supporting their own ground forces[119] and did not fly in significant numbers until 23 April, days after the first Marine and Army forces crossed into Iraq.[120] In ground operations Army and Marines fought in geographically segregated sectors and had little lateral interaction below the land component commander level, a situation that would create friction between units and increased the potential for fratricide once the units met in Baghdad.

When analysis of the acceptability of the apportionment construct focuses on the efficiencies gained by employing capabilities in a flexible and responsive manner, Operation Iraqi

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[118] While joint cooperation, integration and synchronization was evident at higher levels, the Tigris and Euphrates Rivers provided a convenient boundary to allow the two U.S. land service components to fight jointly deconflicted instead of jointly integrated battles. Upon meeting in Baghdad, USMC and U.S. Army tactical units were unable to communicate directly with each other via radio. It took face-to-face liaisons over paper maps to effect coordination. Zucchino, "Unfriendly Communications."

[119] U.S. Marine Corps air activities focused entirely on shaping the battlefield for the decisive ground element's operations instead of potentially becoming the decisive effort of the Marine fight. Several quotes support this statement: "The Marine wing's overarching goal was to 'shape the Iraqi army" in the area that the 1st Marine Div. would move through toward Baghdad;" "Strike sorties were concentrated against artillery, armor and other weapons that posed the greatest risk for the coalition ground forces;" and "We shaped the deep battle to such an extent *there has been little left for the close battle*." (emphasis added) Robert Wall, "Lessons Emerge," *Aviation Week and Space Technology* (April 14, 2003): 26, as found in the AFIS Early Bird, http://ebird.afis.osd.mil. Arguably, the "shaping" air operations were the decisive operations and the ground operations merely reinforced the air component's success.

[120] Tamar A. Mehuron, ed. "Gulf War II Air Campaign by the Numbers," *Air Force Magazine* (May 2003), 47; Rajiv Chandrasekaran and Susan B. Glasser, "Ground War Starts, Airstrikes Continue As U.S. Keeps Focus On Iraq's Leaders," *Washington Post* (March 21, 2003); 1, as found in the AFIS Early Bird, http://ebird.afis.osd.mil. This decision deprived the joint force of air capabilities useable elsewhere in

Freedom provides promising support for the construct's acceptance. Coalition forces overthrew the government of a country twenty-five times the size of Kuwait with about half the troops used in Desert Storm, suffered 103 combat fatalities in the twenty-one days it took for Baghdad to fall, and completed the task in a lightening-fast manner.[121] Conventional courses of action that involved significantly more heavy forces and artillery deemed necessary to defeat the Iraqi Army were wrong. For instance, the lack of organic artillery in the battles did not become a factor in the outcome thanks to joint integration and synchronization of action and purpose.[122]

HIGHER COMMANDERS

Assessing the acceptability of the alternative apportionment construct involves more than analyzing it using theory, organizational and individual behavior characteristics, and history. Any new operational concept must be acceptable to higher commanders, both military and civilian. Military commanders, however, tend to coalesce around near-term requirements and away from supporting fellow units, even those in the same echelon.[123] This focus leads commanders to favor functional specialization among forces, especially if those forces are organic capabilities. Combine that pressure with service cultures that see military functions in traditional ways and it is easy to see how commanders might reject apportionable joint forces. However, a cognitive tension exists between the individual's behavior favoring self-centered approaches to battle and joint doctrine that directs the same commander to have a joint force

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the theater. Army and Marine forces crossed into Iraq around 8 p.m. local time on 20 April. It is unknown why Marine aviation did not fly in significant amounts during these first days.

[121] Michael Duffy and Mark Thompson, "Secretary of War," *Time* (December 29, 2003 – January 5, 2004), as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

[122] Opinions differed on the need for artillery in the war. Significantly, only half of the fires occurring beyond direct-fire distances came from artillery. The balance came from aircraft. Grossman, "Army Eyes."

[123] Marshall, S. L. A., *Men Against Fire: The Problem of Battle Command in Future War* (1947; reprint, Alexandria, VA: Byrrd Enterprises, Inc., 1961), 113-14.

> [that is] flexible to react to changes in the strategic environment, adversary changes, and fluid operational conditions [and] must be able to conduct prompt, sustained, synchronized and integrated operations with combinations of forces tailored for missions across the range of military operations throughout the battlespace.[124]

Winston Churchill recognized the effect this tension had on leaders. He called it the "triphibious principle" where commanders "need to understand the combined action of land, sea, and air forces" and avoid situations where actions to avoid risk in one area jeopardize success in another.[125]

Where the alternative construct becomes acceptable to higher commanders is when operations occur within environments with limited resources or time. The situation forces them to closely embrace the triphibious principle. Where the situation has the most impact on analysis of the alternative construct is when specialized forces are unable to effectively handle near simultaneous operations like Operation Desert Storm and then rapidly switch to a potentially opposed but limited in scope hurricane relief mission in a separate Third World country.[126] A modular approach under a standing or a re-organized joint task force, ready to rapidly mix and match forces to meet the task, provides a superior option. This is especially true when, for diplomatic reasons, rapid response is as important as the quantity of capability delivered over time. Additionally, higher commanders like regional combatant commanders normally have a better understanding of regional issues and their planning requirements than do service commanders in the U.S. who must organize, train, and equip forces for a global range of operations.[127] Here is where the alternative construct finds its greatest analytical support. With the alternative construct, a commander can tailor the command structure appropriately rather than

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[124] JP 3-0 *Operations*, III-17.

[125] Rubel, "Principles of Jointness," 48.

[126] This situation actually occurred. Operation Sea Angel in Bangladesh occurred only a few months after Desert Storm ended. Douglas A. Macgregor, "Resurrecting Transformation for the Post-Industrial Era," *Defense Horizons* (September 2001): 1-8, http://www.ndu.edu/inss/DefHor/DH2/DH%5F02.pdf.

[127] Noonan "Conquering the Elements," 39, 43.

having to use an ill-fitting solution provided in a generic deployment package by services focused on providing generic, world-deployable, capabilities.

Analysis of acceptability to higher commanders extends to service leadership, the Joint Chiefs of Staff, and the military's civilian leadership, including the service secretaries and the secretary of defense. Evidence showing these groups would accept the new construct appears in strategic policy documents. The *Army Strategic Planning Guidance*, for instance, is the service's principle planning document that provides the foundation for developing programs for the service's budget process and is the link between the service's budget and Defense Strategy policy guidance.[128] Published along with the service's strategic planning guidance is its transformation roadmap which highlights the move toward capabilities based concepts and force development first presented in the *2001 Quadrennial Defense Review*.[129] Publishing a service's transformation guidance means the service feels it has made the correct analysis of all changes required for the process. Where danger occurs is when organizational biases, perceptions, culture, etc. conspire to influence the analysis.[130]

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[128] U.S. Department of the Army, Headquarters, Department of the Army, Public Affairs, e-mail cover letter included with forwarded copy of the approved *Army Strategic Planning guidance (ASPG)*, 28 November 2003. The ASPG foresees the Army conducting warfare different from the situations for which planners had designed it. The guidance directs the Army to continue its move from independent but deconflicted operations to sustained interoperability but to extend the act to rapidly achieve joint interdependence using modular, capabilities-based force packages. Modularity "better support[s] Combatant Commander requirements by more effectively enabling the delivery of the right Army capabilities at the right place and time." U.S. Department of the Army, *The Army Strategic Planning Guidance, 2006-2023*, 1, 4-5, 7www.us.army.mil. See also Grossman, "Army is Split."

[129] The *Army Transformation Roadmap* also addresses the need to have a joint and expeditionary mindset using "modular, combined arms forces, rapidly deployable, in ready-to-fight configurations" that can rapidly shift among changing tasks and missions. U.S. Department of the Army, *United States Army Transformation Roadmap 2003* (Washington, DC: Headquarters, Department of the Army, 2003), i, xii; U.S. Department of Defense, Secretary of Defense, *Quadrennial Defense Review Report* (Washington, DC: Office of the Secretary of Defense, September 30, 2001).

[130] Lieutenant Colonel H.R. McMaster, "Crack in the Foundation: Defense Transformation and the Underlying Assumption of Dominant Knowledge in Future War," *CSL Student Issue Paper*. vol. 503-03, Carlisle, PA: US Army War College Center for Strategic Leadership, November 2003, 8.

In line with this movement toward capabilities-based forces, the Army Chief of Staff General Peter J. Schoomaker has created a "Task Force Modularity" group to analyze issues involved with making the Army "relevant and ready."[131] A significant characteristic of modularity that affects the apportionment construct is joint interoperability. While a difficult task itself, and some say it has proven insurmountable thus far,[132] apportionment of smaller ground units will only exacerbate the existing interoperability problem.

Ascertaining whether Secretary of Defense Rumsfeld would accept the joint force apportionment construct requires looking at other policy documents as well as public statements. For instance, the Secretary does not support some of the basic tenets of the Weinberger Doctrine because, since 2001, he has seen the benefits of early military involvement in situations because it provides more alternatives to the president.[133] Such early involvement has the added benefit of being more economical since forces required for rapid deployment and action shed heavy and expensive equipment.[134] Apportionment of modular capabilities as presented by the alternative construct is in line with the Secretary's desire to provide the president with as many options as possible.

As further evidence the construct would be acceptable, Secretary Rumsfeld directed his department to:

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[131] Grossman, "Army is Split." Schoomaker's approach is in line with the Army's approach to its Future Force which involves "scalable and modular combined arms formations, tailored in force capability packages to meet the requirements of each contingency." U.S. Department of the Army, Training and Doctrine Command (TRADOC), *The Army Future Force: Decisive 21st Century Landpower, Strategically Responsive, Full Spectrum Dominant* (Fort Monroe, VA: TRADOC, http://www.tradoc.army.mil/dcsdcs, August, 2003), 3.

[132] George K. Muellner, "Battlefield 2030: Interoperability of a Myriad of Emerging Broadband Capabilities Will Become Key," *Aviation Week and Space Technology* 15 December 2003, as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

[133] Roger D. Carstens, "New War Demands a New Military," *Proceedings* 129, no. 12 (December 2003): 2.; Duffy, "Secretary of War." Usage note: referring to the six tests of the Weinberger Doctrine as the Powell Doctrine is technically incorrect, although it is occurs regularly, because the Powell Doctrine is a re-statement of the doctrine first developed by Caspar Weinberger. Caspar W. Weinberger, "Weinberger's Six Tests," *Air Force Magazine* 87, no 1 (January 2004): 42.

> adopt the perspective that now is the time to change the way we operate. If you need specific legal authority to accomplish an important goal, or if you need relief from an unnecessary legal restriction, please ask for it . . . The war on terrorism does not supplant the need to transform DoD; instead, we must accelerate our organizational, operational, business, and process reforms.[135]

The Defense Secretary is not the only agent promoting this path. Additional support for a more agile Defense Department comes from an unlikely source. Although he disagreed with much of the way the U.S. handled war in Kosovo, General Wesley Clark recognized the need for flexibility to adapt to changes in modern warfare.[136]

Other senior officials have highlighted the need for a more responsive and usable military force. In cabinet discussions analyzing the Bosnia situation in 1994, Secretary of State Madeline Albright pointedly remarked to Chairman of the Joint Chiefs General Colin Powell, "What's the point of having this superb military that you're always talking about if we can't use it."[137] The significance of the comment is civilian leaders are always seeking more flexibility in handling crises. A doctrine of last use of overwhelming force does not give civilian leaders the options a mobile, responsive, precision military instrument of power provides. A rapid precision operation can achieve strategic effects with less risk than military action employing a slower, more blunt, physically massive war machine. Additionally, rapid flexible response options also provide a re-configurable capability for asymmetric situations. Finally, having more options allows civilian leaders to focus on planning for an ensuing peace instead of having to address worse problems created by a conventional military response.[138]

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[134] Kagan, "The Art of War."

[135] Secretary of Defense, Memorandum to Secretaries of the Military Departments et al, 17 September 2002, *Legislative Priorities for Fiscal Year 2004*, Washington, DC, 2002.

[136] "Military organizations and their leaders must be agile enough to deal with the actual and changing requirements of battle as war unfolds." Although the quote's context is somewhat different from its use here, the statement is true as it stands. Clark, *Waging Modern War*, 455

[137] Duffy, "Secretary of War."

[138] Grossman, "Army is Split;" Stephenson, "Shades of Gray," 17-18; Megan Scully, "Rethinking Joint Doctrine," *Defense News* (22 December 2003): 4, as found in the AFIS Early Bird, http://ebird.afis.osd.mil.

It is evident that the joint force apportionment construct is acceptable to higher commanders. Reviewing policy statements and documents provides evidence the agility and flexibility provided by apportioning forces fulfills leadership wishes. Being able to arrange joint capabilities in arrays that maximize positive and minimizes negative effects is the key factor.

SERVICE COMPONENTS

Much of the background support for this section's analysis comes from the behavior and historical sections of the monograph. This service component section focuses on service-specific examples of this behavior. Although all services have influence on joint concept acceptability, it is the ground forces, and especially the Army, who have the most potential to resist a new apportionment concept. The most significant reason for its resistance is its inexperience with apportioning their own forces. Thus, in this section, the Army receives more attention than the other services because the changes required to accept the alternative construct are greatest in that Service. Areas for analysis in this section include organizational and individual cultural outlooks on issues based on historical examples.

One example of the influence organizational behavior has on acceptability of new concepts involves institutionalized learning reflected in service doctrine and policy. For example, Army doctrine is the "Army's collective wisdom regarding past, present, and future operations."[139] In the capstone manual FM 1 *The Army*, the service states its mission is to "organize, equip, and train forces for the conduct of prompt and sustained combat operations on land." However, in at least five separate sections, including on page 1, it also sees its task as being to "fight and win the nation's wars." This statement also appears in the first sentence of the

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[139] TRADOC, Reg. 25-36 *DLP*, 11; U.S. Department of the Army, Field Manual 22-100, *Army Leadership: Be, Know, Do* (Washington, DC: Headquarters, Department of the Army, 1999), 1-2.

service's leadership manual.[140] On the surface, this appears to be an innocuous statement intended to imbue pride in the service among its members. When combined with other examples of service centrism and insular cultural identity, however, it begins to suggest the statements are part of a campaign to convince skeptics of the service's continued relevance.[141]

Institutionally supported mantras like "the Army fights and wins our nations wars," besides being factually incorrect, become reflections of a cultural resistance to change.[142] This is especially significant since the Army has already acknowledged it must

> [re-examine and challenge its] most basic institutional assumptions, organizational structures, paradigms, polices and procedures . . . [because] failure in the current fight is unthinkable. To defeat the enemies who threaten our freedoms, we cannot remain static, trapped in a web of our own no longer relevant policies, procedures, and processes.[143]

Another example of Army ethos that is resistant to change is comments suggesting Air Force concepts of long-range precision strike are "nice" but the service should concentrate instead on developing more strategic lift so it can move Army troops and equipment to theaters. The difficulty with this position is proponents provide no supporting arguments for whether those troops and equipment are necessary or required by the joint force commander. The implication is massive troops and ground equipment are always necessary because they are the decisive force and the main effort of any operation.[144] This is a cultural attitude identical to that held by service component "specialists" who tell a joint force commander "synergist" the military tools the

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[140] U.S. Department of the Army, Field Manual 1, *The Army* (Washington, DC: Headquarters, Department of the Army, 2001), 1, 21, 24, 29, 32, 38.

[141] Examples from FM 1 of service centrism and an insular cultural identity include the decision to capitalize the word "The" when referring to "The Army," repeated statements declaring the Army is decisive, etc. Other examples are as small as the banner placed on the restricted-access U.S. Army's Army Knowledge Online website stating the U.S. Army is "Relevant and Ready." U.S. Army AKO: Army Knowledge Online https://www.us.army.mil/portal/portal_home.jhtml, accessed 16 January 2004. While FM 1 is essential as an instructional manual, for outsiders it begins to look like internally focused propaganda that ignores the service's role as a component of the U.S. defense establishment instead of having to be its center of gravity or main effort.

[142] General Montgomery C. Meigs, retired, e-mail with author, 30 November 2003.

[143] U.S. Department of the Army, *The Army Strategic Planning Guidance, 2006-2023*, 1, 10, www.us.army.mil.

commander actually needs are different from those determined in the commander's theater analyses.

Coincident with the service-centric attitude is the need to change the Army's tendency to develop transformational guidance without including outside actors, especially the other services. As suggested in the previous paragraph, even more significant is the fact the Army has yet to address what its customer, the combatant commanders, want from the service. Acting like a functional specialist, it continues to create new, specialized tools that its customers may not need or which could do more harm than good.[145]

What the Army wants is to become "as strategically responsive as either the Air Force or the Navy and Marine Corps while retaining the Army's staying power."[146] What is missing from the entire concept for the Army's Objective Force is the idea of the Army supporting another component. The concept appears only once – the remainder of the concept assumes the Army will be the joint force's focus and decisive force. Even when a service attempts to transform itself, cultural codes that inexorably restrain advancement place one's own organization at the center of all future activities, always being the supported effort rather than a supporting force, strongly suggests the existence of cultural resistance to incorporating concepts outside the norm.[147]

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[144] Carstens, "New War," 2.

[145] Concerning the service's failure to consult the customer, in September 2003 an Army-wide reorganization brief admitted service leaders had not consulted with combatant commanders for their inputs, even though the Army transformation framework was already in place. One slide pointedly asked, "What are the combatant commanders' requirements?" Grossman, "Army Eyes." The areas where the service has planned without extensive consultation with sister services are apparent when dealing with the lift requirements of the future force. US Department of the Army, United States Army White Paper, "Concepts for the Objective Force" (Washington, DC: Department of the Army, n.d. [2001?]), ii.

[146] Wilson, "Alternative Future Force," 21-22.

[147] For instance, in Operations Allied Force and Enduring Freedom, air power from the four U.S. services and coalition militaries provided the primary effects, or in the former case, were the only force employed. These components should have had supported status in the joint force. Yet, in both cases, land functional component commanders had or sought supported status.

> The services that depend most on support from their sister services – the Army is a prime example – champion jointness, at least as long as their central role is preserved. Services capable of semi-autonomous action, like the Air Force, tend to go their separate ways. While the differences among the services are often an asset, it is not enough to let the services fight as they see fit. An effort must be made to harmonize their plans and operations.[148]

The Air Force is equally guilty of lack of faith with its fellow services but its opinions are potentially more offensive because they appear in highlighted text in service doctrine. More significantly, the offensive statement does not reflect joint reality and implies the Air Force lacks trust in its fellow services. For instance, while close air support connotes air activity done in close proximity to friendly forces and with detailed integration,[149] in its apportionment category usage, the definition has no applicability. When the JFC apportions air capabilities to the land component commander for use as the commander sees fit, the JFC does not necessarily direct the land commander to use it in accordance with the CAS definition. The Air Force, however, believes CAS apportioned sorties should only perform CAS missions.

> Perhaps most important for the ground commander to understand is that CAS is not something to be directed anywhere on the battlefield, *but that both US Air Force and joint doctrine call for it to be used strictly in "close proximity" to ground forces*. [italics in original][150]

The reality is the majority of CAS apportioned sorties perform missions other than CAS, [151] despite doctrinal calls for restriction on its use. While it is true ground commanders need more education on the inherent flexibility of air power and the fact aircraft provide more capabilities than just being airborne artillery, official written statements implying other components are unable to understand basic doctrinal principles is unacceptable in a joint environment.

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[148] Gordon, *The Generals' War*, 473.

[149] Close air support - Air action by fixed- and rotary-wing aircraft against hostile targets that are in close proximity to friendly forces and that require detailed integration of each air mission with the fire and movement of those forces. JP 1-02, *DoD Dictionary*, 90. Attempts by the author to create a second definition for CAS that incorporates its use as an apportionment category failed during the recent revision of the close air support doctrine document.

[150] U.S. Department of the Air Force, Air Force Doctrine Document 2-1.3, *Counterland* (Maxwell Air Force Base, AL: Headquarters, Air Force Doctrine Center, 27 August 1999), 85.

[151] OSD, JCAS *Interim Report*.

In effect, Air Force doctrine is telling another component the Air Force knows better how the other component should fight. While air liaison officers provide doctrinal advice to ground commanders on the best way to employ air assets, it is important to remember doctrine is authoritative and not directive. Commanders face unique circumstances with every battle and must be able to adjust their approaches. Having a service artificially limit the options available stifles that commander's initiative and creativity. Such arrogance in print, especially in service doctrine, increases friction between components that modular apportionment constructs only aggravate.[152]

Similar cultural resistance to changes exists within the Marines. In the past, Marines have often fought parallel battles with other land forces (e.g. Desert Storm and Iraqi Freedom) but have been historically reluctant to share their organic capabilities with other services especially if that sharing could adversely affect their own ability to operate as an integrated Marine air-ground team.[153] As is also the case with the other services, Marines prefer to fight with other Marines because they habitually train together. That is the core principle behind the concept of the Marine Air-Ground Task Force (MAGTF). Where this cultural belief can cause resistance to change is when a service largely sees itself operating in isolation from the others or always as the supported

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[152] In reality, both services are talking past each other. CAS as an apportionment category is an incorrect use of an established term. Air Force doctrine does not discriminate between the mission and the apportionment category, believing all air assets apportioned to the ground component are useable only as CAS. Any other use must occur with other apportioned forces. Equally incorrect is when ground forces refer to all the aircraft that support it as CAS.

[153] Rubel, "Principles of Jointness," 49. An obvious example is the World War II originated desire of the Marine Corps to retain its aircraft within the Marine Air-Ground Task Force instead of making them available for use by the JFACC. The 1986 Omnibus Agreement and joint doctrine reinforce this position. The Omnibus Agreement addresses sorties in excess of direct support requirements and doctrine states all functional component commanders exercises tactical control over only those "forces made available for tasking." However, joint doctrine now acknowledges the JFC can "assign missions, redirect efforts (e.g. the reapportionment and/or allocation of any MAGTF TACAIR sorties when it has been determined by the JFC that they are required for higher priority missions." Stephen J. McNamara, *Air Power's Gordian Knot: Centralized Versus Organic Control* (Maxwell AFB, AL: Air University Press, 1994), 3, 127-28. See also JP 0-2, *UNAAF*; JP 3-0, *Operations*; and JP 3-30, *C2 Air Operations*. For discussion of MAGTF TACAIR, see JP 0-2 *UNAAF*, V-4 to V-5.

element. An interesting anecdote that may show the depth of such feeling within the Marine Corps came in the days before Operation Iraqi Freedom. While obviously meant as an emotional appeal to the historic steadfastness and cohesion that is the United States Marine Corps, a division commander's final message to his troops charged them to "keep faith with your comrades on your left and right and Marine Air overhead."[154] Even though this statement came before the most joint war ever fought, it is a subliminal yet illuminating message that trust between services may not be forefront in a commander's mind.

There are other adverse organizational implications that impact the construct's acceptability based on service culture and ethos. They become especially evident when there are perceptions that change threatens service relevance. Not all opposition seeks to change service culture. In an interesting irony, individual agents of change are sometimes simultaneously cultural standard bearers seek to perpetuate their service's relevance.[155] Evidence of this fact may be subliminal. For instance, in its Army Strategic Planning Guidance, the Army states

> When deterrence fails, ground combat forces are *the* decisive element of the Joint Force" and "Sea, air, and space dominance are invaluable, but *only land dominance brings hostilities to a decisive conclusion* – establishing and maintaining favorable security conditions for more comprehensive and enduring solutions to complex crises. [emphasis added][156]

What this quotation suggests is acceptance of the alternative construct and similar approaches to warfare could violate a service's core beliefs.

Reality, however, shows cultural beliefs like this may be damaging to a service's future. While land forces are an essential tool in the joint force, each conflict is different and land forces

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[154] Mattis, Major General J. N., Message, March 2003, 1st Marine Division (REIN), *Commanding General's Message to All Hands*. Adobe pdf file copy in author's possession.

[155] In reference to changes in the Army's force structure, Douglas Macgregor believes "the most important [outcome] is that the U.S. Army is *positioned to be a core element of most future joint operations*." [emphasis added] Douglas A. Macgregor, *Breaking the Phalanx: A New Design for Landpower in the 21st Century* (Westport, CT: Praeger, 1997), 128. Of interest, the Army Chief of Staff General Peter Schoomaker has given the Army's Training and Doctrine Command (TRADOC) "guidance to embrace Doug Macgregor" (a noted critic of current policy) while the previous Chief General Eric Shinseki had "sensitivities" toward Macgregor. Grossman, "Army is Split."

are not always the decisive element of a joint force. For example, in Operation Allied Force, there was no land dominance that "brought hostilities to a decisive conclusion."[157] The significance for service acceptability analysis is firmly held organizational beliefs maintained without the support of periodic constructive reassessment risk violating a basic truth: absolutes are never absolute in warfare.[158]

Other cultural characteristics that resist the adoption of alternative approaches are the result of individual behavior. One example is the higher someone rises in a career, the more likely that person has internalized service culture and loyalty. This is usually good for the service and the joint community. As a form of self-induced payback, the person becomes "a protector of service traditions, doctrine and loyalties."[159] What is bad about this situation is the protectors may also be "old school" and approach any change reluctantly, adhering to the adage "if it ain't broke, don't fix it." In such an environment, agents of change are not welcome and in fact may face retaliation for their efforts.

Cultural clashes between services also impede joint progress and acceptance of new ideas because they can produce resentment, jealousy, or even feelings of superiority. Examples of cultural clashes appear in many situations. For example, they can exist when there are two different living conditions or different force protection policies for forces deployed to the same

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[156] U.S. Army, *ASPG*, 18-19.

[157] Land dominance proponents like Frederick Kagan disagree and continue to assert, "During the Kosovo operation Slobodan Milosevic withstood the American air attack right up until it became clear that a ground attack might follow - and then he surrendered." General Wesley Clark concurs, saying "I am convinced that [the threat of ground forces], in particular, pushed Milosevic to concede" but he also notes "every war is unique." Others saw a ground invasion as one of many reasons for Milosevic's capitulation but the threat was a much smaller factor. Kagan, "The Art of War," 14, Clark, *Waging Modern War*, 425, 418; Stephen T. Hosmer, *The Conflict over Kosovo: Why Milosevic Decided to Settle When He Did* (Santa Monica, CA: RAND, 2001); and Benjamin S. Lambeth, *NATO's Air War for Kosovo* (Santa Monica, CA: RAND, 2001), chapter 4.

[158] Even the principles of war are not absolute. GAO, *Kosovo Air Operations*.

[159] William A. Owens, "What They've Said in JFQ," *JFQ: Joint Force Quarterly* no. 34 (Spring 2003): 75.

area.[160] Many of these cultural traits and service ethos issues have a historical basis. In Vietnam, the Army Chief of Staff openly derided the responsiveness, effects and capabilities of air power.[161] Cultural clashes also continue through the efforts of retired general officers who retain influence over service policies.[162]

A service's traditional wariness to rely on other services for support because that support may not arrive exists in both operations and training. It occurs in the service's training centers when scenarios reduce or discount the effects other components have on the outcome of a battle. Whether this tendency is due to a desire to avoid relying on another service for combat effectiveness is debatable.[163] One reason is it may be an unintentional byproduct of a culture that promotes leadership concepts where personal or organizational ownership of a plan is the means to success.[164] Extending this leadership concept of ownership to an extreme, it can produce an environment where in order to succeed commanders feel they must "own" all the subordinate or supporting assets (OPCON) instead of having temporary control (TACON) or priority for support (SUPPORT). The drawback of the unintended byproduct is ownership has no place in a joint

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[160] An example of stark cultural differences existing simultaneously in the same geographic area comes from Kosovo. "Rinas Airfield, near Tirana, was bustling with activity of all kinds, both humanitarian and military. . . But . . .there were clearly 'two classes of citizens.' On one side was the Air Force, with nifty, clean accommodations and a first-class field medical center. They were the first part of the American contribution to humanitarian assistance, part of our Joint Task Force Shining Hope . . . On the other side of the runway . . .several hundred muddy, wet American soldiers were scrambling to set up close-in defenses and find enough dry ground to park their vehicles and pitch tents." Concerning force protection at the same airfield, Clark queried two solders who didn't salute him. "'Sir, they told us not to salute here - it might be too dangerous,' he said, referring to the idea that snipers might see the salutes and then target the officers. It was clear that he was committed to following the force protection orders he'd been given despite the obviously relaxed Air Force posture across the runway." Clark, *Waging Modern War*, 257.

[161] "He [Johnson] also had a jaundiced view of tactical air support of Army troops, a view he expressed as a ditty that soon made the rounds in Vietnam: 'If you *want* it, you can't get it. If you *can* get it, it can't find you. If it *can* find you, it can't identify the target. If it *can* identify the target, it can't hit it. But if it *does* hit the target, it doesn't do a great deal of damage anyway.'" (emphasis in original) Mark Perry, *Four Stars* (Boston: Houghton Mifflin, 1989), 151.

[162] Grossman, "Army is Split."

[163] Grossman, "Army Eyes."

[164] U.S. Army, FM 22-100, *Army Leadership*, 3-16, 6-28.

effort - sharing capabilities does. The latter concept is the foundation of the alternative construct that also involves inter-reliance between services that requires trust in place of ownership.[165]

Service culture, however, can also support an apportionment approach to joint warfare. Historically, the Navy creates task forces built to accomplish specific missions. This is a form of apportionment, although command relationship details may vary. The Air Force's recent transformation into ten air expeditionary forces (AEFs) also relates to apportionment. Creating ten roughly equal "buckets" of capability from which combatant commanders draw forces required for ongoing small-scale contingency or peacetime engagement operations is apportionment but at an operational/strategic seam.[166] Fundamentally, the specialization and depth of knowledge developed by institutionalized learning within a service culture provides the detailed understanding required to master warfare in the individual dimension as well as form the basis for mastering joint warfare. "Until officers master a dimension of war, they can only be amateurs."[167]

Analyzing service component influence on acceptability of the construct suggests opposition to the construct is potentially insurmountable. Too many organizational and individual behavior characteristics reinforced by historical experience exist to suggest services will accept the alternative construct. Anecdotal evidence along with facts combine to highlight the existence of significant barriers to embracing the inter-reliability the construct imparts on participants. There are suggestions the services are changing their opinions, however. Recent successes in Iraq and Afghanistan and their influence on service attitudes and doctrine show the potential for eventual service adoption of the construct.

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[165] Scully, "Rethinking Joint Doctrine," 4.
[166] Macgregor, "Resurrecting Transformation ."
[167] Murray, "Evolution," 37.

Overall, the alternative faces the greatest resistance to its adoption from acceptability issues held by the services. Analysis of bureaucracies, especially their organizational and individual behaviors, foreshadows the outcome, especially because the new concept appears to threaten the existence of organizations or individuals. In the analysis, cultural influence, a byproduct of organizational and individual behavior, remains the primary obstacle. Service resistance to change far outstrips the effect of higher commander desires. While the analysis shows higher commanders would embrace the alternative construct, successful adoption by lower service echelons remains suspect. Therefore, in the acceptability analysis, the alternative apportionment construct fails although there is potential for success in the overriding supremacy of policy guidance and of higher commander requirements. Realistically, while the secretary of defense and the president of the United States can direct the military to accept change, their tenure is limited while a culture runs deep enough to often survive the passage of administrations.

SUITABILITY

Since there are few chances to test the alternative construct in experiments or in actual combat operations, this section evaluates its suitability against joint directives and policy.[168] The primary references are joint transformation documents and guidance from the Joint Requirements Oversight Council. Products from the JROC include *An Evolving Joint Perspective: US Joint Warfare and Crisis Resolution In the 21st Century,* a paper that provides a joint operational framework for force providers and their programs. The section also draws upon the JROC's *Joint Operations Concepts*, as well as other Defense Department policy documents like *Joint Vision 2010* concepts such as Rapid Decisive Operations (RDO).

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[168] Additionally, much of the analysis done to determine the joint force apportionment concept's acceptability also impacts its suitability but this paper does not repeat that information or analysis.

TRANSFORMATION

There are numerous opinions on what constitutes transformation.[169] What is significant is the *Joint Transformation Roadmap* acknowledges there are many and varied efforts underway or planned that support transformation.[170] This acknowledgment means the construct has more opportunities for it to support transformation efforts. Another document, the Defense Department's *Transformation Planning Guidance,* directs the services to change military capabilities and the way they think, train, and operate. The guidance highlights the danger in retaining the status quo. "Some argue that the United States should not change what are demonstrably the world's best military forces. History and current trends suggest that merely attempting to hold on to existing advantages is a shortsighted approach and may prove disastrous."[171]

Alongside the department's transformation roadmap and planning guidance, the Defense Science Board has produced reports supporting the Defense Department's transformation efforts and the concepts behind the capabilities a transformed military. Two reports, *Enabling Joint Force Capabilities* and *Discriminate Use of Force,* emphasize the requirement for a "quick response with effective, integrated joint and coalition forces without the benefit of deliberate planning or standing, in-place, joint command and control (C2) arrangements." *Enabling Joint Force Capabilities* specifically states the need for flexible, adaptive, responsive and integrated forces, all of which are aspects central to the alternative construct.

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[169] Scully, "Rethinking Joint Doctrine," 4, Meigs, e-mail; Kagan, "The Art of War," 1; Macgregor, "Resurrecting Transformation ," 1.

[170] These efforts include joint concept development, information operations, C2, ISR, deployment and sustainment, joint experimentation, training and education. U.S. Department of Defense, Joint Forces Command, *Joint Transformation Roadmap* (Washington, DC: GPO, 3 November 2003), 170.

[171] U.S. Department of Defense, Office of the Secretary of Defense, Office of Force Transformation, *Transformation Planning Guidance*, (Washington, DC: Department of Defense, April 2003), 1, 4, http://www.oft.osd.mil/library/library_files/documents/document_8_Transformation_Planning_Guidance_April_2003_1.pdf.

> A platform-centric legacy acquisition system [hampers IT advances that support network-centric operations]. Yet a network-centric approach based on a jointly developed network architecture remains essential if we are to field forces that can (1) respond quickly to a wide range of contingency demands and (2) act decisively from the outset against adaptive and resourceful adversaries. This requires full-capability, highly integrated joint land, sea, air, and space forces.[172]

The *Discriminate Use of* Force report highlights the benefits of effects-based operations and directs the services to develop concepts of operation that integrate all the instruments of power. It also emphasizes the increased acceptance of the impact discriminate force has had on campaign development.[173]

In addition to policy directives to transform, it is rapidly becoming common knowledge that the potential for paradigm shifts in operational concepts is here. Despite this situation, there are still cultural preferences that continue to see the future through cultural resistance to change.[174] Regardless, new operational concepts will require new organizational and employment structures that support organizing, training, equipping, and employing forces.[175] The proposed alternative apportionment construct fully fits this need.

Concerning transformation and the relationship between concepts and technology, having unproven technology in the field is sometime necessary to develop and refine the operational

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[172] U.S. Department of Defense, Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, *Report of the Defense Science Board Task Force on Enabling Joint Force Capabilities* (Washington, DC: Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics, August 2003), 1.

[173] This acceptance of the impact of the discriminate use of force goes against historically and doctrinally reinforced desires to reduce its impact. President George W. Bush, however, set the policy baseline in his speech on the U.S.S. Abraham Lincoln as it was returning from Operation Iraqi Freedom. "With new tactics and precision weapons, we can now achieve military objectives without directing violence against civilians." Quoted in USD/ATL *Discriminate Use of Force*, iii.-iv.

[174] "The paradigm of air forces supporting ground maneuver is clearly ripe for rethinking, as the example of the kill boxes shows, but those are work-arounds within the confines of the environment-based architecture." Noonan, "Conquering the Elements," 31-45. Retired Vice Admiral Arthur Cebrowski, leader of the Defense Department's transformation efforts, had an insightful comment in an address to the US Army War College's Annual Strategy Conference, Carlisle Barracks, PA., 10 April 2003. "The next logical step might be to give the Joint Force Air Component Commander operational control over an Army ground unit to optimize the effectiveness of air power, and this is now under consideration in parts of DOD." Noonan, "Conquering the Elements,: 42.

concepts that will govern its use. In fact, because technology takes so long to mature, sometimes as much as twenty years, getting technology fielded without a required need or concept for its has produced successes. "The notion that we need to tie technology to useful military applications is nonsense."[176] The alternative construct provides a flexible framework that can exploit emerging and developing technologies.

Finally, the reason for developing transformational changes in organizational concepts is an attempt to provide more options to the commander. "At its heart, [transformation] is about assigning the right resources (human or material) to a command and control architecture properly structured to achieve mission accomplishment."[177] From a transformation standpoint, the alternative construct is fully suitable for use. It is an optimal framework for incorporating new technology, serving as the structure for new operational constructs, and fulfilling the need for change in the military.

POLICY GUIDANCE

The JROC's *Evolving Joint Perspective* outlines differences between twentieth and twenty-first century warfare. One section concerns what the JROC foresees as the evolving shift in the conduct of joint warfare and conflict resolution. Previously, joint warfare meant jointly deconflicted operations. The future, however, will involve fully integrated operations. The forces involved in fully integrated operations are "tailored by capability, flexible and trained to react promptly to an adversary's adaptive system, within any given battlespace to achieve full

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[175] "New joint operational concepts and structures that integrate diverse service capabilities require a new joint operational architecture to be effective because this architecture breathes life into the concept . . ." Macgregor, "Resurrecting Transformation."

[176] Quotation is from Lieutenant General Bruce K. Brown, former commander of Alaskan Air Command. The development of the airborne warning and control system (AWACS) is an excellent example. Although the technology had been around for years, until fighter pilots saw it demonstrated in the mid 1970s, support for the system in the Air Force was lukewarm. Peter Grier, "Science Projects," *Air Force Magazine* 86, no. 12 (December 2003): 76.

spectrum dominance." Additionally, those forces must have the ability, "when tasked as a team, to operate unilaterally or in combination with multinational (MN) and interagency partners to shape the situation, dissuade, deter or if necessary defeat any adversary across the full range of military operations.[178] The joint force apportionment construct easily allows commanders to tailor their forces to the immediate task.

Furthermore, according to the JROC paper, there are three critical adaptability features the future joint force must retain: versatility, agility, and resiliency. The future force must be versatile enough to "perform diverse missions in diverse environments," permitting the JFC to "keep open as many options as possible and strive for effective solutions." Having a limited number of optimal solutions is analogous to using RPD approaches that look for the first satisfactory fix instead of taking time to find the optimal solution. Agility means the force must be able to operate within the adversary's decision cycle, exploit fleeting opportunities, protect friendly vulnerabilities and adapt to changing situations. Resiliency means the force must "withstand pressure or absorb punishment without permanently losing its focus, structure, shape, or integrity" supporting sustained "performance at high levels, despite losses, setbacks or similar developments."[179] The ultimate goal is an adaptive, flexible, responsive force that is the central product of the apportionment construct. By allowing a commander to craft his force in multiple permutations, he retains significant versatility.

It is within two aspects of joint warfare principles that the model shows its suitability for joint operations. The first aspect is joint forces use strengths to complement weaknesses. The second aspect is jointness tends to increase at lower levels in the face of an enemy while it only

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[177] Noonan, "Conquering the Elements," 32-33.
[178] JROC, *Evolving Joint Perspective*, 22.
[179] The definitions for versatility, agility, and resilience come from Ibid., 57-58. Adaptability is central to rapid decisive operations (RDO)concept development which integrates core functional concepts and ideas developed in *Joint Vision 2010* and *Joint Vision 2020*. JFCOM, *RDO*, 7, 14-15.

remains at higher echelons during peacetime.[180] Giving a joint force commander the ability to apportion forces supports both of these features because it permits more precise adjustments to complement weaknesses and supports the shifting of joint operations to the lowest echelons. The construct should help keep joint integration at low levels but the reality is service components rarely train or act jointly during peacetime.[181] There is no evidence to suggest this situation will improve.

There are some limitations to the model's suitability for future operations, however. Two facts conspire to derail its suitability. Every military action is unique, if at least in the fact it occurs in a different place or at a different time. In addition, a specific framework for organization and employment may work successfully in numerous simulations or during previous operations or exercises. Thus, past performance is no guarantee of future success. This is because fog and friction can reduce any single attempt at success to a chance endeavor fraught with risk or even total failure. Much like the adage "luck evens out, and the skill shines through" over time, a unique event can become "a giant crapshoot"[182] and the risks of taking a particular course of action may be too high to proceed. Despite the uniqueness of each military situation, doctrine continues to present dictums that, on average, produce success. Finally, having the ability to flexibly adapt to changed situations acts to reduce the adverse impact of fog and friction on plans and operations.

Overall, apportionment provides a less restrictive method of balancing strengths and weaknesses in a flexible manner than the current specialist method, yet it also remains suitable for use within policy guidelines. Additionally, an important benefit of the apportionment concept is it forces joint integration training and operations to move to lower levels. This push would allow

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[180] Rubel, "Principles of Jointness," 46.
[181] Owens, "Once and Future RMA," 61.
[182] Lewis, *Moneyball*, 274.

small units to develop habitual relationships with modular capabilities from other services, an outcome that is suitable to land component forces seeking to develop habitual relationships.[183]

OTHER AREAS

An area for further suitability study is the alternative construct's application to inter-agency coordination. This analysis is especially difficult because there is no interagency doctrine or other written guidance available that directs agencies to subordinate their autonomy to operational or strategic needs. [184] In the U.S. government, the arbiter of interagency action in national security issues is the National Security Council (NSC) but the NSC has never been a standardized organization that retained consistent powers over national policy. Each president molds it to his wishes.[185] Despite the need for further study, the analysis presented that addresses organizational behavior suggests corralling long-standing agency bureaucracies and getting them to operate together in a "joint" manner will be difficult.

Another area beyond the scope of the paper is the alternative construct's suitability for coalition operations. Most modern militaries operate in the specialist mode since the command and control capability to do otherwise is extremely difficult to develop and operate, as the Israelis found in 1956. Despite that setback, the Israeli Defense Force approaches warfare in a similar

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[183] A habitual relationship developed through this type of training is not identical to the habitual relationships Special Forces and land units prefer. The alternative of creating an organic force capable of task-organizing itself into sufficiently numerous combinations, however, is fiscally improbable if not impossible. While ground units may prefer consistent, personal relationships built over time, future warfare will largely prohibit that outcome. The same air squadron will not always be available to support the same Special Forces team or land force brigade. Likewise, those same ground forces will not always be available to support air operations by units stationed in a region. However, these facts should not be grounds for declaring the apportionment construct unfeasible.

[184] Montgomery C. Meigs, "Unorthodox Thoughts about Asymmetric Warfare," *Parameters* 33, no. 2 (Summer 2003): 18.

[185] Amos A. Jordan, William Taylor Jr., and Michael J. Mazarr, *American National Security* 5th ed. (Baltimore, MD: Johns Hopkins University Press, 1999), 100-105.

fashion to the method proposed by the alternative construct. For them, both air and ground forces "participate" in battle. Air does not support ground operations. [186]

It is evident by now the apportionment construct receives its strongest support in the feasibility analysis. This is because the framework fully supports policy guidance. This is significant because, regardless of how cultural behavior may entrench to resist accepting new concepts, the military is a hierarchical organization subject to civilian control and will ultimately follow its orders.[187] Most significant to the construct's success is the young members of the military who are less encumbered with institutionalized behavior and are more open to new ideas.[188] With policy guidance that survived two administrations, a culture that supports civilian control of the military, and an influx of youth amenable to new ideas, the alternative construct achieves sufficient support to ensure its adoption by the military despite the difficulties involved with service acceptability.

CONCLUSIONS AND RECOMMENDATIONS

It is clear from the analysis that the alternative apportionment construct faces many obstacles to its incorporation in U.S. military operations. Those obstacles, however, are the same any new concept faces. In the areas of feasibility, acceptability, and suitability, the construct receives a mixed result: it passes the first and last assessment, although not easily, but it fails the

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[186] In describing how his military views close air support, Major General Mordechai Hod, the Israeli Air Force commander from 1966 through 1973, holds an alternative view of operations that could suggest a favorable view of the alternative concept. "We don't believe in direct air support in the IAF . . . We have never believed in close support . . . Instead of using 'close support' we talk of 'participating" in ground battle, which has a different connotation, and 'participating' means how we can, with airpower, make the ground battle easier, cheaper." Benjamin Franklin Cooling, ed., *Case Studies in the Development of Close Air Support* (Washington, DC: Office of Air Force History, 1990), 491.

[187] Sometimes the military does so grudgingly. There have been instances where military leaders have crossed over into areas that may have challenged civilian control (most recently in the 1990s during General Colin Powell's tenure as Chairman of the Joint Chiefs).

[188] When the youth become "old timers," the Greek chorus, the institutional changes will be light years removed from those even a couple decades ago.

middle criterion, acceptability. Overall, however, the three areas are interrelated to such an extent and the suitability area has the greatest weighting, that the construct provides a better method for organizing and employing joint forces than currently is in use.

The feasibility analysis showed how organizational and individual behavior created and supported by historically reinforced institutional learning produces strong cultures. Culture, once institutionalized, has an inbred resistance to perceived threats to its relevance. This result is the core element of opposition to the alternative construct. In addition to culture's influence on the construct's feasibility, other areas have influence on the assessment. These include opinions on apportionment, the joint movement toward effects-based operations, assessment of command and control alternatives, joint and service logistics efforts, budget and Title 10 responsibilities, joint experimentation, education, and the doctrinal development process. The construct, however, passes these analysis tests because it is a viable and feasible option allowed by doctrine. The prime evidence for this assessment is apportionment of air and ISR assets already exists and logistical organization and employment prefers combining capabilities to functional specialization. Obstacles to full adoption, however, remain in the areas of budgetary issues, joint experimentation, education, and the doctrinal development process.

Acceptability is the area where cultural influence, a byproduct of organizational and individual behavior reinforced by historical lessons, is the most significant obstacle to adoption of joint force apportionment. Furthermore, it is organizational culture that maintains significant influence over higher commander requirements and service acceptability. Ultimately that culture resists change. It is so strong a force it could prove insurmountable.

The final methodology criterion used to assess the viability of the alternative apportionment construct is suitability. Since this analysis revolves around policy guidance and the construct's overall suitability for warfare as foreseen in transformation documents, the alternative construct suits most of the criteria, thanks to the consistency of transformational outlooks over two presidential administrations. The greatest support for the concept's suitability,

however, comes from the influence young members of the military will have on changing service culture enough to support acceptability of the construct.

As noted throughout the work, numerous aspects of this issue require further study. The most important area for further analysis involves logistical supportability. The Army is already working on aspects of the issue with the continued development of its Stryker Brigade and Future Force organizations. If the service can solve those issues, as well as the significant logistical problems it faced in Operation Iraqi Freedom, logistical implications on the construct's adoption should decrease. Peripherally connected to logistic supportability but a concept requiring further development is the benefit of having a joint force transportation and logistics component commander (JFTLCC). Although assessed to some extent in this monograph, further analysis of joint experimentation and its ability to assess the effectiveness of the construct is another area requiring further analysis. Without joint experimentation's impact on new concept analysis, effective and sensible adoption of the alternative construct may never occur.

Title 10, service roles and missions, and other issues incident to the Key West Agreement and Goldwater-Nichols legislation also require further analysis. Related issues include the need to analyze the air apportionment process in order to provide more clarity to apportionment categories, solidify command relationships, and provide accurate definitions for terms that could reduce friction among services and cultures. Rapid adoptions of new concepts, such as the joint force apportionment construct, require changes to the joint and service doctrinal development processes. In addition, a larger and more complex assessment of the alternative requires examination of its ability to integrate military operations with other instruments of U.S. power, coalition forces, allies, and other organizations (NGOs, PVOs, etc.). Finally, two additional areas requiring assessment are joint education and training.

The outcome of the analysis proves the alternative construct focusing on combining capabilities instead of functional specialization is the better option for future warfare. The alternative construct apportioning joint force modular capabilities to functional component

commanders is a more efficient, effective, and flexible use of joint capabilities than the current specialist method. It optimizes capabilities and effects and is a better method of joint force organization and employment.

APPENDIX 1: ALTERNATIVE OPERATIONAL CONSTRUCT

Alternative Framework Strategy-to-Task Breakout

Functional Component Commander	Joint Operational Effects (JOE)	Joint Operational Functions (JOF)	Tactical Missions	Tactical Mission Tasks
JFACC	Air Superiority	Counterair	Area Defense	Block
JFLCC	Information Superiority	Counterinformation	Attack	Canalize
JFMCC	Land Superiority	Counterland	Close Air Support	Capture
JFSCC[189]	Maritime Superiority	Countersea	Offensive Counterair	Contain
JFSOCC	Space Superiority	Counterspace	Defensive Counterair	Cover
JFTLCC[190]		Counterstrategy	Offensive Counterinformation	Deceive
			Defensive Counterinformation	Delay
			Offensive Countersea	Defeat
			Defensive Countersea	Degrade
			Offensive Counterspace	Destroy
			Defensive Counterspace	Disrupt
			Interdiction	Exploit
			Land Attack	Fix
			Mobile Defense	Guard
			Movement to Contact	Halt
			Exploitation	Influence
			Pursuit	Interdict
			Retrograde	Isolate
			Strategic Attack	Neutralize
			Strategic Defense	Persuade
				Screen

Table 3 Alternative Framework Strategy-to-Task Breakout

Counterstrategy is a term created by the author to address functions supported by missions conducted to achieve effects against friendly or enemy strategies. Examples include strategic attack, strategic defense, or missions involving functions uncovered by the other five JOFs. It integrates all elements of national power, implies intent, addresses effects other than destruction, and directly focuses on achieving effects. Counterstrategy can focus on leadership, resources, strategy, etc., i.e. means that affect the ability to act or achieve effects. Any component can perform this function e.g. "scud-hunting" by special operations forces is counterstrategy.[191]

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[189] In order to show its adaptability to future operations, this construct assumes the presence of a separate joint force space component commander (JFSCC) in the theater architecture, a function performed by the joint force air component commander in Operation Iraqi Freedom.

[190] In order to show its adaptability to future operations, this construct incorporates a transportation and logistics functional component commander (JFTLCC), an option possible should US Transportation Command and the Defense Logistics Agency merge and assert "fort-to-foxhole" logistics command and control capabilities. Full development of this concept is an area for further study. Thanks to Major Keith "Toaster" Teister for suggesting the concept of a seamless deployment/logistics connection.

[191] Definition and rationale are modified from one presented at the 2002 Hap Arnold Doctrine Symposium. U.S. Department of the Air Force. Outbrief from Panel 4, Major General David Deptula

Land attack is term created by the author to incorporate missions where a force's primary objective is attacking land forces. Since 1991, air power has conducted land attack missions that are not strategic attack, interdiction, maritime support, or close air support. For instance, striking anti-aircraft and C2 sites during sanctions enforcement operations over Iraq are more than suppression of enemy air defenses or strategic attack missions. This new air power capability and its applicability to conventional warfare does not exist in joint doctrine although some call it battlefield air operations. Land attack, however, is a generic term that incorporates aircraft, cruise missiles, artillery fires, etc. from all functional components and applies to missions where striking land forces is the primary mission. Finally, it dispenses with the geographically restrictive term "battlefield."

The "tactical mission" strategic attack is in line with the Air Force definition. It is not limited to aerial use – any functional component can conduct strategic attack operations. [192] Strategic Defense is a new term created by the author to serve as the anti-thesis of strategic attack. Examples include Patriot missile shields over key strategic facilities and combat air patrols over Washington, D.C.

Joint Operational Function Definitions

Counterair – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of air superiority.
Counterinformation – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of information superiority.
Counterland – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of land superiority.
Countersea – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of maritime superiority.
Counterspace – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of space superiority.
Counterstrategy – A mission that integrates offensive and defensive operations aimed at generating effects that most directly achieve our national security objectives by affecting an adversary's leadership, conflict-sustaining resources, or strategy.

Table 4 Joint Operational Function Definitions[193]

chairman, "Strategic Attack and Battlefield Air Operations," 2002 Hap Arnold Doctrine Symposium, Maxwell AFB, AL, 12 April, 2002.

[192] U.S. Department of the Air Force, Air Force Doctrine Document 2-1, *Air Warfare* (Maxwell Air Force Base, AL: Headquarters, Air Force Doctrine Center, 22 January 2000), 109.

[193] These terms are primarily modifications of existing Air Force definitions. See U.S. Air Force, Air Force AFDD 2-1, *Air Warfare*.

APPENDIX 2: GLOSSARY

Definitions are the author's unless otherwise noted.

adaptability – [a fundamental concept where forces] respond mentally and physically to identify, induce, and exploit new patterns in both the larger security environment and in the specific operational area more rapidly and effectively than adversaries.[194]

agility - The ability to move quickly and easily, should characterize US military operations. Agility is relative; the aim is to be more agile than the foe. Agility is not primarily concerned with speed itself, but about timeliness: thinking, planning, communicating, and acting faster than the enemy can effectively react.[195]

Air Component Commander Forces (ACCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Air Component Commander (JFACC) in order for the JFACC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

air interdiction - Air operations conducted to destroy, neutralize, or delay the enemy's military potential before it can be brought to bear effectively against friendly forces at such distance from friendly forces that detailed integration of each air mission with the fire and movement of friendly forces is not required. (JP 1-02, also NATO approved)

apportionment - In the general sense, distribution for planning of limited resources among competing requirements. Specific apportionments (e.g., air sorties and forces for planning) are described as apportionment of air sorties and forces for planning, etc. (JP 3.0)

apportionment - In the general sense, distribution for planning of limited *forces and* resources among competing requirements. Specific apportionments (e.g., air sorties and forces for planning) are described as apportionment of air sorties and forces for planning, etc. (JP 5.0, SD, emphasis added to highlight the proposed change)

apportionment (air) - The determination and assignment of the total expected effort by percentage and/or by priority that should be devoted to the various air operations for a given period of time. Also called air apportionment. (JP 3.0)[196]

close support - That action of the supporting force against targets or objectives which are sufficiently near the supported force as to require detailed integration or coordination of the supporting action with the fire, movement, or other actions of the supported force. (JP 1-02)

combatant command (command authority) (COCOM) - Nontransferable command authority established by title 10 ("Armed Forces"), United States Code, section 164, exercised only by commanders of unified or specified combatant commands unless otherwise directed by the President or the Secretary of Defense. Combatant command (command authority)

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[194] JROC, *Evolving Joint Perspective*, 58.
[195] Ibid., 57.
[196] JP 3.0 *Operations*, GL-4.

cannot be delegated and is the authority of a combatant commander to perform those functions of command over assigned forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction over all aspects of military operations, joint training, and logistics necessary to accomplish the missions assigned to the command. Combatant command (command authority) should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Combatant command (command authority) provides full authority to organize and employ commands and forces as the combatant commander considers necessary to accomplish assigned missions. Operational control is inherent in combatant command (command authority). (JP 1-02)

Counterair (JOF) – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of air superiority.

Counterinformation (JOF) – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of information superiority.

Counterland – Operations conducted to attain and maintain a desired degree of superiority over surface operations by the destruction, disrupting, delaying, diverting, or other neutralization of enemy forces. The main objectives of counterland operations are to dominate the surface environment and prevent the opponent from doing the same. (AFDD 1)

Counterland (JOF) – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of land superiority.

Countersea (JOF) – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of maritime superiority.

Counterspace (JOF) – A mission that integrates offensive and defensive operations to attain and maintain a desired degree of space superiority.

Counterstrategy (JOF) – A mission that integrates offensive and defensive operations aimed at generating effects that most directly achieve our national security objectives by affecting an adversary's leadership, conflict-sustaining resources, or strategy.

culture: – The totality of socially transmitted behavior patterns, arts, beliefs, institutions, and all other products of human work and thought; 1) These patterns, traits, and products considered as the expression of a particular period, class, community, or population: Edwardian culture; Japanese culture; the culture of poverty; 2) These patterns, traits, and products considered with respect to a particular category, such as a field, subject, or mode of expression: religious culture in the Middle Ages; musical culture; oral culture; 3) The predominating attitudes and behavior that characterize the functioning of a group or organization.[197]

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[197] While culture can refer broadly to the full complement of arts and products of human work and thought, etc., it also refers to socially transmitted behavior patterns, traits, and products. Ethos involves character, values, spirit, etc. Furthermore, culture has become an accepted term to refer to those same traits and products of smaller groups. It also refers to a "complex aggregate of its attitudes toward a variety of issues including its role in war, its promotion system, its relation to other services, and its place in the society it serves. Winton, *Challenge of Change*, xiv. The Army defines it as the "shared attitudes, values,

direct support: – A mission requiring a force to support another specific force and authorizing it to answer directly to the supported force's request for assistance. (JP 1-02)

ethos – The character, sentiment, or disposition of a community or people, considered as a natural endowment; the spirit which actuates manners and customs; also, the characteristic tone or genius of an institution or social organization.[198]

force – 1. An aggregation of military personnel, weapon systems, equipment, and necessary support, or combination thereof. 2. A major subdivision of a fleet. (JP 0-2)

Land Component Commander Forces (LCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Land Component Commander (JFLCC) in order for the JFLCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

Maritime Component Commander Forces (MCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Maritime Component Commander (JFMCC) in order for the JFMCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

operational control (OPCON) - Command authority that may be exercised by commanders at any echelon at or below the level of combatant command. Operational control is inherent in combatant command (command authority) and may be delegated within the command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Operational control is the authority to perform those functions of command over subordinate forces involving organizing and employing commands and forces, assigning tasks, designating objectives, and giving authoritative direction necessary to accomplish the mission. Operational control includes authoritative direction over all aspects of military operations and joint training necessary to accomplish missions assigned to the command. Operational control should be exercised through the commanders of subordinate organizations. Normally this authority is exercised through subordinate joint force commanders and Service and/or functional component commanders. Operational control normally provides full authority to organize commands and forces and to employ those forces as the commander in operational control considers necessary to accomplish assigned missions; it does not, in and of itself, include authoritative direction for logistics or matters of administration, discipline, internal organization, or unit training. Also called OPCON. (JP 1-02)

Space Component Commander Forces (SCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Space Component Commander (JFSCC) in order for the JFSCC to

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goals, and practices that characterize the larger institution" and differentiates it from climate in that culture is longer-term, "deeply rooted in long-held beliefs, customs, and practices." U.S. Army, FM 22-100, *Army Leadership*, 3-14.

[198] *Webster's Revised Unabridged Dictionary*, 1996, 1998 MICRA, Inc. accessed at Dictionary.com, http://dictionary.reference.com/search?q=ethos, 10 January 2004.

accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

Special Operations Component Commander Forces (SOCCF): The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Special Operations Component Commander (JFSOCC) in order for the JFSOCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

strategic attack – Military action carried out against an enemy's center(s) of gravity or other vital target sets, including command elements, war production assets, and key supporting infrastructure in order to effect a level of destruction and disintegration of the enemy's military capacity to the point where the enemy no longer retains the ability or will to wage war or carry out aggressive activity. (AFDD–1)

Strategic attack (tactical mission) – Military actions carried out against an enemy's center(s) of gravity or other vital target sets, including command elements, war-production assets, and key supporting infrastructure in order to effect a level of destruction and disintegration of the enemy's military capacity to the point where the enemy no longer retains the ability or will to wage war or carry out aggressive activity."

Strategic defense (tactical mission) – Military actions carried out to protect friendly center(s) of gravity or other vital target sets, including command elements, war-production assets, and key supporting infrastructure in order to prevent a level of destruction and disintegration of friendly military capacity to the point where the friendly force no longer retains the ability or will to wage war or carry out aggressive activity.

support - 1. The action of a force that aids, protects, complements, or sustains another force in accordance with a directive requiring such action. 2. A unit that helps another unit in battle. 3. An element of a command that assists, protects, or supplies other forces in combat. (JP 1-02)

tactical control (TACON) - Command authority over assigned or attached forces or commands, or military capability or forces made available for tasking, that is limited to the detailed direction and control of movements or maneuvers within the operational area necessary to accomplish missions or tasks assigned. Tactical control is inherent in operational control. Tactical control may be delegated to, and exercised at any level at or below the level of combatant command. When forces are transferred between combatant commands, the command relationship the gaining commander will exercise (and the losing commander will relinquish) over these forces must be specified by the Secretary of Defense. Tactical control provides sufficient authority for controlling and directing the application of force or tactical use of combat support assets within the assigned mission or task. Also called TACON. (JP 1-02)

transformation – A process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations that exploit our nation's advantages and protects against our asymmetric vulnerabilities to sustain our strategic position in the world.[199]

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[199] OSD, *Transformation Planning Guidance*.

Transportation and Logistics Component Commander Forces (TLCCF) The apportionment category or the collection of forces the joint force commander (JFC) directs supporting service components to provide to the Joint Force Transportation and Logistics Component Commander (JFTLCC) in order for the JFTLCC to accomplish tasked missions. With this direction, the JFC establishes a TACON, general, direct and/or close support command authority between the components.

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