

Issue Paper

RAND

National Defense Research Institute

Preparing Military Forces for Integrated Operations in the Face of Uncertainty

David C. Gompert

INTRODUCTION: THE NEED FOR NEW CONCEPTS OF ORGANIZATION

This issue paper offers a way to think about two related issues that bear on current and future U.S. military effectiveness:

- How to *assemble* forces to meet operational needs in a security environment rife with uncertainty
- How to *transform* forces to exploit technology and meet long-term needs.

It is now widely agreed that both assembling and transforming forces in the new security era must be driven by the demands of joint operations. American military successes in Afghanistan and Iraq have proven this to all but die-hard skeptics. Yet, there has been only modest progress in building both a firm conceptual basis and a genuine consensus about how to enhance and make the most of operational jointness. We know organizational change to be essential to exploiting new technology, especially information technology. But change has been cautious and marginal in the U.S. military establishment.¹ The ideas in this paper are meant to prompt a more open debate about how best to prepare forces for whatever military contingencies the nation may call on them to face, now and in the future.

A premise of the paper, encouraged by recent combat experience, is that joint operations integrated by common information networks are key to enabling the United States to overcome a wide and fluid assortment of threats

and meet its global security needs. By combining effects from every domain (land, sea, aerospace, and cyberspace), allowing any unit of any service to draw upon the whole, and permitting new levels of boldness and speed, joint forces can outperform disjointed ones, all else being equal. Already, small and dispersed land forces exploiting overhead sensors can call in precision strikes from land- or ship-based aircraft to destroy fleeting targets—a critical but near-impossible task without network-enabled jointness.

Compelling as it is, however, integrating forces for joint operations compounds the problems of assembling forces for today and transforming them for tomorrow. Obviously, both assembling and transforming forces depend critically on how the military is organized. The greater the technological and doctrinal progress, the more apparent the organizational shortcomings become. Moreover, while preparing to operate jointly is the right strategic response to the uncertainties of global security, the combination of jointness and uncertainty demands a more responsive organization than that which exists today.

These waters are already partly charted and heavily trafficked. A number of practical steps have been taken or are under consideration within the Pentagon and at various commands to increase both the preparedness of forces for joint operations and the weight of joint requirements in transformation. Two of the more significant steps are (1) the empowerment of Joint Forces Command (JFCOM) to deliver joint forces to warfighting commanders and develop future joint operating capabilities and (2) the setting up of joint task force (JTF) headquarters

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 2003		2. REPORT TYPE		3. DATES COVERED -	
4. TITLE AND SUBTITLE Issue Paper. Preparing Military Forces for Integrated Operations in the Face of Uncertainty				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Rand Corp, 1700 Main St, Santa Monica, CA, 90407				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT see report					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 16	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

in peacetime to provide a running start when contingencies occur.

While taking account of such progress, this paper suggests that new security conditions, new technology, and new concepts of operation require more-innovative concepts of organization.² Specifically, it suggests

- placing limited, high-leverage “core” joint capabilities permanently under warfighting commands (with main forces remaining under the services in peacetime)
- creating links and processes to ensure that main forces provided by the services can be swiftly assembled, tailored, networked, and integrated around these core capabilities
- holding joint commanders accountable for the readiness of the joint force *as a whole*, including the ability to form it out of disparate parts
- using these same arrangements to align transformation efforts with anticipated joint operating needs.

These ideas are not radical—in fact, trends already point in their general direction. But they will be hard to implement. Structural adjustments rarely take place at the same speed as technological developments. Boundaries between services and joint warfighting commands are exceedingly complex. Jointness is relative, not absolute, and the degree of jointness is unsettled. The extent to which operations *can* be integrated is constrained by outstanding technical problems, such as non-interoperable communications gear. The extent to which operations *should* be integrated rests not on the fulfillment of some utopian scheme of total seamlessness but instead on practical optimization of when jointness is and is not operationally useful. Moreover, the U.S. military’s responsibility to meet current needs—already a heavy load—competes for time, resources, and attention with organizational renovation. Finally, tradition, habit, prudence, and jealousies among military organizations—joint versus service, service versus service, and even joint versus joint—offer tenacious resistance to change.

Despite these impediments—or perhaps because of them—the author hopes the concepts suggested here will lend coherence to steps already under way and encouragement to consider even bolder ones.

DEFINING THE PROBLEM

Back to Basics

The most fundamental *responsibilities* of military organizations are to fight wars and to get ready to fight them.³ “Fighting wars,” for the purpose of this paper, encompasses

the full spectrum of military operations, not just combat. In the specific case of U.S. forces in today’s security era, it also includes various peacetime operations and international activities, sometimes referred to as engagement or, lately, security cooperation. “Getting ready” involves training and arming forces. It also includes preparing for *future* operations, not just near-term ones, by modernizing or transforming.

These responsibilities overlap: Peacetime operations and international security engagements commonly involve preparations for contingencies; in crises, forces intensify their preparations even as they position for combat. Nevertheless, the two basic responsibilities of military organizations are worth differentiating because they demand different *general competencies*:

- *Operating* depends on the ability to make and execute decisions under uncertainty and urgency; real-time direction of strategic, operational, and tactical developments; and such intangibles as cohesion, adaptability, and risk management. In addition, peacetime operating responsibilities require diplomacy; routine deployment management; regional awareness, intelligence, and vigilance; and crisis management. Competence in operations planning spans peacetime and contingency responsibilities.
- *Getting forces ready to operate* involves planning, programming, and resource management; infrastructure and support service; skill definition and enhancement (e.g., individual and unit training); technological-strategic foresight; research and development; investing in people and systems; and policymaking.

In corporate argot, operating and getting ready to operate are two different “businesses,” with little commonality in the general competencies on which they depend. Or, within a single business, they are akin to “back office” and “front office”—two organizations that depend vitally on each other but differ greatly in functions, capabilities, and even culture. Getting their respective responsibilities right and clarifying the interaction between them are essential for success.

The same can be said for military organization. Obviously, the forces themselves are the same and have both responsibilities: Every unit must be good at preparing and at operating (how could it be otherwise?). What varies is how those forces are *organized* in view of the different competencies needed to meet the two different responsibilities.

Organizing to Prepare and to Operate

In military affairs as in business, the objective of organization is to align competency with responsibility. Because the two basic responsibilities of military organizations

demand dissimilar general competencies, no single U.S. military organization is—or, arguably, can be—suitable for both.

- The four armed services, as the traditional and statutory force providers, have the principal responsibility to prepare (formally, “to organize, train, and equip”) the vast majority of forces, and they have the competencies needed to do so.⁴
- Joint commands—particularly regional unified combatant commands, such as Central Command (CENTCOM) and Pacific Command (PACOM)—have chief responsibility for peacetime operations and contingency operations within their areas.⁵ Especially demanding joint operations are often mounted by JTFs that are set up and directed by the regional combatant commands.⁶

Although peacetime operations (e.g., security cooperation) and contingency operations emphasize different competencies, regional combatant commands are responsible for both, for a good and simple reason: The perilous passage from peacetime to crisis to combat is best navigated by the same command, which knows the region in question and the countries and forces—friend and foe—within it. However, the difference in competencies required for peacetime and contingency operations poses the challenge (addressed later) of how the regional commands can shift smoothly from the former to the latter, especially under uncertainty and time pressure.

The table below summarizes the basic responsibilities, the competencies needed to discharge them, and the organizations expected to maintain those competencies and carry out those responsibilities.

	Responsibility	Competencies	Organization
Getting Ready	Preparing forces for current operations and future needs	Administration and policy Infrastructure and support Training and equipping Investment	Services
Operating	Conducting peacetime operations	Relationship building Regional knowledge and shaping Intelligence and vigilance	Regional unified combatant commands
	Conducting contingency operations	Deploying and employing forces Decisionmaking under pressure and urgency Risk management	Regional unified combatant commands and JTF commands

The division of responsibility between services (to prepare) and combatant commands (to operate) is more or less the way U.S. armed forces have been managed for decades.⁷ It has served well:

- Training and equipping *like* forces—land, amphibious, land-based air, and naval forces (including ship-based air)—are best carried out by individual services. Commonality across one service lends economy, efficiency, and proficiency in preparing building blocks of forces, even for joint operations. Fundamental combat skills—shooting, flying, patrolling, maneuvering—tend to be service-specific. Moreover, the services have a global perspective that enables them to synthesize needs across regions and thus deliver standard forces to any and every joint combatant command.
- In addition to lacking global perspective and commonality, regional joint commands optimized for peacetime engagement and contingency operations lack the scope of competencies to train and equip forces.⁸
- At the same time, the United States can hardly afford to have its separate armed services each conducting its own peacetime operations, much less waging its own wars. Regional combatant commands are necessarily joint.

Although it is not obvious that there is a better basic way to organize, the traditional way presents two inherent challenges:

- How to ensure that getting ready for operations—training and maintaining for today, transforming for tomorrow—will in fact meet current and future oper-

ating needs, given that two separate, different organizations are responsible for preparing and for operating.

- How to transition swiftly and smoothly from a peacetime posture to joint contingency operations.

The way the military is organized seemed to work well enough during the Cold War (although we cannot know for sure because armed conflict with the Soviet Union was avoided). But the challenges inherent in having dual organizations were easier to meet then than they are now. In the era of East-West confrontation:

- The future seemed foreseeable—and for a while it largely was. Predictability (perceived, at least) prevailed, not only over the nature of operations for which forces had to be poised—i.e., World War III—but also over long-term preparations, or modernization, which was governed largely by extrapolating U.S.-Soviet arms competition. So preparing was relatively straightforward, and commands in charge of operating could be confident of receiving properly equipped and trained forces—not only for the near term but also for the long term, which was expected to be roughly like the near term.
- The transition from peacetime to contingency operations—again, World War III—was scripted in exquisitely detailed plans that were regularly exercised and fine-tuned. The task of assembling forces could be planned and practiced with little uncertainty about operating requirements, or so it was thought. It was known in advance what forces would be needed: essentially, all of them. Although there was concern about a short-warning Warsaw Pact attack in Central Europe, sharply focused preparations, as well as considerable automaticity in U.S. and NATO decisionmaking, were meant to ensure a timely response. The challenge was one of vigilance, not of organization.
- Peacetime posture and contingency operations were tightly linked by the very nature of the East-West confrontation. Cold-War alignments and force dispositions were fixed on the very geographic lines along which the war might have turned hot. The location of the “big contingency” was known (i.e., the inter-German border), even if the probability and timing were not. Units garrisoned and rehearsed on the same terrain they were expected to defend in war.
- In both planned (World War III) and actual (Vietnam) conflicts during the Cold War, the separate services played distinct and relatively autonomous roles in operating the forces they furnished. The Army, Navy, and Air Force each planned for and conducted its own slice of operations, which was only loosely coordinated

with those of the others.⁹ What coordination did occur, e.g., between the Army and Air Force, was primitive by today’s standards of joint operations; and information-network-based integration was a thing of the future. The way the military was organized to get and stay ready to fight—in corps, fleets, and wings—was generally the way it expected to fight.

The main problem for U.S. forces during the Cold War was whether they were adequate to defeat Soviet forces, not whether they could shift from peace to war. The predictable nature of war and the separate roles of the services in waging it made the shift straightforward.

What’s New?

In a word: lots. In three words: *uncertainty*, *initiative*, and *jointness*.

Uncertainty

Uncertainty both pervades the current international security environment and obstructs our view of how this environment will evolve. If we thought during the Cold War that we could confidently answer such questions as where, against whom, to what ends, how, with which allies, and with what forces the United States would enter military contingencies, we answer them today at our peril. Who would have predicted on 9/10/01 that the next major U.S. military operation would be weeks away; in Afghanistan; against the Taliban rulers and their “Arab guests”; with special operations forces on horseback calling in air strikes; with the underachieving Northern Alliance as the main ally and land force; and in response to the devastation of lower Manhattan?

As hard as guessing the who, where, when, and why of the next contingency in today’s security environment is trying to figure how the environment will change over time. Different schools of thought perceive different long-term geopolitical trends.¹⁰ There are also serious predictive and prescriptive analyses of the future of warfare.¹¹ But only the daring would map the next ten years in any detail. Anyone who did so in the promising early 1990s has been chastened by deteriorating security conditions from Southwest to Northeast Asia. Anyone convinced that the events of the past two years preview those of the next ten is no more sure to be right.

Along with uncertainty comes complexity (one being to the other what the chicken is to the egg). The first post-Cold-War decade shows that “full spectrum” is no mere buzzword. Being ready for virtually anything is both essential and difficult. From liberating Kuwait (1991), protecting the Kurds in Northern Iraq (1991), intervening in Somalia (1992) and Haiti (1994), signaling resolve in the Taiwan Strait (1996), and conducting strike operations in

Bosnia (1995) and Kosovo (1999) to flushing al Qaeda out of Afghanistan (2001), boarding suspicious ships on the high seas (2001–2002), and ending Baathist rule in Iraq (2003), the message from the new security environment is that we cannot count on just one or two versions of how U.S. forces will need to be employed.

Anyone who expected the current U.S. administration to narrow the range of contingencies for U.S. forces to “big wars” has been proved wrong. Neither the policies and actions of the Executive Branch nor the reactions of Congress suggest that there will be arbitrary proscriptions on the uses of U.S. forces.¹² Current Pentagon planning does a fair—not great—job of taking a range of possible types of contingencies into account when testing the adequacy of current and programmed U.S. forces. U.S. forces are in fact quite versatile, which helps provide flexibility in the face of uncertainty. Yet, in the current environment, even versatile forces cannot be assembled, dispatched, and employed according to fixed plans that try to anticipate every wrinkle of every contingency.

True, some recent operations have been predictable and thus planned way in advance—Bosnia for a year, Kosovo and the recent Iraq war for many months. But the first Gulf War and the Afghanistan campaign were strategic surprises. Banking on predictability and ample warning is imprudent. In sum, the need to cover the full spectrum, uncertainty about where on that spectrum the next contingency might occur, and variability in possible circumstances of each contingency mean that forces might have to be assembled quickly without foreknowledge of what forces are actually needed and what adversary and challenges they will face.

Initiative

Among the most critical factors in military operations is timely action—it is so critical, in fact, that the United States has recently declared that it may not always wait until it must react. During the Cold War, as noted, lines of confrontation and of possible hostilities were largely the same and fixed, in Central Europe and Northeast Asia, and U.S. and allied forces were deployed along those lines. Now, force could be needed anywhere within a vast and roiling area from the Mediterranean to East Asia. Without strategic warning, the United States may not have forces or bases—almost certainly not sufficient forces or bases—in places where hostilities occur. This means that the United States will often be at an initial time disadvantage unless it acts first.

Whether in reacting or taking the initiative, though, timeliness depends on warning and on the wit, will, and ability to act on it. Warning can be strategic (awareness of conditions that could lead to conflict) or tactical (awareness that conflict could be imminent). When facing the

Soviet Union, the United States enjoyed good strategic warning but less good tactical warning: The nature, capabilities, motives, and theaters of possible action of the adversary were known, even if the probability and timing of action were not. Nowadays, the United States may have better tactical warning but worse strategic warning. Today’s shadowy adversaries are harder to read than the Kremlin was—just think of Kim Jong-il and Osama bin Laden!—but intelligence collection is now better at detecting hostile preparations.

Even with improved intelligence capabilities, the United States is more inclined to take military initiative today than it was during the Cold War, when starting hostilities could have led to global war and possible nuclear Armageddon. Facing complex, fluid dangers and lacking consistently good strategic warning, the United States may no longer be able or willing to rely absolutely on tactical warning. Since 9/11, U.S. policy is to take preemptive military action if need be to forestall attacks.¹³ The tactic of preemption, hardly new in the annals of warfare, is being used (somewhat generously) to justify what amounts to a strategy of preventive war, such as the recent one against Iraq. While this is not to suggest that the war against Iraq was unjustified, preventive war raises profound questions of international law, order, and precedent that go beyond the scope of this paper. At the same time, the option of preempting a likely imminent act of war by an enemy is an important factor in any analysis of how to prepare forces for current and future operations.

As the world’s superpower with special security responsibilities, the United States is a uniquely attractive target for hostile entities, be they terrorists or rogue states with long-range missiles. Although homeland insecurity is being reduced, U.S. openness and integration in the world economy mean that it cannot be eliminated. Under these conditions, the United States is intent on having other options besides waiting to be struck. Moreover, better situational intelligence can improve the risk-benefit calculus of acting first. In addition to ensuring tactical military advantage, the prospect that U.S. forces might initiate decisive action can contribute to deterrence and compellence. For these reasons, the need to be able to preempt is no passing fad.

Even if the United States is able to choose the time and place of hostilities, the efficacy of such actions will likely depend on surprise. They may be taken under extreme time pressure (if truly preemptive as distinct from preventive). To guarantee success, they may involve coordinated or integrated use of multiple instruments—e.g., intrusive surveillance, deep precision strikes, and special operations. The task of assembling and integrating such capabilities can be very demanding, especially if there is a danger of imminent hostile action against the United States if not

effectively preempted. Although military initiative is an obvious remedy to the problem of having to react without warning, it reinforces the need to be able to tailor joint forces and to use them swiftly and decisively.

It will not always be wise or legitimate for the United States to take preemptive (much less preventive) military action. There is a danger of miscalculating the odds of being attacked and thus of using force unnecessarily. Indeed, preemption could trigger the very attack it is meant to forestall. Moreover, the idea of attacking first, however justifiable in some circumstances, could be borrowed by less-responsible states. For these reasons, preemption cannot be treated cavalierly or become the general solution to uncertainty. Enhancing the ability of the United States to respond promptly despite uncertainty could reduce U.S. reliance on preemptive war, with all its pitfalls, either by positioning forces to deter aggression or by wresting the initiative from the aggressor.

Jointness

The third major change from the old era to the new is the advent of genuine operational jointness. First motivated two decades ago by a desire to eliminate redundancy and deconflict services' roles and missions, jointness can now be seen as a way to gain a decisive battlefield edge while reducing vulnerability. Jointness also helps in confronting uncertainty: Because of their many combinations and permutations, joint forces are inherently more flexible and versatile than stovepiped service forces. The expanded capacity and use of information networks in recent years permit increasingly integrated joint operations, with service echelons (corps, fleets, wings) becoming less relevant and joint command structure more important. The Afghanistan and Iraq campaigns show that, thanks to networking, jointness can raise the age-old synergy between fires and maneuver to a new level.¹⁴

The current minimalist joint operating command architecture—a JTF commander and several joint component commanders (air, land, sea)—is only a beginning.¹⁵ Before long—years, not decades—U.S. military operations will be, or should be, directed by joint command organizations that extend down to lower levels, since it is unthinkable that four- or three-star JTF or component commanders will micromanage integrated operations.¹⁶

It is also likely that the services will organize increasingly compact fighting units, or building blocks, that are less dependent on traditional service echelons and can be readily networked as modules into joint operations. This move to modularity is already evident in the Army's Stryker Brigade and the Navy's Expeditionary Strike Group. As the trend continues, the interdependence

among modules in operations, regardless of service, will require a deeper reach of joint command. Ever-deeper operating jointness implies an ever-wider gap between the way forces are currently organized to prepare (i.e., by services) and the way they operate (i.e., integrated), a gap that may have to be closed quickly and without warning when contingencies arise.

A Compound Problem

As Figure 1 shows, there has been a growth in uncertainty and complexity of threats and operational challenges across a wide spectrum. In parallel, information technology is enabling operations to become more networked, integrated, and flexible, which can help in dealing with new threats, foreseen and unforeseen. Uncertainty, near- and longer-term, makes jointness all the more compelling. But complexity and integration together are making it harder both to assemble forces for current contingencies and to anticipate future requirements. Consequently, although the basic division of responsibilities between the services and joint combatant commands remains valid, the *relationship* between them must be updated.

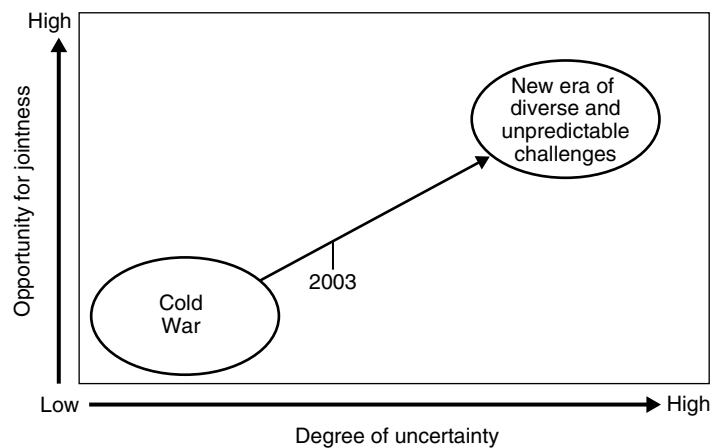


Figure 1—More Complex and Uncertain Threats

Put differently, the advantage of jointness and the value of speed and initiative make it imperative to connect preparations to operations. However, pre-scripting the transition from service-structured preparations to joint operating organizations may not work because of reduced predictability regarding what contingencies may occur, what forces are needed, and what circumstances await them. Since it is impossible to know the composition of a joint force needed for an unforeseeable contingency, generating that force will require ever-greater flexibility, not the multiplication of definitive contingency plans. Operations plans will remain important but had better be elastic. It is unsafe to assume that there will be ample time to plan or that standard packages of forces will suffice. The peace-

time organization of the military must be adapted to improve its responsiveness.

Assembling a force will no longer be a simple matter of separate services furnishing blocks of forces to serve under a joint combatant commander. The new challenge is to ensure that the building blocks provided can be brought gracefully and swiftly into joint operations using common networks. Because operations will be integrated, preparations will become impossible for the separate services to perform alone. Training, exercising, and equipping will have to be more joint. Can the Navy adequately train its units to respond to Army units with which they are networked?¹⁷ Should the Air Force and Navy plan and rehearse their strike options separately? Can the Army equip itself in isolation for maneuver operations that are integrated with Air Force and Navy strike operations?¹⁸

Much has been made, and rightly so, of the shortage of technically interoperable joint communications systems as a major impediment to integrated operations. Extant systems are largely the creations of individual services and are thus “closed,” meaning they cannot talk to one another. Because the large embedded base of these systems cannot be discarded and replaced in one fell swoop, great attention is being paid to how to work around and eventually grow out of this predicament. However, it is a mistake to think that this is the only hurdle to integrated operations. Even with plentiful technically interoperable joint command and control (C2) information networks, service units will have to be prepared to execute joint concepts of operations that exploit these networks. This, in turn, means that organizing, training, and equipping will have to anticipate the integrated way in which forces will operate. Although the organizational duality between preparing and operating will not vanish, a way must be found to link better the organizations that get ready (services) with those that operate (joint commands).

Figure 2 summarizes the growing difficulty of assembling forces for contingency operations. In the Cold War, forces could be assembled according to a predetermined war plan, in approximately the same way they were organized in peacetime: against a known adversary in a known, prepared location where at least some of the forces were already placed and had been exercising. Now, forces must be prepared to cover a wide swath of possible contingencies in unpredictable, unprepared, and unfamiliar places. It will not be known in advance what forces are needed. Because of poor strategic warning, they may have less time between warning and operations. On top of all this, they will have to be integrated for joint operations. These conditions could become even more severe in the future. This continually compounding challenge can only be met if forces are organized and prepared in peacetime

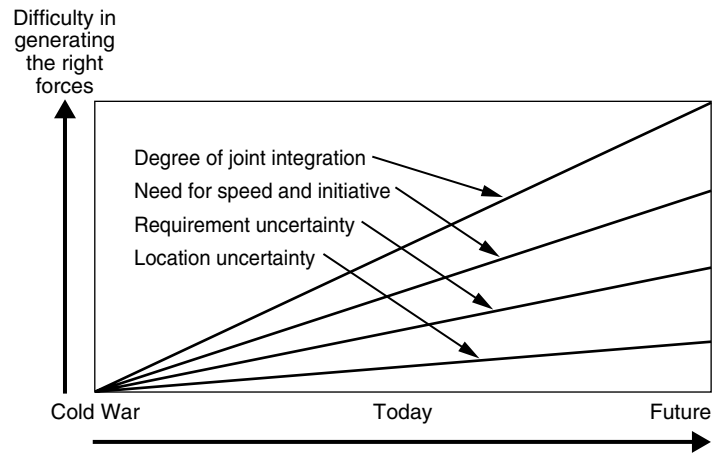


Figure 2—Assembling Forces for Contingencies

to make the transition from peace to war quickly and smoothly.

In addition to the problem of assembling forces, as the separate services’ roles in operations become less distinct, the services’ ability to anticipate long-term needs may suffer, especially as those needs are defined by the challenges of integrated joint operations. The services will retain a major role in long-term force planning, focused on providing the right building blocks. But the point of such planning must be to develop joint solutions to anticipated operational challenges. At a minimum, joint input and oversight of each service’s development of capabilities and doctrine will be needed. (We will say more about transformation later in the paper.)

TACKLING THE PROBLEM

A New Architecture for Preparing and Assembling Forces

If we were to make an analogy between military and political change, the right analog for the new U.S. military architecture would be not the French Revolution but the replacement of the Articles of Confederation with the U.S. Constitution—which provided greater unity (jointness) with a continuing role for the states (services).

The services will remain the appropriate structures to “organize, train, and equip”—up to a point.¹⁹ Regional joint combatant commands, being optimized and organized for peacetime engagement and for directing joint operations, are suited neither for routine preparation of forces nor for anticipating and investing to meet long-term, global needs. They lack the general competencies for the former; their time horizon is too close for the latter; and their regional blinders are a problem for both. Thus, despite the rise of uncertainty and the advent of joint inte-

gration, the services and the regional joint commands continue to have important roles to play.

At the same time, as noted, the division of labor between these dual organizations is becoming more awkward. It is necessary to find an approach that improves continuity between preparing—for both immediate and long-term needs—and operating. The need for a new approach was anticipated in the creation of JFCOM in October 1999, the mission of which includes concept development, requirements-setting, training, and delivery of joint forces to combatant commanders. The time has come to go further. Figure 3 points toward a way of doing that. It shows where organizational responsibility should lie for preparing various capabilities in peacetime. It suggests a new architecture for preparing, given the rise of complexity and integration and the inherent limitations on the general competencies of the services.

The architecture depicted here features the joint combatant command (e.g., JTF command within a regional unified combatant command) at the center and puts within its peacetime reach all capabilities, seen as concentric circles (labeled A, B, and C), that it may need for contingency operations. The goal is to ensure that capabilities for an integrated joint operation are available, prepared, and tailorable, *even when it may not be known in advance what capabilities are needed*. As a general principle, capabilities closer to the center are

- more likely than others to be needed, and needed early, in every contingency
- particularly valuable in the smooth and speedy assembly, deployment, and employment of the whole force
- potentially critical to the network
- relatively independent of any of the separate services to be trained, equipped, and organized.

Battle-Management Nucleus

At the very center would be, of course, the JTF commander (the regional commander or designee). Circle A would include the commander's joint battle-management staff. The need for this inner circle is by no means a new idea: Efforts have been under way for some years to beef up the regional combatant commander's peacetime staff to be better prepared for contingencies.²⁰ The battle-management staff would be designed and trained to plan, customize, and assemble forces for contingency operations and to help guide those operations. It would plan, set up, and manage the joint operating network.

As noted earlier, battle-management competencies differ from those required for normal peacetime activities of a regional command, e.g., security cooperation, basing, rou-

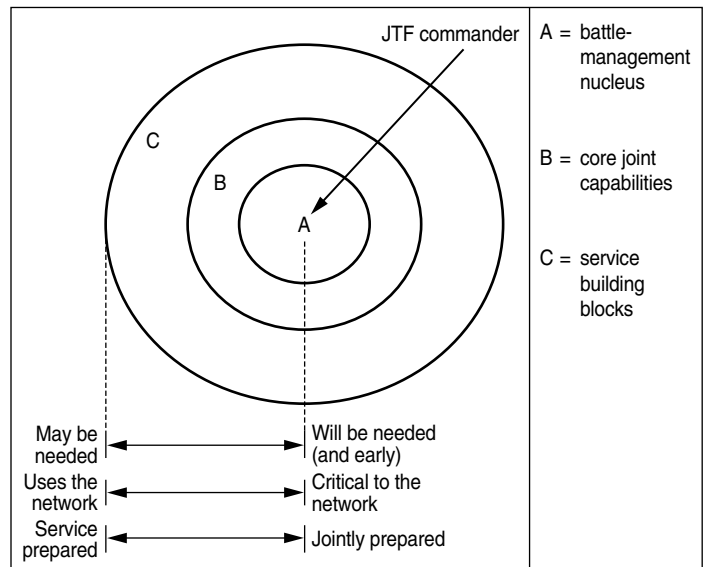


Figure 3—Rings of Capabilities: A New Way of Preparing

tine deployments, and regional affairs. However, for continuity, there should be overlap between the regional command peacetime staff and the JTF battle-management staff, either through collocation or double-hatting. Thus, most of the staff needed in circle A will already be there when a crisis arises.

Along with the commander and battle-management staff, circle A should also include those minimum C2 technical capabilities that the command must have at its disposal to ensure that it is ready to act. This might consist of a command center/platform—perhaps one fixed and one deployable (ship, air, land)—communications packages, bandwidth, processing hardware and software, and displays. Together, the commander, staff, and C2 center represent the minimum essential *nucleus* of a joint force. Although the battle-management staff could, in theory, be flown in to reinforce the commander in the event of a crisis, any advantages of doing so are far outweighed by loss of speed, familiarity, and continuity. Therefore, circle A capabilities should be kept in place at all times within the regional combatant command to ensure the ability to assemble and integrate a joint force in the face of uncertainty and possibly short warning.²¹

Force Building Blocks

The outer circle (C) comprises the forces to be prepared in peacetime by the services—Army brigades, Navy carrier battle groups and expeditionary strike groups, Marine expeditionary units, Air Force expeditionary forces, and the like. These units represent the main *building blocks* and the bulk of a joint force. Barring a major change in the strategic environment, such as a need for exceptionally high permanent readiness of a large portion of U.S. forces, these building blocks are best maintained, prepared, and

provided by the organizations with the general competencies to train and equip them: the separate services. Which of these building-block forces would actually be called upon by the joint commander for use in a particular contingency is hard to judge in the abstract (that is, in peacetime)—another compelling reason to keep the forces under the services until needed.

Like any building blocks, these forces must be able to fit snugly together to create a structure with integrity. Although this requirement-to-fit is not new, the compound challenges of uncertainty and integration make it more dynamic and demanding than in the past. The fitting together must happen quickly, flexibly, and thoroughly, even though the ultimate force to be assembled is uncertain, as it was in the recent Iraq war. The battle-management nucleus would tailor the force by determining what building blocks to assemble, possibly on the run. The network, fashioned by the battle-management staff, provides the connectivity needed to integrate the building blocks for and during an operation.

Although the joint command cannot know contingency requirements in advance, it should know what service building blocks are available and be confident that they are prepared to operate effectively in an integrated operation if summoned. This process would be accomplished (to an extent, it already is) by earmarking forces for presumed assignment to one or another regional command—except for scarce forces, which would have to be reserved at the national level. To a large degree, such earmarking would relieve the joint command of the need to request forces (except as a formality) and any uncertainty about what would be provided.²² It would also facilitate placing on that command the ultimate responsibility to ensure and exercise readiness to form a joint force (more on readiness below).²³ Of course, a significant change in global security conditions or a crisis of global implications could require reassessment of earmarking service building blocks for regional combatant commands.

Core Joint Capabilities

Although the inner and outer circles of this architecture do not imply significant changes in organization, the middle circle does. In addition to the battle-management nucleus, certain core capabilities will be needed, and probably needed early, in *most* expeditionary contingencies and circumstances along the spectrum. These lie in circle B of the new architecture. Examples of such capabilities might include

- minimum intelligence, surveillance, and reconnaissance (ISR) assets (other than national space-based systems) that could be critical at the earliest stage of any sudden operation

- some special operations forces (SOF)—which have a way of seeing action in nearly every U.S. military operation—for early entry, reconnaissance, and/or action against weapons of mass destruction
- information operations (IO) personnel and instruments (for psychological operations, computer network assurance, and information warfare)
- some lift and logistics capabilities, e.g., management systems and force debarkation units
- fire-power liaison and support teams
- security for deployable forces and temporary bases, including antiterrorism capabilities
- Chemical, biological, and nuclear (CBN) warfare detection, response, and consequence management.

Because of uncertainties and difficulties associated with gaining access to a theater of conflict, not to mention the absence of land-based infrastructure, another possible core joint capability is what the Navy and Marines call “sea basing.”²⁴ Still in concept development, this capability might consist of clusters of ships and fast means to get to them, among them, and from them to shore. It would enable U.S. forces to be deployed and sustained near locations that were not predicted, developed, accessible, or safe. One can imagine that “sea bases” could be the semi-permanent homes to the JTF battle-management nuclei as well as certain of the core joint capabilities listed above—such as SOF, lift and logistics support, and ISR (e.g., unmanned aerial vehicles). Sea basing itself depends vitally on an information network, which could be virtually the same as the core JTF network, thus facilitating the integration of later-arriving service building blocks.

Along with sea basing, it is also worth considering whether the JTF core should include some small, quick-response strike and maneuver forces (in addition to SOF). The Marines already view sea basing as a mobile way to position and support forcible-entry capabilities; such forces could very well become part of an increasingly robust set of core joint capabilities.

Note that all these examples of *core* joint capabilities both are important in their own right and could be essential to the effectiveness of the much larger building-block forces provided by the services. There may be no tolerance for uncertainty in the availability of core capabilities and no excuse for delay, given that they are presumed to be needed (whether they prove to be or not). These capabilities either could be vital in constructing the network (e.g., ISR, IO, SOF) or must enter the network rapidly to mount the operation (fire liaison, logistics). All of them must be able to interact freely with two or more services. Even if

manned and equipped by one service, they are essentially joint capabilities. One of the advantages of assigning such core joint capabilities permanently to the regional combatant command is that the battle-management staff would be able to focus its attention on tailoring and assembling the bulk of the force from service building-blocks, having the core capabilities already in place.

Readers may worry that “hard-wired” assignment of such core joint forces to a standing theater-specific JTF within a regional combatant command would render important assets unavailable for their other peacetime activities or stretch them too thin to serve under the standing JTF and perform other duties effectively. This need not be a problem. Core forces would still go through the normal range and rhythm of peacetime activities—e.g., training and maintenance. But they would be ready to use with minimal warning or delay *as joint capabilities*, by virtue of their assignment to a standing JTF at a regional combatant command.

A more serious problem could be a critical shortage of core capabilities at one command during a contingency because all other such capabilities are committed to other commands. But this could be mitigated by reassignment protocols or, better yet, by not assigning all such capabilities to a regional command and instead assigning some of them to one or another global joint command, for instance, STRATCOM or TRANSCOM.²⁵ Obviously, tradeoffs have to be made between the enhanced responsiveness of placing such assets under the joint commander and the loss of global flexibility by doing so. Such choices would require detailed and continuing analysis, capability by capability.

As a practical matter, the joint command would surely “outsource” to the appropriate service those train-and-equip tasks for core capabilities that the service is most competent to perform. For example, the Air Force would ensure that airborne ISR systems are kept current; the Marines could see to the training of debarkation units and forces for initial forcible entry; and the Navy would man, maintain, and sail sea-basing platforms. But the joint command would set requirements based on the needs of joint operations.²⁶ The capabilities would “belong” permanently to the joint command—with allowance for rotation or emergency reassignment. Thus, practical changes could be limited and nondisruptive. But the alignment of responsibility would be crucial for responsiveness.

A fuller image may give the reader a better feel for the entire joint force. Figure 4 shows that core joint capabilities may be the first to see action.

Implementation

This architecture suggests an expanded notion of a standing joint capability under an operating command—

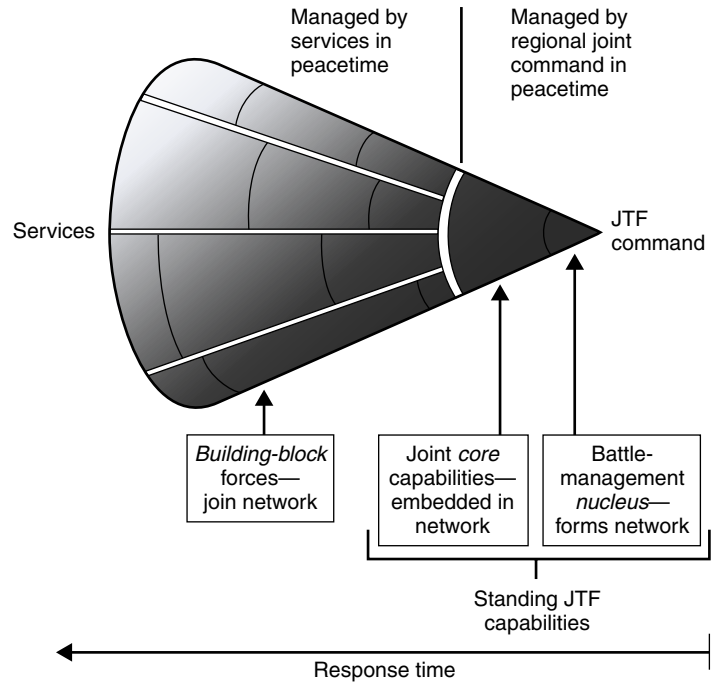


Figure 4—Organizing Joint Capabilities

more than a standing JTF headquarters but less than a full-blown standing JTF. It responds to Defense Secretary Donald Rumsfeld’s interest in improving the nation’s ability to generate joint forces for a wide range of contingencies. It would give the president the option of acting swiftly but confidently even if the requirement and thus the composition of the force cannot be known in advance. Yet it would not require the reorganizational equivalent of the French Revolution.

Something akin to the first step—creating the battle-management nucleus—is already being done through an initiative of JFCOM, which is grooming staff cadres and associated C2 capabilities to deploy to joint operating commanders upon warning. In focusing especially on minimum essential battle management (BM) capabilities for a joint force, JFCOM is starting in the right place. At the same time, there could be a tension between JFCOM’s mandate to be able to generate joint capabilities and the combatant command’s determination to mold and manage those capabilities itself. Although more analysis is needed before determining which core joint capabilities should be housed at the combatant command, JFCOM, or elsewhere, the aim of improving responsiveness suggests that, in due course, joint capabilities should migrate toward the commands that will employ them.

More broadly, what is needed is a *joint community* in which JFCOM is champion, innovator, and developer of solutions (joint doctrine and capabilities), whereas the combatant commands are the line organizations with the

responsibility to conduct joint operation and therefore with the resources at hand to be ready to do so in the face of uncertainty and possible urgency. Once developed by JFCOM, core joint capabilities would be assigned to operational commands, whereupon JFCOM would turn to further development. Joint personnel assignments, teams, and other methods could be used to foster movement of ideas and solutions throughout the community.

Another recent development is the proliferation of standing JTFs—in reality, standing JTF staff cadres—for specific contingencies. This proliferation may prove to be an unnecessary burden on both the regional commands and the services, which must send personnel or other assets to support them. The idea offered in this paper is that the nucleus and core, both presumed necessary in any case, could grow quickly and flexibly into *whatever* full JTF is needed. In theory, a standing JTF, so designed, would be able to handle any contingency within a given region. Consequently, there would be no need for numerous specialized ad hoc standing JTFs. The greater the flexibility of a JTF to respond to different sorts of contingencies, the fewer JTFs needed.

The number of flexible JTFs per regional combatant commander could be pegged to the number of contingencies in that region that are deemed both likely and critical enough to require such standing capabilities. The best indicator of this number might be the set of contingencies for which national operations plans (OPLANs) are formally required. One could foresee, say, three to six such JTFs in the evolving security era, concentrated in the Central and Pacific theaters.

The architecture suggested here would also be conducive to involvement of allies and other participants in U.S.-led coalition military operations. It might include

- personnel of especially close allies in the battle-management nucleus
- important allied capabilities alongside U.S. capabilities in the core
- allied main-force building blocks that are assembled into the force as a whole.

This would improve coalition political cohesion, military interoperability, and readiness. It would also take into account that some allies are closer and/or more capable militarily than others—thus their presence in the standing JTF nucleus and/or core.

Allied participation could be arranged bilaterally or multilaterally. Exercising could elevate confidence in both the willingness and the ability of allies to commit forces to contingencies, even hard-to-predict ones. In the context of NATO, providing for allied participation in JTFs, includ-

ing their standing elements, would also reinforce the goal of allied force transformation announced at the recent Prague summit. One could easily imagine the integration of the planned NATO Response Force with one or another U.S. JTF.

With this background, Figure 5 shows a more defined illustration of the construct.

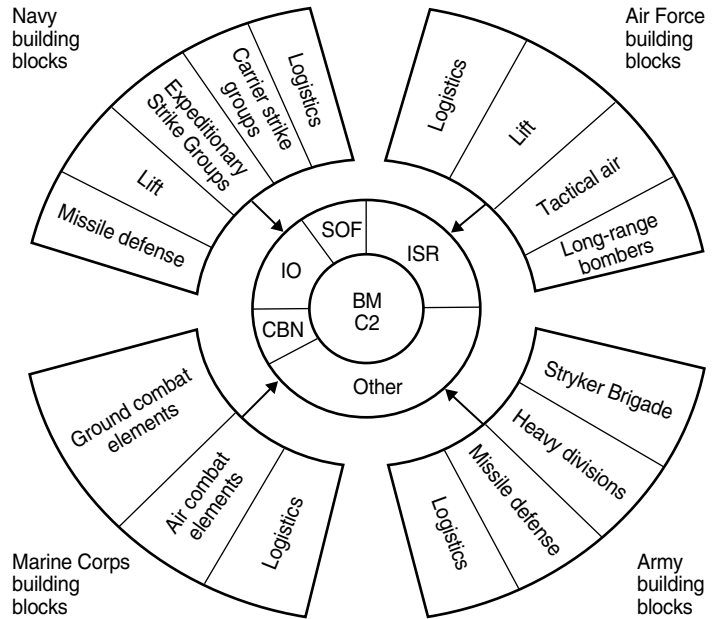


Figure 5—The Building-Block Construct

The approach of the Marines to force preparation could be an example. The Marines already organize air-ground units—Marine Air-Ground Task Forces (MAGTFs)—to ensure integrated readiness for integrated operations.²⁷ These in turn are to be married with naval forces, for instance, Expeditionary Strike Groups, to form a sea-deployable air-ground capability. Thus, the forces the Marines provide to a joint command are not elementary building blocks but rather are already partially joint and prepared as such. Generally speaking, having service building blocks that are themselves designed and exercised to fit together and into a joint force would make the architecture all the stronger.

Preparing, Exercising, and Operating the Whole Force

As noted, the battle-management nucleus and core capabilities should facilitate the assembly of the rest of the tailored joint force from mainly earmarked Army, Navy, Air Force, and Marine units. Intensive exercising and common training would be essential to increase the readiness and cohesion of the standing joint capability (nucleus plus core). Exercising the ability to join together

and operate the entire force (nucleus, core, and building blocks) on a common information network will become as important as exercising the intrinsic capabilities of the separate parts.

Over time, core joint capabilities might not retain strong service affiliations. SOF are an interesting case in point: Their peacetime organization is joint; their personnel remain members of one or another service; they are prepared to support or be supported by any service; they are responsible for training and equipping themselves; and they are tightly aligned with joint operating commands. Although there are still service components within SOF, all of them function more or less as a joint force in peacetime and war. Existing or new global joint commands could take analogous responsibility for other core joint capabilities.

The essence of the suggested architecture is *responsiveness with flexibility*—being able to act promptly and properly despite uncertainty. Figures 6 and 7 depict two examples of different contingencies—or exercises—for which a flexible, responsive JTF might be constituted. Note the relevance of the standing battle-management nucleus and core joint capabilities in both cases.

The combination of uncertainty and increasingly integrated jointness will compound the difficulty of ensuring the readiness of a joint force. Because it is impossible to foresee every contingency, the composition of the joint forces required cannot be known. Moreover, having ready separate building blocks does not translate into having a ready force of integrated building blocks. Only the joint combatant (regional or JTF) commander can vouch for the readiness of the force as a whole, and even that is complicated by the fact that the actual force will vary depending on the need.

Solving this puzzle will require that responsibilities for readiness be assigned and met as follows:

- The services are responsible for building-block readiness based on global standards.
- In addition, they are responsible to the relevant combatant commander—or JFCOM if they are not earmarked—for meeting joint-force standards of readiness to assemble and integrate with other forces. (This may require setting universal standards and procedures for assembling interoperable joint forces so that the services will have basic guidelines for preparation.)
- The combatant commander is responsible for the readiness of the standing joint capabilities (nucleus and core), including the ability to tailor and form up the building blocks.

- At the end of the day, the joint commander must answer for the readiness of the joint force as a whole—to be more precise, for the readiness of *whatever* joint force might need to be formed.

Of course, it is an essential aspect of preparation to exercise both the tailoring of forces and connecting them to

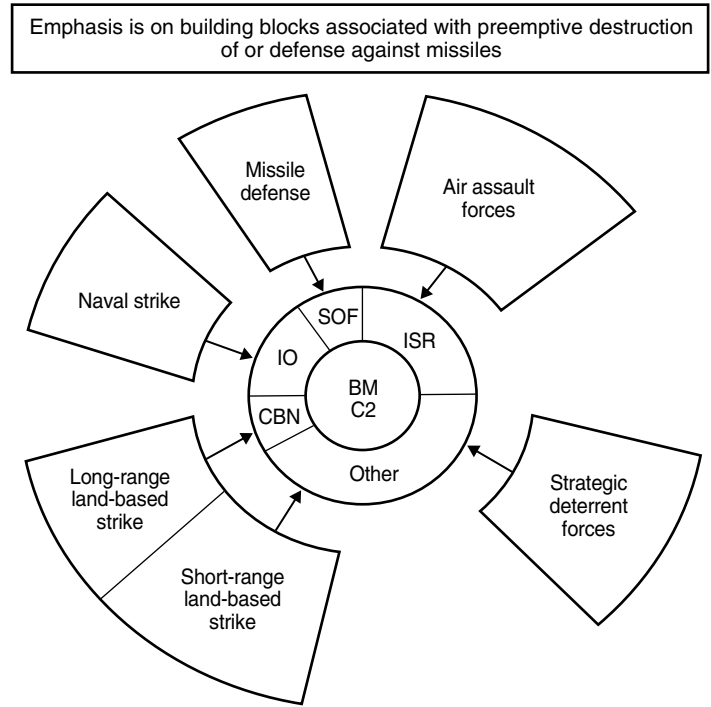


Figure 6—Countering a Missile Threat to Forward Forces

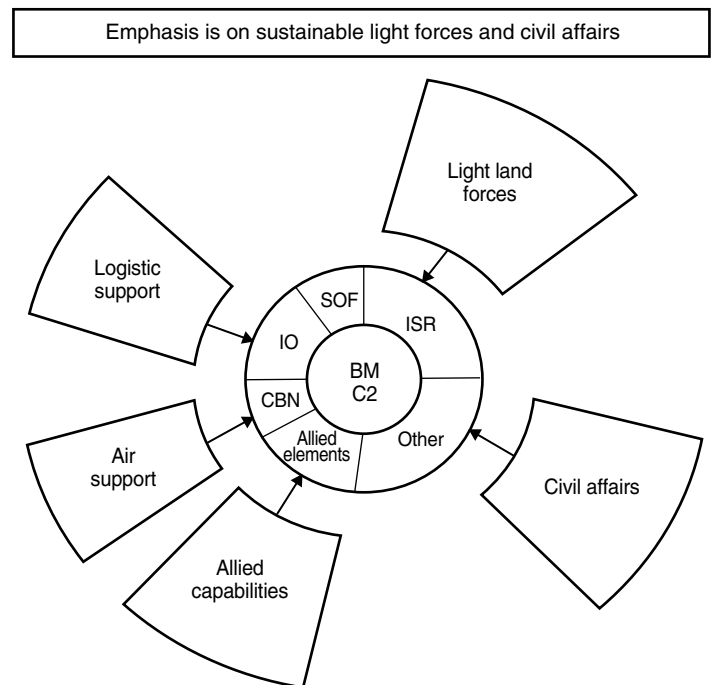


Figure 7—Organizing for Post-Conflict Stability Operations

a common operating network. In these respects, preparations cannot be left entirely to the services; the joint command is in a better position to exercise the ability to form the building blocks into a force. Exercising the nucleus, the nucleus plus core, and the nucleus plus core plus building blocks in various combinations and permutations (such as those illustrated in the above figures) will be one of the major peacetime responsibilities of the joint command and an increasingly important activity of the forces themselves.

Finally, the architecture suggested here would help ensure a smooth transition from peacetime engagement to contingency operations for the joint combatant commands themselves. The alignment and readiness of battle-management staff, C2, and crucial core capabilities mean that all the critical competencies needed to operate—other than service building blocks—will be in place within the command at all times. This placement can avoid a situation in which a regional command focused on peacetime engagement is suddenly faced with the need to retool in order to operate. The joint commander will only need to shift gears, not switch cars.

TRANSFORMATION

The challenge of preparing for joint operations extends from assembling existing forces for today's uncertain needs to developing forces to meet the needs of an uncertain future. Whether or not the future is now more uncertain than it was during the Cold War is impossible to say (or even fathom). But there is clearly a greater appreciation now of the future's uncertainty. Moreover, the revolutionary possibilities of information technology—sensors, processing, and networking—make it possible to transform both operating concepts and capabilities. By enhancing speed, dispersion, precision, lethality, rapid deployability, survivability, and awareness, transformation is worth pursuing both to overcome the operational challenges we can anticipate and to position ourselves better for the challenges we cannot anticipate.

Since 9/11, no military service or joint command is lacking in passion for transforming forces.²⁸ This is partly because awareness has grown that the new security environment requires transformation and partly because increased defense spending has obviated the need to sacrifice legacy procurement programs and current force structure to invest in transformation. Although it is good to have this broad, enthusiastic support for transformation, it is not obvious where the chief responsibility for transformation lies within the armed forces: Is it the services or the joint commands?

This ambiguity was less noticeable, and of less concern, before transformation accelerated in recent years. While both organizations are vital to transformation and

should have some leeway, the relationship between *pull* from the joint commands and *push* by the services needs to be settled. It can be.

Focusing on Networked Solutions to Joint Operational Challenges

The specific problem, already described elsewhere, is that the best solutions to anticipated future operational challenges are increasingly joint—i.e., solutions based on networked capabilities from multiple services.²⁹ An individual service may be able to craft a best “product” to meet a future need (e.g., antisubmarine warfare can be done by the Navy alone). But it is fair to presume that, for many tasks, networking permits combined and better effects by drawing on capabilities of two or more services.

Responsibility for devising networked solutions to anticipated operational challenges should fall upon those responsible for joint (network-based) operations. It is well known, however, that the regional unified combatant commands do not have the distant time horizons needed to conceive future operational needs—they are preoccupied with engaging and operating in the here and now. Hence, one of the main reasons JFCOM was created is to identify *long-term* joint needs and develop solutions to them.

At the same time, it would be a mistake to tell the services they need not concern themselves with transformation. After all, they are still expected to prepare forces for the long term as well as for the short term. Recall that the services are the organizations with general competencies in making and managing investments on a global basis. Even under the architecture suggested above, the services provide the bulk of the forces that are to be integrated into a joint force using common networks. The content of most joint solutions (e.g., interdicting an enemy force, knocking down anti-access defense, securing critical points of land) will come mostly from the services. Transforming building blocks is crucial to developing novel joint solutions and is just as important. So the aim is not to relieve any organization of responsibility to transform, but to clarify and align roles.

Using the Same Architecture to Aid Transformation

One way to approach the issue of *who* is supposed to transform *what* is to use the architecture suggested above not only to assemble forces for immediate needs but also to develop and implement solutions to future operational demands. In such a scheme, the joint community would have the responsibility to transform joint capabilities of the nucleus and core. JFCOM—or, in particular cases, the other joint noncombatant commands—would be responsible for clarifying operational challenges, devising solutions, and planning and programming the capabilities to give

life to those solutions. This is more or less the way Special Operations Command (SOCOM) functions today for SOF transformation.

In addition, the joint community, guided worldwide by JFCOM, would be responsible for conceiving *total* solutions to anticipated future operational challenges. It would indicate what building blocks are needed, what capabilities those forces should have to meet a particular challenge (leaving ample scope to adapt), and how building blocks would fit and function together. It would then send the demand signal to the services. This is done to some extent already. However, the services have the discretion to heed or disregard the signal. Greater accountability is needed, either through budget controls or some other way.

The services would then be responsible for transforming the building blocks, using new technology, new concepts of operation, and new models of organization to develop forces that the joint commands need for their integrated solutions. Service transformation would be indispensable but would respond to needs flowing from operational solutions conceived by the joint combatant commands and synthesized by JFCOM. JFCOM has begun efforts in this direction focused on battle management. While the nucleus of the joint force is, again, the right place to start, the goal must be to extend outward to develop transformational solutions for core joint capabilities and for networked building blocks.

Such responsiveness would help ensure that the transformed capabilities of the services could be networked effectively, both in the narrow technical sense that has received most attention to date and in a larger operational sense. This approach would amount to outside-in/operational-pull transformation as opposed to inside-out/product-push transformation by the services (or top-down transformation devised and dictated by DoD leadership). Experience from nonmilitary transformation suggests that this is what it takes to exploit and evolve information networking.

In effect, the joint community would be responsible for transforming standing joint capabilities and for signaling to the service the requirements for transforming all other capabilities. Figure 8 illustrates how these responsibilities would be distributed. Note the direction of the arrows (connoting demand signal), indicating that all capabilities requirements would be defined by integrated solutions to anticipated operational challenges.

One way to ensure a continuous line of thinking from operating command through JFCOM to the services is to organize *teams* that cut across joint and service organizational lines. These teams would be challenged to come up with solutions to operational problems and see them through to fruition. This has been tried, albeit with mixed

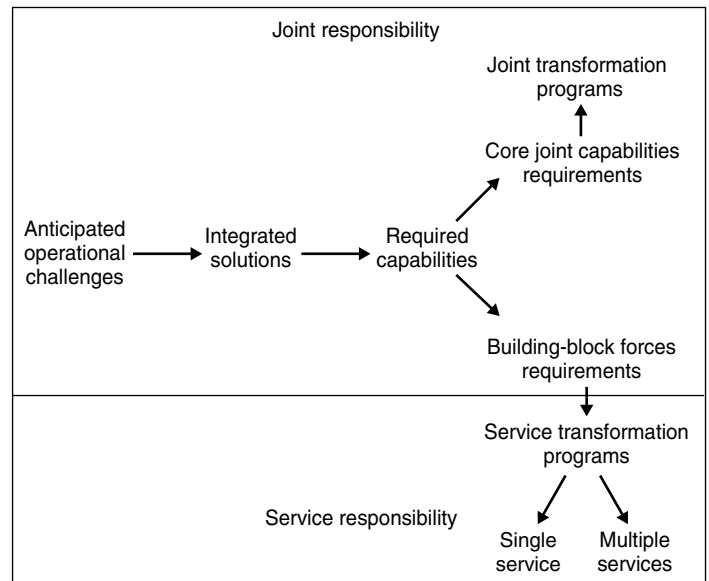


Figure 8—Distributing Transformation Responsibilities

results. However, DoD-wide agreement on the basic construct suggested above would establish clearly that the joint commands are responsible for defining, developing, and implementing solutions to challenges associated with standing joint capabilities and for defining—but not developing or implementing—requirements for forces that are best maintained and prepared by the services.

Using teams to enable the joint commands to reach into the services—across hierarchical boundaries—to meet their long-term needs would be akin to how they would reach into the services to meet their immediate operational needs. Just as the joint command would be ultimately responsible for the readiness of the whole force, it would be responsible for transformation of the whole. And just as the services would be responsible to the joint commander for readiness of the building blocks (short-term preparation), they would be responsible to the joint commands for transformation of the building blocks (long-term preparation).

CONCLUSION

The aim stated at the outset of this paper was to offer for debate ideas to improve the ability of the U.S. military both to assemble forces for contingencies and to transform them for the future, given uncertainty (near- and long-term) and the promise of network-based integrated operations. It turns out that the same architecture can address both objectives. The concept is not radically different from what is already being considered and even tried ad hoc by some commands, nor is it different from what the top DoD leadership has been seeking. The standing JTF elements suggested above represent only a small part of U.S. forces.

But they could play a crucial part both in responding to immediate contingencies and in exploiting networks to ensure that future capabilities meet the nation's needs.

ENDNOTES

- 1 To those who have made (and suffered through) military organizational change, it may seem anything but cautious and marginal. However, comparing it with changes made to exploit IT in other sectors, the author stands by this characterization.
- 2 It should surprise no one that reorganization might be indicated. After all, other sectors (e.g., banking, manufacturing, and wholesale) have managed to exploit the information revolution only by changing, sometimes radically, the way they organize and operate. Yet organizational change in other sectors also took time, especially for large and complex structures akin to the U.S. military.
- 3 These responsibilities are not the sole domain of uniformed military organizations. The Secretary of Defense and his civilian subordinates also have major roles in preparing forces and in overseeing operations. This paper does not address the civil-military division of responsibility, instead confining itself to how the military organizes.
- 4 "Force providers" is a standard term often applied to the services. But this term may become increasingly ambiguous because there are also "joint force providers" for certain critical multiservice capabilities, such as Special Operations Command (SOCOM), Transportation Command (TRANSCOM), and Strategic Command (STRATCOM).
- 5 PACOM and CENTCOM are mentioned because they are the commands most likely to have to conduct large joint expeditionary operations. Because of security progress in Europe and the Western Hemisphere, European Command (EUCOM) and Southern Command (SOUTHCOM) are less likely to be so called upon; they "engage" more than they "operate." Nonetheless, the ideas in this paper could apply to all.
- 6 A JTF does not necessarily have to come under the operational control of a regional combatant command. But every regional combatant command must be able to exercise such control when called upon to do so.
- 7 The Goldwater-Nichols DoD Reorganization Act of 1986 made the commanders of the existing unified commands truly joint commanders accountable to the National Command Authority for performing their assigned missions. In theory, the act cut the service secretaries and chiefs of staff out of the operational chain of command.
- 8 For example, designing new systems; managing research, development, and procurement; running schools; maintaining equipment and infrastructure; providing routine peacetime services for service members and their families; and recruiting and other personnel management tasks.
- 9 This segregation began to break down as air and land forces became more interdependent in U.S. and NATO planning for defense in Europe (under AirLand Battle Doctrine), where the use of increasingly superior U.S. tactical air power was placed at the service of land forces otherwise faced with Soviet armor preponderance.
- 10 For example, in *Right Makes Might: Freedom and Power in the Information Age* (National Defense University, 1998) the author argues that globalization and the centrality of information technology create a strong trend toward economic, technological, political, and military superiority for the free-market economies, above all the United States, giving them the ability to cope with new security challenges. At the other extreme, Robert D. Kaplan argues in *The Coming Anarchy: Shattered Dreams of the Post-Cold-War World* (Vintage Books, 2001) that demographic, distributional, and political trends will lead to growing chaos.
- 11 See, for instance, John Arquilla and David Ronfeldt, *In Athena's Camp: Preparing for Conflict in the Information Age* (RAND, 1997).
- 12 The current U.S. administration replaced the two-major-theater-war force-planning standard of its predecessor partly because it judged that that standard did not account for diverse needs. *Quadrennial Defense Review Report* (Released 30 September 2001), pp. 17–18.
- 13 National Security Council. *The National Security Strategy of the United States* (Released September 2002), pp. 15–16.
- 14 On Afghanistan, see Stephen Biddle, "Afghanistan and Future Warfare," *Foreign Affairs*, Vol. 82, No. 2, 2003.
- 15 The land, maritime, and air component commanders are in fact little more than the commanders of Army, Navy, and Air Force contributions to the JTF. While this arrangement is the right place to start in theory, in practice it will not advance the goal of operational integration if it merely perpetuates service distinctions.
- 16 Micromanagement is, in fact, a current risk for U.S. network-centric operations, given the availability of a detailed real-time operating picture. Anecdotes provided by junior officers suggest that senior officers are exploiting the network to become more involved in tactical choices than is helpful. The U.S. military would be well advised to study how British forces plan to use improved awareness and networking to distribute authority officers closer to the action. British tradition has been to empower front-line officers, and that is the way the UK intends to use what it calls "network-enhanced capabilities."
- 17 The formation of the naval Expeditionary Strike Group is, in part, an effort to strengthen Navy-Marine preparation for operations.
- 18 Prototypically, the Navy and the Marines already prepare together, such as in exercising Amphibious Ready Groups comprised of units from both services. Of course, long-standing organic connections between these services make the leap from this example to other interservice preparations a large one.
- 19 This responsibility falls to them under U.S. law—See Sections 3062, 5062, and 8062 of Title X, U.S. Code, for each service's organizational responsibilities.
- 20 PACOM has been moving in this direction for nearly a decade.
- 21 Rotational assignment of individuals or subunits would be adequate for the task.
- 22 A place to start would be to earmark forces for CENTCOM and PACOM, the commands most likely to face major contingencies.
- 23 In fact, Goldwater-Nichols anticipated this development by making the regional joint commanders responsible for the "preparedness . . . to carry out the missions assigned to [them]." (Goldwater-Nichols Department of Defense Reorganization Act of 1986, Public Law 99-433, 1 October 1986, Section 211, Chapter 6, sec. 164(b)(2)(B).)

- 24 The concept of sea basing is being developed and proposed by the Chief of Naval Operations and the Commandant of the Marine Corps to ensure support for forcible entry anywhere in the world.
- 25 Existing noncombatant joint commands are TRANSCOM, STRATCOM, SOCOM, and JFCOM.
- 26 JFCOM could perform this function for forces not earmarked to regional combatant commands.
- 27 A MAGTF can range in size from a Marine Expeditionary Unit at the low end, to a Marine Expeditionary Brigade, to a Marine Expeditionary Force at the high end.
- 28 Prior to 9/11, transformation had a bumpy history. The intellectual foundations were largely laid during the 1990s, when the nexus of information technology and the military demands of the post-Cold-War era were first understood (under the rubric “revolution in military affairs”). It took the better part of that decade before these ideas made any gains in the defense and military establishments, owing to bureaucratic and programmatic inertia. Even the new U.S. administration of 2001, which made transformation a major campaign theme, had difficulty gaining the support of the armed services, with their vested interests and vested ideas. It took 9/11 and the ensuing Afghanistan campaign to provide the resources and evidence needed to align all the players.
- 29 See David Gompert and Irving Lachow, *Transforming U.S. Forces: Lessons from the Wider Revolution* (RAND, 2000).

This research was conducted within RAND's National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense, the Joint Staff, the unified commands, and the defense agencies.

RAND is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. Results of specific studies are documented in other RAND publications and in professional journal articles and books. To obtain information about RAND studies or to order documents, contact Distribution Services (Telephone: 310-451-7002; toll free 877-584-8642; FAX: 310-451-6915; or email: order@rand.org). Abstracts of RAND documents may be viewed at www.rand.org. RAND® is a registered trademark.

RAND

1700 Main Street, P.O. Box 2138, Santa Monica, California 90407-2138 • Telephone 310-393-0411 • FAX 310-393-4818
1200 South Hayes Street, Arlington, Virginia 22202-5050 • Telephone 703-413-1100 • FAX 703-413-8111
201 North Craig Street, Suite 202, Pittsburgh, Pennsylvania 15213-1516 • Telephone 412-683-2300 • FAX 412-683-2800