America's Joint Force and the Domains of Warfare

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The term "joint" has been well established in the U.S. military lexicon for many decades. While the word's meaning may remain a constant, its significance for the American military is changing.

The essays on the dimensions of warfare in the *2018 Index of U.S. Military Strength* reflect a crucial dynamic that affects thinking about how militaries ought to be employed. Dominance in war will not be gained through domination of a single domain. The future focus of jointness will be on ensuring that U.S. armed forces retain the ability to operate effectively in all domains in a theater (land, sea, air, subsurface, cyberspace, and space) and to exploit the ability to use advantages in one domain to operate in another. For the U.S., having the capacity to check an adversary or take the initiative across all domains will be essential to establishing a competitive advantage in future conflicts.

The Dimensions of War

One of the great truisms of war was expressed by the British military historian B. H. Liddell Hart: "The real target in war is the mind of the enemy commander, not the bodies of his troops."[1] This maxim touches the core of understanding the nature of warfare. War is a competition. War is a competition between adversaries, a contest of action and counteraction that concludes or changes based on the agency of competitors, and this competition unfolds in the domains accessible to each competitor: land, sea, air, space, and cyberspace. Dominating in war is not about dominating a domain. It is about dominating an enemy.

In contemporary conflict, as competitors increasingly gain access to all domains of warfare, it becomes more likely that adversaries will seek to offset a competitor's dominance in one domain by acting more aggressively in another space. As transnational terrorists like ISIS have lost physical ground in the Middle East, for example, they have redoubled their cyber operations to stay in the fight against the West. Alternatively, competitors might redouble their efforts to defeat an adversary's capacity to dominate them in a particular domain. This has become a feature of Chinese military strategy, which seeks to prevent adversaries from achieving a dominant advantage in space, air, sea, and cyber operations in the Asia–Pacific theater.

Thus, dominance in one or more domains is important, but to dominate an enemy, the ability to conduct operations in more than one domain at a time, to shift between them, and to use one domain to affect another is more important.

The elements of the U.S. armed forces increasingly operate across domains, each service specializing in one but increasingly having an effective presence in the others and/or relying on the other services to create opportunities for exploitation and to prevent an enemy

from using a domain for their own purposes. No one service bears sole responsibility for military operations in any domain. Each of the uniformed military services, for example, uses cyberspace. All conduct or depend on space operations. Forces from land bases can affect operations at sea. Naval forces can influence land battles. Air force operations routinely have an impact on multiple domains.

The nature of contemporary warfare has implications for how the armed forces address jointness now and in the future. Further, the evolution of the joint force and how the U.S. military thinks about conducting joint operations has significant consequences for how national leaders understand military strength and its utility in securing national interests.

Evolution of the Joint Concept

For the Pentagon, "joint" "[c]onnotes activities, operations, organizations, etc., in which elements of two or more Military Departments participate."[2] In the case of the United States, that means the Army, Air Force, and Navy Departments, the last of which includes the Navy and Marine Corps. The U.S. Coast Guard, when operating in concert with them, also could be considered part of the joint force. U.S. Special Operations Forces (e.g., SEALs and Rangers) are provided by the services; when they operate across service components or with conventional forces (e.g., Army brigades), they are also conducting joint operations.

The U.S. military's appreciation of jointness is built on a historical understanding of Western warfare and its own contemporary experiences. While joint operations, the cooperative use of forces operating in their respective domains, may not be as old as war itself, there are certainly many antecedents from the times of ancient warfare. Most notably, histories of the Peloponnesian Wars, the decades-long struggle between alliances led by the Greek city-states Athens (primarily a naval power) and Sparta (the dominant land power), turned on joint operations.[3]

Athens and Sparta. One instructive example of joint operations in the ancient world

was the land–sea campaign in Sicily from 415 BC to 413 BC. An Athenian expeditionary force was dispatched to secure the strategic island off the coast of Italy that, some of their leaders argued, would provide a decisive advantage in the war with Sparta. The Athenian force was joint, composed of a naval force of some 100 triremes (Greek war galleys, or rowed fighting ships); numerous transport and cargo ships; and more than 5,000 hoplite infantrymen and additional archers and slingers that could conduct ground operations.[4]

Once establishing themselves in Sicily, the Athenians were slow to advance on their main objective, the city of Syracuse. This allowed time for the Spartans to dispatch reinforcements to their Syracusan allies. The Athenians lost the land battle against the superior combined land force of Sparta and Syracuse. When they tried to withdraw by sea, the Spartans, having developed their own navy, intercepted the retreating fleet, soundly defeating the Athenians in a massive sea battle.

Using the Athenian naval assets to maneuver ground units into a superior position was a classic exercise in joint operations, leveraging forces that operate in one domain to provide a competitive advantage to forces operating in another. But coordinating different forces and operating in different domains is complex. Effective command and control of the Athenian expeditionary force broke down, leaving it vulnerable to the Spartan counterstrike.[5] In this respect, the operation illustrated both the potential advantages and possible pitfalls of employing joint forces in a campaign.

Joint operations, principally cooperation between land and sea forces, have been a feature of Western warfare through the ages. U.S. military history also includes exemplars of joint operations, notably including the defeat of the British at Yorktown in 1781[6] and the siege of Vicksburg in 1863.[7]

Yorktown. The siege of Yorktown included both joint operations and combined operations (operations involving forces of more than one nation). After a vigorous campaign in Virginia, British forces withdrew to the

Yorktown Peninsula to rearm and refit, resupplied and protected by British naval forces. As the Continental Army conducted a forced march from New York to the Tidewater region in the Chesapeake Bay to block the British by land, a French fleet intercepted and destroyed reinforcements dispatched to the British at Yorktown by sea. While the Continental Army laid siege to the garrison by land, the French Navy blockaded Yorktown by sea. Pressed by the advance of combined American–French forces and cut off from reinforcement and re-supply, the British surrendered, a catastrophic military defeat that led to the end of the war and the securing of American independence.

Napoleon in Egypt. The battles of the American Revolution presaged the transition from the early modern era of warfare to the Napoleonic Age, which saw significant innovation in both land and sea warfare in terms of technology, tactics, and logistics. The practice of joint operations—such as Napoleon's aborted invasion of Egypt in 1798, in which the future emperor transported an army of over 30,000 by sea only to see the force eventually cut off and defeated in detail—looked not much different from the conduct of joint operations in previous decades.[8]

In many ways, the American Civil War continued the practices and tactics of the Napoleonic era. One area in which there were glimpses of change was in the conduct of joint operations, which indicated the potential promise of coordinating land and sea operations to achieve strategic objectives—practices that would emerge more fully during the two great world wars of the 20th century.

Vicksburg. The most illustrative battle was the siege of Vicksburg.[9] A joint land–naval force isolated and reduced the Confederate strong point at Vicksburg, Mississippi. The victory gave the Union control of the Mississippi River, effectively cutting the Confederacy in two. Not only did the battle preview new technology, such as armored ships and rifled cannon, but Union operations demonstrated the effective coordination, command, and control of joint forces, with General Ulysses

Grant succeeding where Athens and Napoleon had failed.

Throughout the evolution of war in the early modern and Napoleonic eras and into the modern era, joint operations were a matter of practice, but there was scant emphasis on the development of doctrine, tactics, training, or force development. Even massive joint operations, such as the Gallipoli campaign of 1915–1916 during World War I, were largely improvised.[10]

Gallipoli. While war on the European Western Front stagnated in trench combat, operations in the Dardanelles were intended to knock the Ottoman Empire out of the war by employing the swift maneuver of forces that could be achieved by joint operations. A British-led Allied expeditionary force moved to secure Gallipoli, a strategically important peninsula that controlled Mediterranean access to the Black Sea, but the operation was protracted and suffered from numerous delays, giving the Turks time to move adequate defenses into place, after which the battle devolved into trench warfare that soon resembled the stalemate on the Western Front. Though the Allies had the means to transport a land force by sea and support its employment from the sea, and enjoyed effectively uncontested use of the sea, their failure to move swiftly, decisively, and in well-practiced form ceded all of the important advantages to the Turks, who used their control of the land to greater effect.[11]

World War II. The modern age of warfare arrived during World War II when operations in several theaters required the integrated use of land, sea, and air forces. Most notably in the Pacific Theater, amphibious operations to sustain land campaigns from the sea, designed to seize a beachhead in order to conduct more expanded operations ashore, required joint operations as a matter of course.

Dramatic advances in airpower during the 1930s added a new dimension to warfare. Forces and supplies could be moved by air, either air-landed or inserted by glider or parachute forces. Airpower could also provide airborne reconnaissance and fire support for both land

and sea services (e.g., sub hunting and attack by air of an opposing fleet).

Another but little discussed aspect of emerging joint warfare was the electromagnetic dimension, from radio communications to intercept, radar, and electronic jamming. Forces had to learn how to operate across a new dimension of war that did not transit a geographical space and was not the purview of any one service. This was a sign of times to come, as all of the services would find themselves operating increasingly in multiple domains, which requires a great degree of coordination and deconfliction.

In response to the demands of the war, the military services developed operations, command and control organizations, equipment, doctrine, and training to facilitate joint operations. However, while military operations and campaigning were joint, many other aspects of military operations including education, intelligence, and logistics were often done as single-service activities or only loosely integrated.

The Post–World War II Era. Even after the experience of the Second World War, military thought continued to focus on the competition between domains for dominance in warfare. The classics still mattered. The Army favored Prussian military theorist Carl von Clausewitz, who focused his writing on victory in land battles;[12] the Navy had Alfred Thayer Mahan, who concentrated on control of the sea;[13] and new-to-the-scene airpower enthusiasts referenced Giulio Douhet, who championed victory through airpower.[14] With the invention of nuclear weapons, strategists like Bernard Brodie argued for the strategic dominance of nuclear weapons.[15]

Despite the prevalence of joint operations during World War II, little was done to institutionalize joint operations. The Defense Reorganization Act of 1958, under the tutelage of President Dwight David Eisenhower, drawing in part on his extensive experience with joint operations during the war as Supreme Allied Commander Europe, advanced efforts to establish unified command for joint forces, but little more.[16]

Goldwater–Nichols. Lack of effective joint operations at the operational level was one of the significant criticisms of U.S. military activities during the Vietnam War. The issue was famously addressed in Arthur T. Hadley's book *The Straw Giant*.[17] Among the many reforms instituted by the Goldwater–Nichols Department of Defense Reorganization Act of 1986 was a legislative effort to institutionalize jointness in the armed forces.[18] The legislation addressed the Unified Command Plan (the global command and control of U.S. forces); education, professional development, and training; and acquisition of weapon systems, platforms, and related equipment.[19] Thus, after Goldwater–Nichols, jointness emphasized integration of the military services across the full range of defense activities, not just warfighting.

The case for jointness, introduced by the Senate Armed Services Committee staff that spearheaded the Goldwater–Nichols legislative effort, was illustrated by the aborted Iranian hostage rescue operation (1980), popularly called the disaster at Desert One.[20] All of the services participated in the ad hoc effort to put together a special operation to rescue U.S. embassy employees who had been taken hostage in Tehran during the Iranian Revolution. Although the operation was joint, it failed.

In truth, however, the mission's most critical shortfalls had little to do with a failure of joint operations. The Marine helicopters were operating at the extreme edge of their operational range; that, combined with bad luck and some miscues on the ground, doomed the mission. Nevertheless, the story was one of dramatic and embarrassing failure and helped to galvanize support for the legislation, which was actively opposed by the Pentagon and the services, which viewed jointness as an imposition on their responsibilities for managing and employing military forces.

Despite opposition from the Pentagon, the legislation was passed and signed into law. This effort coincided with the Reagan defense buildup, which increased the size of the military force, as well as funding for operations and training, and greatly advanced the

modernization of key military platforms (ships, planes, and armored vehicles).[21] Flush with resources and responding to the challenge and demands of jointness imposed by Goldwater–Nichols, the military responded adroitly.

Goldwater–Nichols largely succeeded in institutionalizing joint warfare. From professional military education to operations in the field, U.S. military activities today are inherently joint. Further, the U.S. military has decades of extensive combat experience in joint operations at the operational and tactical levels across the spectrum of conflict. Joint integration has been so successful that when major defense reforms (e.g., Goldwater–Nichols II) are suggested, they rarely substantively address joint matters.[22]

Of course, innovations in jointness did not erase the intellectual debate about which dimensions of war ought to be considered the most important and which service forces would dominate future conflict. The debate was renewed in the wake of the First Gulf War (1991). Air Force advocates, with the introduction of the proliferated use of precision-guided weapons, argued that post–Cold War military operations would be dominated by airpower. This vision was reflected in the Air Force-sponsored Gulf War Air Power Survey.[23] In contrast, the official Army history, *Certain Victory*, argued for the returned dominance of land power.[24] The Navy, which played a subordinate role in the conflict, looked beyond the "lessons" of the war to make the case that U.S. security in the post–Cold War world would be protected by sea-centric military dominance.[25]

The renewed debate about domain dominance that emerged after the Gulf War was as likely a reflection of competition between the services for scarce defense dollars as it was influenced by new technologies and warfighting concepts. In the wake of the war, the Pentagon suffered from an end-of-the-Cold War "peace dividend" that saw a reduction in forces and military spending throughout the 1990s.[26] Increasingly, the services squabbled over pieces of an increasingly smaller budget pie, with each service arguing in part that it delivered more bang for the buck because of its capacity to dominate battle space in its domain.

Despite the renewal of interservice intellectual rivalry, in practice, the trend toward increasing jointness in the development and employment of forces continued. There were many controversial aspects to military operations in Afghanistan and Iraq following the terrorist attacks of September 11, 2001, but shortfalls in the capacity to undertake joint operations were far down the list of items noted by critics.

Joint Future

While some military reformers and theorists continue to propose ways of war predicated on dominance of particular domains, most modern military thinking envisions future operations that are inherently joint. In recent years, for example, the U.S. Army and Marine Corps have advanced the concept of Multi-Domain Battle, the notion that the U.S. should be prepared to fight in an environment in which all domains are contested.[27] Whether the Army–Marine concept is useful remains a subject of some debate (and would eventually have to be proven in battle anyway), but it does reflect mainstream military thinking: The U.S. armed forces must have the expertise, capabilities, and capacity to operate in all domains in a contested theater and to leverage those domains more effectively than the enemy can. Developing and sustaining that capacity will be the key goal of joint future.

As previewed by Multi-Domain Battle, joint future will likely focus on the challenge of employing the armed forces in environments where operations are contested in multiple domains. Planning for military operations may likely be based on assumptions that the U.S. will not enjoy superiority,[28] much less supremacy,[29] in one or more domains. The services will likely focus more on what they can contribute to operations across the dimensions of war rather than arguing the unique contributions of their capabilities in a single domain. The U.S. military will likely continue to look at a mix of operational practices, technologies,

force structure, and capacity to achieve and sustain a competitive edge across the dimensions of warfare.

Most likely, other aspects of jointness will fade in priority: Logistics, infrastructure, education, planning, and training will become more inherently joint as a matter of practice. Joint future will focus on inter-domain dependencies and cross-dimension operations and effects.

A careful reading of the domain essays in this edition of the *Index of U.S. Military Strength* suggests both the challenges and opportunities involved in building U.S. military strength for the next fight. These range from human resources to warfighting systems, from alliances to enemies, from technological improvement to intellectual innovation. The essays raise important questions for the future of the joint force concept and its role in protecting the vital interests of the United States.

Endnotes

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