
The Joint Operating Environment 2008: The Implications for the Joint Force

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About this Study

The Joint Operating Environment (JOE) is intended to inform joint concept development and experimentation throughout the Department of Defense (DOD). It provides a perspective on future trends, shocks, contexts, and implications for future joint force Commanders and other leaders and professionals in the national security field. This document is speculative in nature and does not suppose to predict what will happen in the next twenty-five years. Rather, it is intended to serve as a starting point for discussions about the future security environment at the operational level of war. Inquiries about the *Joint Operating Environment* should be directed to U.S. Joint Forces Command (USJFCOM), Public Affairs.

Order or disorder depends on organization, courage or cowardice on circumstances, strength or weakness on dispositions . . . Thus, those skilled at making the enemy move do so by creating a situation to which he must conform; they entice him with something he is certain to take. And with lures of ostensible profit they await him in strength. Therefore, a skilled Commander seeks victory from the situation and does not demand it of his subordinates.¹

Sun Tzu

In an uncertain world, which will inevitably contain enemies who aim to either attack the United States directly or to undermine the political and economic stability on which America, its allies, and the world's economy depend, the nation's military forces will play a crucial role. Yet, war is an inherently uncertain and costly endeavor. As the United States has discovered in Iraq and Afghanistan, there is no such thing as a rapid, decisive operation that does not generate unforeseen second and third order effects.

While the most important mission of the American military has been the ability to fight and win the nation's wars, the ability of U.S. forces to deter conflict has risen to equal footing. Preventing war will prove as important as winning a war. In fact, the two missions are directly linked in a symbiotic relationship. The ability to deter a potential adversary depends on the capabilities and effectiveness of U.S. forces to act across the full range of military operations. Deterrence also depends on the belief on the part of the adversary that the United States will use its military power in defense of its national interests.

Since the fall of the Iron Curtain, the United States has planned for a global repositioning effort, removing forces from forward basing and garrisoning much of its military force structure at home. Instead, the Joint Force has found itself in near-constant conflict abroad; and now forces based

1. Sun Tzu, *The Art of War*, trans. and ed. by Samuel B. Griffith (Oxford, 1963), 93.

at home find themselves in heavy rotation, projecting forward into the Middle East and elsewhere around the world. After protracted action in Afghanistan and Iraq, the force now faces a period of reconstitution and rebalancing which will require significant physical, intellectual, and moral effort that may take a decade to complete. During this time, our forces may be located significant distances from a future fight. Thus, the Joint Force will be challenged to maintain both a deterrent posture and the capacity and capability to be forward engaged around the world, showing the flag and displaying the ability to act in ways to both prevent and win wars.

War in the Twenty-First Century

As the discussion of trends and contexts above has suggested, the roles and missions of the Joint Force will include the protection of the homeland; the maintenance of the global commons; the deterrence of potential enemies; and, when necessary, fighting and winning conflicts that may occur around the world. Such challenges are by themselves daunting enough but they will occur in a period characterized by radical technological, strategic, and economic change. All of which will add to the complexities of the international environment and the use of military force. America's position in the world, unprecedented in almost every respect, will continue to present immense challenges to its military forces.

Rapidly changing trends within the contexts described in the previous section will have profound implications for the character of war itself and the methods by which the Joint Force will wage it. Yet, the nature of war will remain closer to Agincourt than to Star Trek. At its heart, war will always involve a battle between two creative human forces. Our enemies are always learning and adapting. They will not approach conflicts with conceptions or understanding similar to ours. And they will surprise us. No amount of technology, conceptualization, or globalization will change those realities. Moreover, the employment of military force will continue to be conditioned by politics, not only those of the United States and its allies, but by those of its opponents. Above all, joint force Commanders, their staffs, and their subordinates must have a clear understanding of the strategic and political goals for which they conduct military operations. In almost every case, they will find themselves working closely with partners, a factor which will demand not only a thorough understanding of U.S. political goals, but coalition goals as well.

It is in this political-strategic environment that the greatest surprises for Americans may come. The United States has dominated the world economically since 1915 and militarily since 1943. Its dominance in both respects now faces challenges brought about by the rise of powerful states. Moreover, the rise of these great powers creates a strategic landscape and international system, which, despite continuing economic integration, will possess considerable instabilities. Lacking either a dominant power or an informal organizing framework, such a system will tend toward conflict. Where and how those instabilities will manifest themselves remains obscure and uncertain.

Between now and the 2030s, the military forces of the United States will almost certainly find themselves involved in combat. Such involvement could come in the form of a major regular conflict or in a series of wars against insurgencies. And, as this document has suggested, they will certainly find themselves engaged not only against terrorist organizations, but against those who sponsor them. One of the great problems that confronts American strategists and military planners is the conundrum of preparing for wars that remain uncertain as to their form, location, level of commitment, the contribution of potential allies, and the nature of the enemy. The only matter that is certain is that joint forces will find themselves committed to conflict against the enemies of the United States and its Allies and in defense of its vital interests.

Preparing for War

There are two ominous scenarios that confront joint forces between now and the 2030s. The first and most devastating would be a major war with a powerful state or hostile alliance of states. Given the proliferation of nuclear weapons, there is the considerable potential for such a conflict to involve the use of such weapons. While major regular war is currently in a state of hibernation, one should not forget that in 1929 the British government adopted as its basic principle of defense planning the assumption that no major war would occur for the next ten years. Until the mid-1930s, “the ten year rule” crippled British defense expenditures. The possibility of war remained inconceivable to British statesmen until March 1939.

The one approach that would deter a major conflict involving U.S. military forces, including a conflict involving nuclear weapons, is the maintenance of capabilities that would allow the United States to wage and win any possible conflict. As the Romans so aptly commented, “If you wish for peace, prepare for war.” Preventing war will in most instances prove more important than waging it. In the long-term, the primary purpose of the military forces of the United States must be deterrence, for war in any form and in any context is an immensely expensive undertaking both in lives and national treasure. When, however, deterrence fails, then, the military effectiveness of those forces will prove crucial. Here the efforts that have gone into preparing U.S. forces for conflict at their various training centers must continue to receive the same support and attention in the future that they have over the course of the past 30 years. As the Japanese warrior/commentator Miyamoto Musashi noted in the seventeenth century:

There is a rhythm in everything, but the rhythms of the art of war are especially difficult to master without practice . . . In battle, the way to win is to know the opponent’s rhythms while using unexpected rhythms yourself, producing formless rhythms from the rhythms of wisdom.²

The second ominous scenario that confronts the Joint Force is the failure to recognize and fully confront the irregular fight that we are in. The requirement to prepare to meet a wide range of threats is going to prove particularly difficult for American forces in the period between now and the 2030s. The difficulties involved in training to meet regular and nuclear threats must not push preparations to fight irregular war into the background, as occurred in the decades after the Vietnam War. Above all, Americans must not allow themselves to be deluded into believing their future opponents will prove as inept and incompetent as Saddam Hussein’s regime was in 1991 and again in 2003. Having seen the capabilities of U.S. forces in both regular and irregular war, future opponents will understand “the American way of war” in a particularly detailed and thorough way.

In Iraq and Afghanistan, our opponents have displayed considerable capacity to learn and adapt in both the political and tactical arenas. More sophisticated opponents of U.S. military forces will certainly attack American vulnerabilities. For instance, it is entirely possible that attacks on computers, space, and communications systems will severely degrade command and control of U.S. forces. Thus, those forces must possess the ability to operate effectively in degraded conditions. In planning for future conflicts, joint force Commanders and their planners must factor two important constraints into their calculations: logistics and access. The majority of America’s military forces will find themselves largely based in North America. Thus, the first set of problems involved in the commitment of U.S. forces will be logistical. In the 1980s many defense pundits criticized the

2. Quoted in Thomas Cleary, *The Japanese Art of War: Understanding the Culture of Strategy* (Boston, 1992), 38.

American military for its supposed over-emphasis on logistics and praised the German Wehrmacht for its minimal “tooth to tail” ratio in the Second World War. What they missed was that the United States had to project its military forces across two great oceans, then fight massive battles of attrition in Europe and in East Asia. Ultimately, the logistical prowess of U.S. and Allied forces, translated into effective combat forces, defeated the Wehrmacht on the Western Front, crushed the Luftwaffe in the skies over Germany, and broke Imperial Japan’s power.

The tyranny of distance will always influence the conduct of America’s wars; and joint forces will confront the problems associated with moving forces over great distances and then supplying them with fuel, munitions, repair parts, and sustenance. In this regard, a measure of excess is always necessary, compared to “just in time” delivery. Failure to keep joint forces who are engaged in combat supplied could lead to disaster, not just unstocked shelves. Understanding that requirement represents only the first step in planning, but it may well prove the most important.

The crucial enabler for America’s ability to project its military power for the past six decades has been its almost complete control over the global commons. From the American standpoint, the Battle of the Atlantic that saw the defeat of the German U-boat menace in May 1943 was the most important victory of the Second World War. Any projection of military power in the future will require a similar enabling effort and must recognize that the global commons have now expanded to include the domains of cyber and space. The Joint Force must have redundancy built in to each of these areas to ensure that access and logistics support are more than “single-point safe” and cannot be disrupted through a single enemy point of attack.

In America’s two recent wars against Iraq, the enemy made no effort to deny U.S. forces entry into the theater. Future opponents, however, may not prove so accommodating. Hence, the second constraint confronting planners is that the United States may not have uncontested access to bases in the immediate area from which it can project military power. Even in the best case, allies will be essential to providing the base structure required for arriving U.S. forces. But there may be other cases where uncontested access to bases is not available for the projection of military forces. This may be because the neighborhood is hostile or because smaller friendly states have been intimidated. Hence, the ability to seize bases by force from the sea and air could prove the critical opening move of a campaign.

Given the proliferation of sophisticated weapons in the world’s arms markets, potential enemies, even relatively small powers will be able to possess and deploy an array of longer-range and more precise weapons. Such capabilities in the hands of America’s enemies will obviously threaten the projection of forces into a theater as well as attack the logistical flow on which U.S. forces will depend. Thus, the projection of military power could become hostage to the ability to counter long-range systems even as U.S. forces begin to move into a theater of operations and against an opponent. The battle for access may prove not only the most important, but the most difficult.

One of the major factors in America’s success in deterring potential aggressors and projecting its military power over the past half century has been the presence of its naval forces off the coasts of far-off lands. Moreover, those forces have also proven of enormous value in relief missions when natural disasters have struck. They will continue to be a significant factor in the future. Yet, there is also the rising danger with the increase in precision and longer range missiles that presence forces could be the first target of an enemy’s action in their exposed positions.

The Conduct of Military Operations in the Twenty-First Century

The forms of future war will each present peculiar and intractable challenges to joint forces. The U.S. will always seek to fight and operate with partners, leading where appropriate, and prepared to act alone when required to support our vital national interests. However, there is every likelihood that there will be few lines of delineation between one form of conflict and another. Even in a regular war, potential opponents, engaged in a life and death struggle with the United States, may engage U.S. forces across the spectrum of conflict. Thus, the Joint Force must expect attacks on its sustainment, its intelligence, surveillance and reconnaissance (ISR) capabilities, and its command and control networks. The Joint Force can expect future opponents to launch both terrorist and unconventional attacks on the territory of the continental United States, while U.S. forces moving through the global commons could find themselves under persistent and effective attack. In this respect, the immediate past is not necessarily a guide to the future.

Deterrence of aggression and of certain forms of warfare will remain an important element of U.S. national security strategy, and the fundamentals of deterrence theory will apply in the future as they have for thousands of years of human history. Deterrence operations will be profoundly affected by three aspects of the future joint operating environment.

First, U.S. deterrence strategy and operations will need to be tailored to address multiple potential adversaries. A “one-size-fits-all” deterrence strategy will not suffice in the future joint operating environment. Deterrence campaigns that are tailored to specific threats ensure that the unique decision calculus of individual adversaries is influenced.

Second, the increased role of transnational non-state actors in the future joint operating environment will mean that U.S. deterrence operations will have to find innovative new approaches to “waging” deterrence against such adversaries. Non-state actors differ from state actors in several key ways from a deterrence perspective. It is often more difficult to determine precisely who makes the key decisions one seeks to influence through deterrence operations. Non-state actors also tend to have different value structures and vulnerabilities. They often possess few critical physical assets to hold at risk and are sometimes motivated by ideologies or theologies that make deterrence more difficult (though usually not impossible). Non-state actors are often dependent on the active and tacit support of state actors to support their operations. Finally, our future deterrence operations against non-state actors will likely suffer from a lack of well established means of communications that usually mark state-to-state relations.

Third, continued proliferation of weapons of mass destruction (WMD) will make the U.S. increasingly the subject of the deterrence operations of others. As such, the U.S. may find itself in situations where its freedom of action is constrained unless it can checkmate the enemy’s deterrent logic.

U.S. nuclear forces will continue to play a critical role in deterring, and possibly countering, threats to our vital interests in the future joint operating environment. Additionally, U.S. security interests will be advanced to the degree that its nuclear forces are seen as supporting global order and security. To this end, the U.S. must remain committed to its moral obligations and the rule of law among nations. It must provide an example of a responsible and ethical nuclear power in a world where nuclear technology is available to a wide array of actors. Only then will the existence of powerful U.S. nuclear forces, in support of the global order, provide friends and allies with the confidence that

they need not pursue their own nuclear capabilities in the face of growing proliferation challenges around the world.

Unfortunately, we must also think the unthinkable—attacks on U.S. vital interests by implacable adversaries who refuse to be deterred could involve the use of nuclear weapons or other WMD. For both deterrence and defense purposes, our future forces must be sufficiently diverse and operationally flexible to provide a wide range of options to respond. Our joint forces must also have the recognized capability to survive and fight in a WMD, including nuclear, environment. This capability is essential to both deterrence and effective combat operations in the future joint operating environment.

If there is reason for the joint force Commander to consider the potential use of nuclear weapons by adversaries against U.S. forces, there is also the possibility that sometime in the future two other warring states might use nuclear weapons against each other. In the recent past, India and Pakistan have come close to armed conflict beyond the perennial skirmishing that occurs along their Kashmir frontier. Given India's immense conventional superiority, there is considerable reason to believe such a conflict could lead to nuclear exchanges. As would be true of any use of nuclear weapons, the result would be massive carnage, uncontrolled refugee flows, and social collapse—all in all, a horrific human catastrophe. Given 24/7 news coverage, the introduction of U.S. and other international forces to mitigate the suffering would seem to be almost inevitable.

Nuclear and major regular war may represent the most important conflicts the Joint Force could confront, but they remain the least likely. Irregular wars are more likely, and winning such conflicts will prove just as important to the protection of America's vital interests and the maintenance of global stability.

A significant component of the future operating environment will be the presence of major actors which are not states. A number of transnational networked organizations have already emerged as threats to order across the globe. These parasitic networks exist because communications networks around the world enable such groups to recruit, train, organize, and connect. A common desire to transcend the local, regional, and international order or challenge the traditional power of states characterizes their culture and politics. As such, established laws and conventions provide no barrier to their actions and activities. These organizations are also becoming increasingly sophisticated, well-connected, and well-armed. As they better integrate global media sophistication, lethal weaponry, potentially greater cultural awareness, and intelligence, they will pose a considerably greater threat than at present. Moreover, unburdened by bureaucratic processes, transnational groups are already showing themselves to be highly adaptive and agile.

Irregular adversaries will use the developed world's conventions and moral inhibitions against them. On one hand the Joint Force is obligated to respect and adhere to internationally accepted "laws of war" and legally binding treaties to which the United States is a signatory. On the other hand, America's enemies, particularly the non-state actors, will not find themselves so constrained. In fact, they will likely use law and conventions against the U.S. and its partners.

That said, in the end, irregular war remains subject to the same fundamental dynamics of all wars: political aims, friction, human frailties, and human passion. Nevertheless, the context within which they occur does contain substantial differences. As Mao suggested, the initial approach in irregular war must be a general unwillingness to engage the regular forces they confront. Rather, according to him, they should attack the enemy where he is weakest, and in most cases this involves striking his

political and security structures. It is likely that the enemy will attack those individuals who represent the governing authority or who are important in the local economic structure: administrators, security officials, tribal leaders, school teachers, and business leaders among others, particularly those who are popular among the locals. If joint forces find themselves engaged in such situations, a deep understanding of the local culture and the political situation will be fundamental to success. What past irregular wars have suggested is that military organizations confronted by irregular enemies must understand the “other.” Here, the issue is to understand not just the nature of the conflict, but the “human sea,” to use Mao’s analogy, within which the enemy swims. The great difficulty U.S. forces will confront in facing irregular warfare is that such conflicts require a thorough understanding of the cultural, religious, political, and historical context within which they are being fought, as well as a substantial commitment of “boots on the ground” for sustained periods of time. There are no “rapid decisive operations” in irregular warfare that can achieve swift victory. Instead of decisive campaigns, U.S. forces can only achieve victory by patient, long-term commitments to a consistent, coherent strategic and political approach.

This coherent approach must also take into account the capabilities of other elements of government. Often, interagency cooperation is difficult because of the relative imbalance of resources between the Department of Defense and other agencies. For this reason, the Joint Force can expect tension to exist between tasks that must be completed to accomplish the mission and enabling the interagency community to engage effectively. Ultimately, war against irregular enemies can only in the end be won by local security forces. Moreover, the indices of success are counterintuitive: fewer engagements, not more; fewer arms captured, not more; fewer enemy dead, not more.

What is of critical importance in irregular war is the ability to provide security to the local population with the purpose of denying the enemy the ability to survive among the people, allowing local police and military forces to build up sufficient strength to control their area of responsibility. Moreover, the Joint Force should contribute to the development of political legitimacy so that local police and military forces are acting with the support of the local population and not against it. The security side of the mission requires a deep understanding of local culture, politics, history, and language. In all cases the use of firepower will be a necessary feature, but balanced with non-lethal activities. Equally important will be the provision of high quality advisors to indigenous forces. Ultimately, U.S. forces can neither win a counterinsurgency, nor ensure that indigenous forces are regarded as the legitimate governing authority; only the locals can put in place the elements guaranteed to achieve lasting victory.

The current demographic trends and population shifts around the globe underline the increasing importance of cities. The urban landscape is steadily growing in complexity, while its streets and slums are filled with a youthful population that has few connections to their elders. The urban environment is subject to water scarcity, increasing pollution, soaring food and living costs, and labor markets in which workers have little leverage or bargaining power. Such a mixture suggests a sure-fire recipe for trouble.

Thus, it is almost inevitable that joint forces will find themselves involved in combat or relief operations in cities. Such areas will provide adversaries with environments that will allow them to hide, mass, and disperse, while using the cover of innocent civilians to mask their operations. They will also be able to exploit the interconnections of urban terrain to launch attacks on infrastructure nodes with cascading political effects. Urban geography will provide enemies with a landscape of dense buildings, an intense information environment, and a complexity all of which makes defensive

operations that much easier to conduct. The battles of Leningrad, Stalingrad, Seoul, and Hue with their extraordinarily heavy casualties all offer dark testimony to the wisdom of Sun Tzu's warning: "The worst policy is to attack cities. Attack cities only when there is no alternative."³

If there is no alternative than to fight in urban terrain, joint force Commanders must prepare their forces for the conduct of prolonged operations involving the full range of military missions. They should do so cognizant that any urban military operation will require a large number of troops and that actual urban combat could consume manpower at a startling rate. Moreover, operations in urban terrain will confront joint force Commanders with a number of conundrums. The very density of building and population will inhibit the use of kinetic means, given the potential for collateral damage as well as large numbers of civilian casualties. Such inhibitions could increase U.S. casualties. On the other hand, any collateral damage carries with it difficulties in winning the "battle of the narrative." How crucial the connection between collateral damage and disastrous political implications is suggested by the results of a remark an American officer made during the Tet offensive that American forces "had to destroy a village to save it." That comment reverberated throughout the United States and was one of the contributing factors to the erosion of political support for the war.

The ability of terrorists to learn from their predecessors and colleagues will not confront the hindrance of having to process adaptations and innovations through bureaucratic barriers. One must also note the growing convergence of terrorist organizations with criminal cartels like the drug trade to finance their activities. Such cooperative activities will only make terrorism and criminal cartels more dangerous and effective.

Operations against terrorists will keep Special Forces busy, with conventional forces increasingly active in supporting and complementary roles. If the Middle East continues on its troubled path, it is likely the war on terrorism will not continue on its current levels, but could actually worsen. Where an increase in terrorist activity intersects with energy supplies or weapons of mass destruction, joint force Commanders will confront the need for immediate action, which may require employment of significant conventional capabilities. Finally, we should underline that persistent media coverage, coupled with changing Western attitudes about the use of force, will influence and be influenced by U.S. military operations. What will be of great importance in the situations where force is being employed will be the narrative that plays on the world's stage. The joint force Commander must understand that he should place particular emphasis on creating and influencing that narrative. Moreover, he must be alert and ready to counter the efforts of the enemies of the United States to create and communicate their own narratives. The enemy's ability to operate within the local cultural and social fabric will complicate such efforts. This puts at a premium the ability of Americans to understand the perceptual lenses through which others view the world.

3. Sun Tzu, *The Art of War*, trans. and ed. by Samuel B. Griffith (Oxford, 1963), 78.