

Strategic Asymmetry

Steven Metz

STRATEGIC ASYMMETRY uses some sort of difference to gain an advantage over an adversary. Many of history's greatest generals had an instinct for it. Like the US military in the Gulf War, Mongols under Genghis Khan and his successors often used superior mobility, operational speed, intelligence, synchronization, training and morale to crush enemies in lightning campaigns. When necessary, the Mongols used superior Chinese engineering for successful sieges. Other conquerors, such as the Romans, Europeans, Aztecs and Zulus, brought superior technology, discipline, training and leadership to the battlefield. Rebels in anticolonial wars also relied on asymmetry by weaving guerrilla operations, protracted warfare, political warfare and a willingness to sacrifice into Maoist People's War, the Intifada and the troubles of Northern Ireland.

Throughout the Cold War, asymmetry was important to US strategic thinking but was not labeled as such. Matching Soviet quantitative advantages in Europe with US and NATO qualitative superiority was integral to US strategy. Other concepts such as Massive Retaliation in the 1950s or the maritime strategy in the 1980s elevated asymmetry to an even higher plane.¹ Beginning in the 1990s, the Department of Defense (DOD) began to recognize the potential for asymmetric threats to the United States. This was part of DOD's increased understanding of the post-Cold War security environment. Since the global power distribution was asymmetric, it followed that asymmetric strategies would naturally evolve.

Explicit mention of asymmetry first appeared in the 1995 Joint Publication 1, *Joint Warfare of the Armed Forces of the United States*, but the concept was used in a very simplistic, limited sense.² The doctrine defined asymmetric engagements as those between dissimilar forces, specifically air versus land, air versus sea and so forth.³ This narrow concept of asymmetry had limited utility. The 1995 National Military Strategy approached the issue

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somewhat more broadly, listing terrorism, using or threatening to use weapons of mass destruction and information warfare as asymmetric challenges. In 1997 asymmetric threats began to receive greater attention. The *Report of the Quadrennial Defense Review* stated, "US dominance in the conventional military arena may encourage adversaries to . . . use asymmetric means to attack our forces and interests overseas and Americans at home."⁴

The National Defense Panel (NDP), a senior-level group Congress commissioned to assess long-term US defense issues, was even more explicit. The panel reported: "We can assume that our enemies and future adversaries have learned from the Gulf War. They are unlikely to confront us conventionally with mass armor formations, air superiority forces, and deep-water naval fleets of their own, all areas of overwhelming US strength today. Instead, they may find new ways to attack our interests, our forces and our citizens. They will look for ways to match their strengths against our weaknesses."⁵ The NDP specifically mentioned danger of massive US casualties caused by enemy weapons of mass destruction to delay or complicate US access to a region and inflict casualties, attacks on US electronic and computer-based information systems, use of mines and missiles along straits and littorals, and terrorism.

The intelligence community and the Joint Staff reacted to the panel's report, and a flurry of activity

North Vietnamese artillery in action, April 1972. Heralded by massive artillery attacks, North Vietnamese forces advanced straight across the demilitarized zone, the Central Highlands and toward An Loc in the Saigon corridor. A later conventional offensive overran South Vietnam in 1975.

US Army Center of Military History

In most anticolonial wars or insurgencies, the less-advanced forces preferred to emulate the advanced ones. . . . Mao held that guerrilla warfare was seldom decisive but should be used as a preface for large-scale mobile war. After all, it was not the Viet Cong who overthrew the government of South Vietnam but a conventional combined arms force from North Vietnam. Understanding whether the asymmetry is deliberate or by default is important since an enemy using deliberate asymmetry is likely to make more adjustments and require a more flexible counterstrategy.

ensued to flesh out the meaning and implications of strategic asymmetry.⁶ The most important single study was the 1999 *Joint Strategy Review, Asymmetric Approaches to Warfare*, which provided a conceptual framework and a number of recommendations. *Joint Vision 2010*, a 1995 document prepared by the chairman, Joint Chiefs of Staff, to provide a conceptual template for future US Armed Forces, did not mention asymmetry, but *Joint Vision 2020*, the follow-on document released in 2000, labeled asymmetric approaches as “perhaps the most serious danger the United States faces in the immediate future.”⁷ Finally, the Secretary of Defense’s Annual Report to Congress in 1998 and 1999 noted that US conventional military dominance encourages adversaries to seek asymmetric means of attacking US military forces, US interests and US citizens. The 2000 annual report, while retaining the description of asymmetric threats used in previous reports, dropped the word “asymmetric.”

This treatment of asymmetry in official strategy documents indicates that the concept may grow even more significant. Yet, strategy and doctrine to deal with asymmetric threats and highlight US asymmetric capabilities require greater conceptual rigor.

Definition and Conceptual Foundation

Clear thinking begins with simple, comprehensive, shared definitions. The 1999 *Joint Strategy Review* provided the broadest official treatment of asymmetry: “Asymmetric approaches are attempts to circumvent or undermine US strengths while exploiting US weaknesses using methods that differ significantly from the United States’ expected method of operations. . . . [Asymmetric approaches] generally seek a major psychological impact, such as shock or confusion, that affects an opponent’s initiative, freedom of action or will. Asymmetric methods require an appreciation of an opponent’s vulnerabilities. Asymmetric approaches often employ innovative, nontraditional tactics, weapons or technologies and can be applied at all levels of warfare—strategic, operational and tactical—and across the spectrum of military operations.”⁸ This latest official definition of asymmetry expanded official thinking but has two shortcomings: it is specific to the current strategic environment and US security situation, and it deals primarily with what an opponent might do to the United States rather than giving equal weight to how the US military might use asymmetry against its opponents.

A more general, complete definition of strategic asymmetry would be: In military affairs and national security, asymmetry is acting, organizing and thinking differently from opponents to maximize relative strengths, exploit opponents' weaknesses or gain greater freedom of action. It can be political-strategic, military-strategic, operational or a combination, and entail different methods, technologies, values, organizations or time perspectives. It can be short-term, long-term, deliberate or by default. It also can be discrete or pursued in conjunction with symmetric approaches and have both psychological and physical dimensions. While the key idea is that significant differences exist, there are several elements of this definition that warrant elaboration.

Dimensions of asymmetry. Strategic asymmetry can be positive or negative. Positive asymmetry uses differences to gain an advantage. US military strategy places great value on superior training, leadership and technology to sustain and exploit superiority. Negative asymmetry involves an opponent's threat to one's vulnerabilities. Most DOD thinking about asymmetry focuses on its negative form.

Strategic asymmetry can also be short-term or long-term. Military history shows that sooner or later the enemy adjusts to many types of short-term strategic asymmetry. During World War II, for instance, blitzkrieg succeeded for a year or two until the Soviets found ways to counter it. It took longer, but Third World governments and their militaries eventually found counters to the Maoist People's War. The 1999 air campaign against Serbia suggests that enemies may find ways to counter US advantages in air power by camouflage, dispersion and dense, but relatively unsophisticated, air defense systems. Long-term asymmetry is more rare. The United States will probably sustain its asymmetric advantage over certain types of enemies for a fairly long time, largely by devoting more resources to maintain military superiority than potential enemies. However, sustaining an asymmetric advantage requires constant effort; any military force that does not adapt to strategic change will decline in effectiveness.

Strategic asymmetry can be deliberate or by default. US strategists actively think about asymmetry and how best to use or control it. More often, antagonists in a conflict simply use what they have and do what they know. An asymmetric outcome is more accidental than planned. For instance, a combined French and Indian force defeated British General Edward Braddock near Fort Duquesne in 1755, and a group of colonial mountaineers defeated loyalists, commanded by Major Patrick Ferguson, at King's Mountain in 1780. The Indians and moun-

taineers were victorious because they fought in a way they understood, not because they analyzed the weakness of the more conventional loyalist forces and designed ways to take advantage of them. In most anticolonial wars or insurgencies, the less-advanced forces preferred to emulate the advanced ones.

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Strategic asymmetry can be low-risk or high-risk. Some forms of asymmetry such as superior training or leadership are time-tested. They may be costly to develop and maintain but seldom increase strategic or operational risk. The high cost of having a fully trained, equipped, ready force reduces risk even though it may not fully protect against all asymmetric actions such as the attack in Aden, Yemen. In another sense the assault was a low-cost, high-risk action that may have had disproportionate consequences—removing US naval presence from a key port and possibly others. Other forms of asymmetry are experimental and are risky. Terrorism, for instance, may be a low-cost, high-risk approach because it can generate a backlash against users or reinforce rather than erode the target's resolve. Just as most mutations in nature are dysfunctional or insignificant, many forms of strategic asymmetry are acts of desperation that do not work or only work temporarily.

Strategic asymmetry can be discrete or integrated with symmetric techniques. Generally, only the most desperate antagonists would rely solely on asymmetric methods. Those who are capable integrate asymmetric and symmetric methods. *Joint Vision 2020* notes that "our adversaries may pursue a combination of asymmetries, or the United States may face



A German victory parade in Warsaw after the Nazis divided Poland between themselves and the Soviets in 1939.

Asymmetry can be material or psychological. The two concepts are interrelated: a material asymmetric advantage often generates psychological advantages. But, there have been states and militaries throughout history that were particularly adept at manipulating psychological asymmetry, often by propagating an image of fierceness. The Mongols, Assyrians, Aztecs and Zulus are examples of great conquerors who effectively combined material and psychological asymmetry.

a number of adversaries who, in combination, create an asymmetric threat."¹⁰ Commonly, such integrated approaches are more powerful than strategies that rely solely on either symmetric or asymmetric methods.

Finally, asymmetry can be material or psychological. The two concepts are interrelated: a material asymmetric advantage often generates psychological advantages. But there have been states and militaries throughout history that were particularly adept at manipulating psychological asymmetry, often by propagating an image of fierceness. The Mongols, Assyrians, Aztecs and Zulus are examples of great conquerors who effectively combined material and psychological asymmetry. Their fierce image augmented advantages in training, leadership and doctrine. Often psychological asymmetry is cheaper than the material variant but is harder to sustain.

Levels of asymmetry. The most common form of asymmetry resides at the operational level of war. Historical examples include the Germans' use of submarine warfare to counterbalance the British advantage in capital ships; urban operations to counterbalance a military force with superior mobility; long-range fires in the battles for Stalingrad or Hue; guerrilla operations in an enemy's rear area as an

adjunct to conventional operations; Operation *Bodyguard*, the operational-level deception plan to support the Normandy invasion; and antiaccess or counterdeployment techniques using missiles, mines, terrorism and other weapons. Military-strategic asymmetry is an integrated military strategy based on asymmetry rather than using it as an adjunct to symmetric methods. Examples include the Maoist People's War, blitzkrieg and Massive Retaliation, the strategic concept that Warsaw Pact aggression would invite a US nuclear strike on the Soviet homeland.

Politico-strategic asymmetry is using nonmilitary means to gain a military advantage. For instance, recent attempts to ban forms of military technology, including information warfare, target the United States more than less-developed states. Similarly, one opponent in a conflict might be able to gain an advantage by claiming victim status. While the North Vietnamese were able to gain the moral high ground against the United States to some extent, Slobodan Milosevic and Saddam Hussein failed. In any case, politico-strategic asymmetry is likely to become increasingly significant as information and globalization make states more susceptible to external political pressure.

Forms of asymmetry. At least six forms of asymmetry are relevant in the realm of national security and warfare. Asymmetric methods involve using different operational concepts or tactical doctrines than the enemy. Examples include guerrilla war and other nonlinear concepts. Many of the operational concepts the US Army anticipates using in the future, such as advanced vertical envelopment with mobile, protected forces (as opposed to air assaults or airdrops using simple foot-mobile infantry), would entail operational asymmetry.

Asymmetric technologies have been common in military history, particularly in wars pitting an industrially advanced state against a backward one such as Europe's imperial wars of the 19th and 20th centuries. While the Europeans brought a wide array of military advantages to bear in their colonial wars, Hillaire Belloc captured their enduring trust in technological asymmetry when he wrote, "Whatever happens, we have got the Maxim gun and they have not." Advanced technology can be decisive in conflicts when the less-developed antagonist cannot adapt. Britain's colonial forces first used the Maxim gun in the Matabele War in 1893-94. In one engagement, 50 soldiers fought off 5,000 Matabele warriors with just four Maxim guns. However, during protracted wars, clever enemies tend to find counters to asymmetric technology. Vietnam provides the clearest example.

Asymmetries of will are important when one antagonist sees its survival or vital interest at stake and the other is protecting or promoting less-than-vital interests. This type of asymmetry played a role during conflicts in Vietnam, Somalia and Iraq. An asymmetry of will leads the antagonist with the higher stake to bear greater costs, accept greater risk and undertake actions the less-committed antagonist might eschew on moral or legal grounds. Asymmetries of will are most relevant at the level of grand strategy. At the operational and tactical levels, the equivalent of an asymmetry of will is an asymmetry of morale, which can be crucial, even decisive. Napoleon Bonaparte held, "In war the moral is to the material as three to one." Asymmetries of will are closely related to normative asymmetries between antagonists with different ethical or legal standards. The United States faces enemies willing to use terrorism, ethnic cleansing and human shields. In the long term such actions can be self-defeating if they alienate potential supporters, but they can generate desired results in the short term, particularly by highlighting an asymmetry of will.

Asymmetries of organization can provide great advantage to even a state without other advantages. Examples include the Macedonian phalanx, Swiss

pike formations that dominated European battlefields during the Renaissance, the levee en masse which helped French revolutionaries stave off a number of professional European armies, the system of independent but mutually supporting corps

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Napoleon created and insurgent undergrounds. In the future, state militaries may face nonstate enemies organized as networks rather than hierarchies.¹¹

Finally, asymmetries of patience or time perspective can be significant. These are conceptually linked to an asymmetry of will but more often operate in cross-cultural conflicts. Specifically, an asymmetry of time perspective may occur when a committed antagonist enters a war and the opponent can only sustain the will for a short war. The United States prefers to resolve armed conflict quickly, in part, because congressional and public support for any use of force that does not involve vital national interests is limited. Furthermore, many of the advanced weapons and systems the US military uses, such as precision bombs and missiles, are in limited supply. Restocking requires restarting dormant production lines.

Because of US global security commitments, involvement in a protracted conflict might encourage enemies to undertake aggression, believing US resources are spread too thin. US advantages in strategic mobility match the desire for a quick win—the preferred operational style. Knowing this preference and knowing or suspecting the limited US stockpile of precision weapons, an adversary might seek to extend a conflict. In addition to straining the quick-win preference, if the weapons become more blunt, collateral casualties will rise, and the enemy might gain a moral advantage. Conversely, the shorter a conflict involving the US military, the greater the US advantage will be. Asymmetries of patience have a cultural component as well. Americans are instinctively impatient, seeking fast resolution of any problem. This attitude contrasted with Asian patience and willingness to prevail in a conflict that lasts for years or decades. While

A Somali gunman flees from 10th Mountain Division troops during operations in Somalia.

US Army

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sweeping cultural generalizations are fraught with danger, there is at least a kernel of truth in this one. Somewhere, the US military is likely to face an enemy attempting to take advantage of an asymmetry of patience.

Strategic Concepts

The operational concepts that form the basis of *Joint Vision 2020*—full-spectrum dominance derived from dominant maneuver, precision engagement, focused logistics and full-dimensional protection—are designed to take advantage of positive asymmetry but are also relevant to countering negative asymmetry. To best meet asymmetric challenges, though, the US military should adopt and develop five strategic concepts that build on the joint vision operational concepts.

Maximum conceptual and organizational adaptability. Two characteristics of asymmetric threats are particularly important: US defense planners today cannot know precisely what asymmetric threats will emerge or prove effective; and the effectiveness of asymmetric threats sooner or later declines as the enemy adjusts. By maximizing conceptual and organizational adaptability and flexibility, the US military can assure that it will rapidly counter emerging asymmetric threats and speed the process that renders asymmetric threats insignificant or ineffective. The military that develops new concepts and organizations more quickly than its opponents has a decided advantage.

DOD must institutionalize ways to keep adaptation and transformation processes continuous and

rapid. Part of the solution involves shifting attitudes. Innovation and creativity must be nurtured and valued throughout uniformed and DOD civilian ranks. While iconoclasts and nonconformists should not rule the military, they should be valued, preserved and heard. Experimentation and research should focus on strategic and operational adaptability. For instance, experiments should create new types of organizations to deal with new types of enemies. If networked nonstate enemies become a major threat to US security, how quickly could the nation organize to deal with them? In all likelihood, some future US military components must acquire network characteristics to counter networked enemies.

DOD experimentation should focus more on potential asymmetric challenges. Today, the enemy in most armed service and DOD experiments or war games remains a traditional, mechanized, state military that has invaded a neighboring state. Asymmetric war games should form a greater proportion of the total. Joint war games should be a robust test of transformation and modernization programs, not a confirmation or endorsement process. At the National Training Center, Fort Irwin, California, the Army has learned the value of ignominious defeat at the hands of a highly skilled Red team. For some reason, the same process is seldom applied to strategic war games. Both congressional and DOD leaders must recognize that a Blue war-game defeat does not invalidate a transformation or modernization program but simply provides a means of adjustment and refinement.

The process of focusing more analysis and ex-

perimentation on asymmetric challenges would be strengthened by an institutional focus. DOD should fund a center to study emerging threats that is closely linked to the joint community, the combatant commands and the armed services but independent enough to be creative and innovative. This center should be tied to the joint experimentation process at the US Joint Forces Command, the Pentagon's Office of Net Assessment, the Defense Intelligence Agency's futures programs, service experimentation programs, concept development centers and battle labs. It should also have strong interagency and multinational connections.

At a somewhat different level, the US military should prepare for asymmetric challenges by making unit and system modularity a central criterion during force development. Versatility and agility are the touchstones. The armed services and joint community should experiment with ways to build task-specific organizations rapidly. The US military's experience forming joint task forces must expand to explore how future organizations would build interagency and multinational ties. Modularity should also be a criterion for developing and procuring systems. Future multipurpose systems like the Black Hawk helicopter and the high-mobility, multipurpose, wheeled vehicle (HMMWV) could perform an even wider array of tasks and be reconfigured according to the mission. This would give the Army an added degree of flexibility and better prepare it for asymmetric challenges. While multipurpose systems are seldom as effective as single-purpose ones, multipurpose systems make the most sense in an age of strategic uncertainty and could serve as a foundation for single-purpose systems if long-term needs become clear.

Focused intelligence. There is growing agreement in the defense and intelligence communities that US intelligence efforts need to refocus on non-traditional threats. Intelligence collection, analysis and dissemination should become increasingly interagency for maximum effectiveness. In addition, intelligence focused on asymmetric threats should make greater use of open sources—publicly available information.¹² The 1999 *Joint Strategy Review* suggested that the United States should immediately undertake a multiagency, holistic assessment of its vulnerability to asymmetric threats.¹³ The intelligence community must help improve adaptability and flexibility, particularly by strengthening the Red teams in war games and experimentation.

The *Joint Strategy Review* emphasizes the need for improved human intelligence (HUMINT) to counter asymmetric threats.¹⁴ New technology for collecting, assessing, fusing and disseminating intelligence would also be helpful. HUMINT sources



SH-60F carrying a "Rigid Duck" raiding craft as a streamlined external load. Black Hawks can be configured for medical evacuation, antisubmarine warfare, combat assaults, special operations and more.

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are not always available or reliable. Rather than relying solely on overhead imagery and signal intercepts, nanotechnology and robotics could form intelligence systems that surpass past technical-collection systems and HUMINT in some tasks. Defending against asymmetric challenges demands bold, new collection methods.

Minimal vulnerability. The *Joint Vision 2020* concept of full-dimensional protection applies to asymmetric threats. Current force-protection efforts, augmented by developments in robotics and nonlethal weapons, can help counter terrorism and other attempts to cause casualties and erode US will. Minimal vulnerability would also require resilience or nondependence on systems susceptible to attack. Single sources of anything invite asymmetric attacks, but with some systems, redundancy may be too expensive. All reasonable steps should be taken

to avoid dependence on any single operational method or system. For instance, if the US military becomes so dependent on information superiority that it cannot function without it, asymmetric attacks against information systems could be devastating or even decisive. Even as the US military increases its use of digital technology, it should sustain some skill at older, low-tech methods.

Finding ways to project power against an enemy who employs an access-denial strategy and to sus-

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tain projected forces without forward bases would be an important part of minimizing vulnerability. Since the campaigns of Generals Ulysses S. Grant and William T. Sherman, the “American way of war” has called for stocking massive amounts of materiel and supplies in theater for decisive victory. This strategy is contingent on the enemy’s inability to strike rear bases effectively. But if future enemies have precision-guided munitions, weapons of mass destruction and delivery systems, in-theater sanctuaries may not exist. Even air superiority and theater missile defense would be inadequate against a nuclear-armed enemy, since they cannot assure 100-percent effectiveness. The future US military could confront a counterdeployment strategy that uses sabotage or precision-guided munitions and ballistic missiles to attack bases and staging areas in the United States and in a theater of operations, and threaten states that provide support, bases, staging areas or overflight rights to the United States.

An enemy using a counterdeployment strategy could be blunted in several interrelated ways. One would be through greater intratheater mobility via lighter forces and systems such as high-speed, shallow-draft, sealift vessels. Another would be using theater reconfiguration areas located in remote areas of agreeable nations with a landing strip as the only fixed part of the base. All of the other things needed to prepare equipment and troops for combat could be mobile, concentrating just before an inbound aerial convoy arrived and dispersing as soon as it left. Inventorying supplies at a theater

reconfiguration area would be kept to a minimum and replenished only when necessary. Repair and hospital facilities would also be mobile and dispersed.

Theater reconfiguration areas could be protected by conventional concealment methods, electronic masking, and a laser-based missile and air defense web combining ground-based fire platforms; long-loiter and quick-launch, unmanned aerial vehicle fire platforms; and space-based sensor and fire platforms. Autonomous sentry systems somewhere between a full-fledged robot and a mobile, smart mine could provide local security. Host nation support would be minimum to protect operational security. To complicate targeting by enemies, several decoy theater reconfiguration areas could be set up in each country that allowed them. Such a shell game could provide effective deception and thus complicate attempts to strike theater reconfiguration areas with missiles.

Full-dimension precision. The US military will remain vulnerable to normative and political asymmetries. The more operations limit collateral damage and reach a speedy resolution, the less likely these challenges will prove important. One way of doing that is with greater full-dimension precision. One component of this is physical precision—the ability to hit targets with great accuracy from great distances with precisely the desired physical effect. Physical precision derives from improved intelligence, guidance systems and, increasingly, from the ability to adjust weapon effects. A proposed electromagnetic gun, for instance, could be adjusted from a nonlethal setting to an extremely lethal one.¹⁵ But there is more to precision than simply hitting the right target. Military strategists and commanders must think in terms of psychological precision as well—structuring a military operation to shape the attitudes, beliefs and perceptions among the enemy and other observers, whether local noncombatants or global audiences.

Technology can help future militaries attain greater psychological precision. It is vital to have a very wide range of military options—a “rheostatic” capability assures that an operation has the desired psychological effect. This suggests a growing need for effective nonlethal weapons, particularly when the psychological objective is to demonstrate the futility of opposition without killing so many of the enemy or noncombatants that the enemy’s will is steeled rather than broken or that public opposition is mobilized. Some advocates of nonlethal weapons go so far as to see them as the central element in future armed conflict.¹⁶ While this is probably an overstatement, such weapons will be integral to psychological precision.

Different forms of psychotechnology might allow greater psychological precision. Conceivably, technology could give militaries the ability to alter the perceptions of targets, perhaps causing intense fear or calm. But any state with the capability and inclination to develop such technology should be very careful because of the potential for violating basic human rights. In most cases, technology for psychological manipulation should be eschewed. Some state or organization without ethical and legal constraints may field an array of psychotechnology weapons. Then the United States will have to decide whether to respond in kind or seek other means of defense. The potential for a psychotechnology arms race is real.

Technology is only part of psychological precision. Much psychological analysis, particularly dealing with anxiety and fear, is not adequately integrated into military planning. When the goal is to create fear and anxiety or collapse the enemy's will, the operation should be phased and shaped for maximum psychological impact. Successful militaries must assure that operational and strategic planning staffs are psychologically astute, whether by educating the planners themselves or using information technology to provide access to psychologists, cultural psychologists and members of other cultures. They should undertake cross-cultural psychological studies aimed at building databases and models that can help guide operational planning.

Integrated homeland security. Modern technology and globalization have changed strategic geography. The United States can no longer assume that conflict and warfare will only take place far from the homeland. Future enemies will have the means to strike at the US homeland with missiles, information attacks or terrorism. The United States needs

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to develop a robust and integrated homeland security strategy and organization. Many homeland defense efforts are already under way, particularly in infrastructure protection and military roles. One important future task is sealing the seams between the agencies involved in homeland defense since gaps create vulnerabilities that an enemy might exploit.

Ultimately, negative asymmetry can be mitigated but not eliminated. That said, the United States is not on the verge of disaster. US military organizations, technology, strategy and doctrine can either deal with most asymmetric threats or be quickly modified to do so. The more adaptable, flexible and strategically agile the US military is, the better it will be prepared to deal with asymmetry. Positive asymmetry will continue to provide the US military with advantages over most enemies. Even so, DOD should continue to refine its understanding of asymmetric challenges. A more general and complete definition of asymmetry is needed as a foundation for doctrine and for integrating maximum adaptability and flexibility, focused intelligence, minimal vulnerability, full-dimension precision and integrated homeland security into US security strategy. 🇺🇸

NOTES

1. John Foster Dulles, "The Evolution of Foreign Policy," *Department of State Bulletin*, 25 January 1962, 107-10.
2. Joint Publication (JP) 1, *Joint Warfare of the Armed Forces of the United States* (Washington, DC: US Government Printing Office [GPO], 10 January 1995), IV-10 and IV-11.
3. The same discussion of symmetrical and asymmetrical actions is included in the *Joint Doctrine Encyclopedia*, 16 July 1997, 668-670; and JP 3-0, *Doctrine for Joint Operations* (Washington, DC: GPO, 1 February 1995), III-10.
4. Secretary of Defense William S. Cohen, *Report of the Quadrennial Defense Review*, May 1997, Section II.
5. Report of the National Defense Panel, "Transforming Defense: National Security in the 21st Century," (Washington, DC: December 1997), 11.
6. During 1998, based on a contract from the intelligence community, CENTRA Technologies formed a blue ribbon panel on asymmetric warfare. A workshop held in December included Dr. John Hillen, Mr. Richard Kerr, Dr. Steven Metz, Admiral William Small, Professor Martin van Creveld and Lieutenant General Paul Van Riper. The project apparently was dropped after this meeting.
7. *Joint Vision 2020* (Washington, DC: Department of Defense, Chairman,

- Joint Chiefs of Staff [CJCS], 2000), 5.
8. *Joint Strategy Review* (Washington, DC: CJCS, 1999), 2.
9. Mao Tse-Tung, "On Protracted War," in *Selected Works of Mao Tse-Tung*, Vol II (Peking: Foreign Languages Press, 1967), 172.
10. *Joint Vision 2020*, 5.
11. For elaboration on this idea, see Steven Metz, *Armed Conflict in the 21st Century: The Information Revolution and Post-Modern Warfare* (Carlisle Barracks, PA: US Army War College, Strategic Studies Institute, 2000), 56-59.
12. Robert D. Steele, "Open Source Intelligence: What Is It? Why Is It Important to the Military?" <www.oss.net/Proceedings/95Vol1/aa00aw.html>; Steele, *On Intelligence: Spies and Secrecy in an Open World* (Fairfax, VA: AFCEA International Press, 2000), 105-26. Steele is one of the pioneers and most ardent advocates of open-source intelligence.
13. *Joint Strategy Review*, 31-32.
14. *Ibid.*
15. US Army Chief Scientist A. Michael Andrews interviewed by Ron Laurenzo, *Defense Week*, 29 November 1999, 6.
16. John B. Alexander, *Future War: Non-Lethal Weapons in Twenty-First Century Warfare* (New York: St. Martin's, 1999).

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