

The US Army War College Quarterly: Parameters

Volume 23
Number 1 *Parameters* 1993

Article 23

7-4-1993

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Recommended Citation

Wayne K. Maynard, "Spears vs. Rifles: The New Equation of Military Power," *Parameters* 23, no. 1 (1993), doi:10.55540/0031-1723.1670.

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Spears vs. Rifles: The New Equation of Military Power

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The overwhelming success of the United States and its coalition partners in the Gulf War of 1991 was a demonstration of raw military power that shocked not just Iraq, but uniformed and civilian pundits worldwide. The efficiency, lethality, and, most of all, ease with which the UN coalition forces destroyed their enemy's ability to resist was unexpected. Iraq, possessor of the fourth largest army in the world and the best modern weapons it could buy, legally or illegally, had every right to anticipate causing heavy casualties to its opponents.¹ On paper, Saddam Hussein's large, battle-tested army and air force should have been a formidable force, able to give even as tough an opponent as the Americans a bloody nose.²

A number of reasons have been put forward for the surprising success of the US-led coalition. Almost all of them are at least partially true. What has been largely ignored, however, is the changed equation of military force demonstrated by the war, and the implications of that change. Almost unnoticed, the technology that drives the science of war has taken a giant leap forward, and the Third World has been left behind. In any conventional conflict in which the United States or any of the major Western powers is pitted against a Third World adversary, the outcome is preordained. In effect, the change is so significant that we have returned to the military equation of the 19th century, when colonial wars pitted small numbers of disciplined, well-trained Western troops with rifles against hordes of tribal warriors armed with only shields and spears.

The March of Technology

In his book *Technology and War*, Martin van Creveld placed the beginnings of technology's impact on warfare at 2000 B.C. While Bernard and Fawn Brodie used a later point of departure in their survey *From Crossbow*

to *H-Bomb*, the importance of technology on armed conflicts remains a central thesis of the study of war.³ Further, all agree that there can be no stasis—technology marches onward.⁴ The Industrial Revolution marked the start of a continuing trend toward the substitution of firepower mass for manpower mass. This trend toward more and more lethality reached its ultimate exemplification in the detonation of a thermonuclear device by the United States in 1952. But by the early 1960s, such weapons had become so powerful as to render their use in war suicidal against an opponent similarly armed.

As a result, limited non-nuclear war became the focus of world conflict. Technology, while still important, lost much of its luster since the full potential of conventional weapons technology was impossible to demonstrate under the restraints imposed by a superpower rivalry played out in the shadow of nuclear annihilation. True, Korea, Vietnam, the Arab-Israeli wars, and Afghanistan were not without technological refinement, but they provided only glimpses of the total picture of improved conventional war capability.⁵ It was the momentous events of 1989-90 in Eastern Europe and the Soviet Union, by freeing Western democratic states from the fear of Soviet intervention, that truly opened the door to the waging of technological war writ large.

The Gulf War of 1991, amply demonstrating the superiority of Western military technology and manpower, was the first war fought since 1945 free of the Cold War overlay. What remains is to explore the implications of this superiority for future conflict in the conventional arena.

The Third Industrial Revolution

Daniel Bell argues that there have been three technological revolutions.⁶ The first, about two hundred years ago, was the application of steam power to transportation, factory production, and extractive mining. The second, coming a century later, was the spread of electricity, with its implications for manufacturing, chemistry (synthetics, petrochemicals, aluminum), communications (telegraph, radio, TV), and our way of life (lighting, elevators and high-rise buildings, entertainment). The modern world as we know it is thus less than a hundred years old.

While both these revolutions had military implications, it is the third—the burgeoning of electronic applications (including computers, lasers, and robotics)—that is currently driving change in the military sphere. Barely

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30 years old, the third revolution has made the giant leap in military capabilities possible.⁷

The desire to substitute firepower for manpower, or what General James A. Van Fleet in the Korean War termed the desire “to expend fire and steel, not men,”⁸ has been the focus of US weapons acquisition policy at least since the 1920s. This basic American value—a high premium on the lives of our soldiers—led ultimately to an effort to develop an entirely new science of war. Conceived and developed in the 1970s and coming to fruition in the following decade, this approach was part of what former Secretary of Defense Harold Brown called the “offset strategy,” based on the need to counter the numerical advantages of Soviet forces in any Western European conflict. The aim was not simply to field better weapons than the USSR. Rather, as William J. Perry has pointed out, the offset strategy was intended to give American weapons a systems advantage by supporting them on the battlefield in a manner that greatly multiplied their combat effectiveness.⁹

It was electronics as reflected in the third technological revolution that made the offset strategy work so well in the Gulf War. The offset strategy’s success is a direct outgrowth of the marriage between consumer electronics and military research and development. The equipment itself includes such items as the portable computers that manage everything from intelligence data to logistical information, the fire direction computers of the artillery, the communications equipment that ties together the command and control network, the locators tied to global positioning satellites, the navigation systems and bombing computers of USAF aircraft, the laser guidance systems of anti-tank missiles and smart bombs, the internal navigation systems of cruise missiles, and even the software that keeps the computer chips humming.

The key to success lay not just in possessing the equipment—Iraq itself had a great deal of sophisticated military hardware. The key lay rather in the way the hardware was applied.

The Personnel and Training Factors

While the US military is not alone among Western nations in devoting both resources and time to training its combat forces, the American effort is certainly unique in scale. With the creation of the all-volunteer force after the Vietnam War, the United States finally relaxed its hold on the principle of conscription it had long cherished. Although the reasons for the change relate to the trauma of involvement in Southeast Asia rather than rational calculation, the military has nonetheless fully embraced the concept of a professional military.¹⁰ The increasingly complex nature of American weapons, and the systems in which they are employed, require a degree of expertise and teamwork that would have been very difficult to achieve with the personnel turnover associated with the days of the draft.¹¹



VII Corps

Destroyed Iraqi T-72 tanks lie in the desert of northern Kuwait. “On paper, Saddam Hussein’s large, battle-tested army . . . should have been a formidable force.”

The training of the United States’ well-paid and stable AVF has become a priority equal to that of weapons readiness (though one should not underestimate the turbulence in the armed forces being generated by the Selective Early Retirement Boards and other early-release programs incident to the force drawdown). The US Air Force, for instance, regularly conducts highly realistic tactical air warfare exercises in the area around Nellis Air Force Base in Nevada. This continuing program incorporates the use of highly classified electronic warfare measures and stealth aircraft, and employs specially prepared and equipped opposing forces.¹² For its part, the Army has created the National Training Center, complete with a Soviet-style aggressor force, in California’s Mojave Desert for the exercise of mechanized and armored units. There is a second center in the wooded hills of Ft. Chaffee, Arkansas, for light infantry training. The Marine Corps has established its own facility at its base in Twentynine Palms, California—the Marine Corps Air-Ground Combat Center—where it conducts advanced integrated training. The Navy has its now-famous “Top Gun” school for fighter pilots and continues to conduct extensive at-sea training exercises for its ships. In addition, the four services conduct regular joint and combined exercises under the command and control of the various area-specific unified commands.¹³ All such training is both time-consuming and expensive, but as Desert Storm showed conclusively, it pays off handsomely in combat.¹⁴

There is an additional factor to be considered with regard to the qualitative advantage in personnel enjoyed by the West—the ready availability

of technical and scientific education as embedded in modern industrial society itself. While many in America may denigrate their educational system, they do so only in comparison to other advanced industrial countries, not the Third World.¹⁵ Children in Western nations grow up accustomed to a sophisticated technological environment. Their ability to comprehend and employ modern weaponry effectively is taken for granted.¹⁶ There is no shortage of qualified applicants in the United States for aviation or armored vehicle mechanics. Yet most Third World countries must rely on foreign military or civilian technicians for much of their maintenance.¹⁷

As the complexity of weapons and weapon systems inevitably increases, education becomes an ever more important component of national security. The performance of the intelligent, well-trained, and highly competent soldiers, sailors, airmen, and Marines in Operation Desert Storm exemplifies the importance of modern education to a force employing modern weapons. Discussing the interplay of training and modernity, Norman Friedman concludes his book *Desert Victory* with a fascinating lesson:

Third World countries are unlikely to defeat reasonably competently handled First World forces unless they modernize their societies—that is, unless they emerge out of the Third World. Mere purchases of sophisticated weapons will not do. They may have an impact, but only a temporary one.¹⁸

Steel and Fire

Technology and qualitative manpower improvements are thus what have made the offset strategy work. In order to fully understand the changed military equation, however, one must consider several supplementary factors.

The first of these is *mobility*, both strategic and tactical. So far as strategic mobility is concerned, air and sea power make it possible. No other nation on earth can equal the quality or quantity of the ships and transport aircraft of the US Navy and Air Force. Coupled with their overseas bases, which aid deployment, resupply, and protection capabilities, US strategic mobility was unique even before the demise of the USSR.¹⁹ Of course, we still lack sufficient strategic mobility assets to move heavy forces within the timeframe that may be required, but compared to other nations the United States is supreme.

This capability not merely to project power but to sustain it leads to the capability to achieve local air and naval superiority over any opponent.²⁰ This in turn provides free scope for the employment of tactical mobility both on the ground and through the air. With the end of the Cold War, the use of the skies, including space-based assets, is now an American perquisite. In war this translates to the disruption of enemy mobility, command, control, logistics, and intelligence, with attendant degradation of his combat capabilities.²¹

Air power will not win wars by itself, but it does make it easier to deal with the enemy on your own terms. Ditto for sea power, with its air component.²² There are those who say that the Gulf War, owing to the desert terrain, was an ideal environment for capitalizing on American technological supremacy, whereas other regions will not be as hospitable. The jungles of Vietnam and mountains of Afghanistan are often cited as prime examples. Such pessimism ignores several key Gulf War lessons. Air power in Vietnam was employed in a piecemeal and uncoordinated fashion yet was still devastating to the enemy whenever he was located.²³ Repeatedly it was the deciding factor in battles where US ground forces fought outnumbered, surprised, and even out-gunned. It was also without many of the technological improvements in use today.²⁴

The key part of a modern conventional war air campaign is the establishment of air superiority, which requires destruction of the enemy's air defense system. The Gulf War demonstrated decisively some of the major US improvements in this area. Particularly impressive was the close coordination of air and naval assets, including the use of cruise missiles.²⁵

A second factor in the force equation is *communications, command, control, and intelligence*. Only the Western nations have established a decentralized C³I network.²⁶ It links the elements of air, ground, and sea power, allowing their completely integrated employment. It handles not just tactical and operational instructions, but intelligence and logistical information as well. It converts individual aircraft, ground units, and ships into groups of self-sustaining and coordinated systems, ones that increase advantages and minimize weaknesses. The Airborne Warning and Control System (AWACS) and the new E-8A Joint Surveillance and Target Attack Radar System (J-STARS) aircraft, which mate high-tech sensors and communications with command personnel, are but two examples of this kind of C³I. Amphibious command ships like the USS *Blue Ridge* (LCC-19), a fleet flagship with a superb array of communications gear, are another.²⁷

A third factor is the sophistication of *munitions*. During the Falklands War, the inability of the Argentinians to properly fuse their simple iron bombs was a major factor in the survival of a number of British ships, greatly influencing the overall outcome.²⁸ Laser-guided artillery shells, TOW and Hellfire anti-tank missiles, heat-seeking air-to-air weapons, and cruise missiles—to mention just a few of our incredibly sophisticated repertoire—can tip the scales in war. But they are expensive, requiring special maintenance and often special testing before use. Though modern munitions are highly effective, they require care and skill that are beyond the ability of many Third World military personnel.

The force-enhancing factors mentioned above are not intended to be all-inclusive, but merely suggestive of how technological changes in the science of war, coupled with basic ingredients like personnel and training,

have given a tremendous advantage to the industrialized nations. Prior to the third technological revolution, advances in warfighting were like links in a chain—the whole being only as strong as the weakest link. The present capabilities of the US and Western militaries are different. The new advantages in conventional military power shown in the Gulf War are more like a woven nylon rope, where each individual strand has its own strength, but together they are stronger than the sum of their parts.

The New Military Balance

Memories of Vietnam bear much of the blame for the failure to recognize key events that foreshadowed the Gulf War. The images of a victorious force of poorly armed and pajama-clad Viet Cong, unbowed by the power of the mighty American Army; the vivid pictures of overloaded US helicopters taking off from the Embassy roof in Saigon only a few steps ahead of the triumphant North Vietnamese; the panic in the faces of US allies left behind—these scenes and more flood the remembrances of a war fought for the wrong reasons, in the wrong way, and in the wrong place. Forgotten is the fact that the US forces never really lost a battle, even when fighting on the enemy's terms. While Vietnam was indeed fought the wrong way for the wrong reasons, it was a defeat of American strategy, not military power.²⁹ Moreover, it was essentially a revolutionary civil war until Tet 1968, not a conventional limited war, and therein lies a crucial difference.

The Falklands War between Great Britain and Argentina in 1982 presented the first clue that a qualitative difference in technical expertise, manpower, and C³I could have such a significant impact. All these factors were critical to the British success, helping to overcome both geographical disadvantages and near parity in basic equipment.³⁰ The US actions in Libya in 1986, in Grenada in 1983, and in Panama in 1989 were also significant, for two reasons. On the political side they demonstrated that American presidents had put aside the memories of Vietnam and were willing to act with resolution when sufficiently aroused. These incidents also showed that public support for the use of force could be garnered by quick, decisive effort. On the military side, they were a warning that the United States could achieve tactical surprise and use overwhelming force to subdue and punish an opponent with minimal losses to its own forces.³¹

The Gulf War thus made clear what we should have already known—the military balance had shifted dramatically.

Key Lessons

- *Western industrialized nations need no longer feel helpless in the face of insults from Third World tyrants.* Henceforth, despots tweak the lion's beard at their own risk. Access to Western technology and equipment by Third

World nations is not enough to allow them to compete on the modern battlefield, no matter how much money is spent. Insurgency, terrorism, and various nonviolent forms of political competition may offer opportunities to Third World nations in conflict with the West, but conventional war does not.

It has been argued that perhaps Saddam Hussein had more to gain from losing the fight than refusing it, since staying in power was his most important goal.³² But even this sort of strategy is increasingly risky. While no one will openly admit targeting a foreign leader, the US attacks on Muammar Gadhafi's compound in Libya in 1986, and the hurried development of special bombs to hit deep bunkers in Baghdad in the last days of the Gulf War, make it clear that enemy "military commanders" are fair game.³³ Tyrants beware.

- *The US strategy for offsetting enemy numerical superiority is successful.* Western equipment works, the people work, the C³I system works, and the whole is indeed stronger than the sum of its parts. That is not to say we have no weaknesses or areas for improvement—the need for more strategic lift comes to mind—but the decisions to invest in technology and people have paid off dramatically.

- *Military power is still useful as a diplomatic tool.* Military force has returned as a tool of diplomacy for the United States. It is a powerful tool. It restored national sovereignty to Kuwait and a balance of power to the Gulf region.

While the threat to the United States and its Western allies has assuredly diminished with the end of the Cold War, the Gulf War itself, as well as more recent events in what was formerly Yugoslavia and parts of the former Soviet Union, have vividly illustrated that the world still faces an uncertain future.³⁴ Thus the need for a continuation of the offset strategy should remain paramount in our thinking. True, the overall size of the American military can safely be cut, but cuts should be made carefully. Reductions in equipment and forces should not be based on the usual method of letting the individual services determine their own needs. They should rather be made on the basis of objective calculation of the forces required to meet present and future threats, arriving at a *systems mix* of air, ground, and naval combat forces, with appropriate inter- and intra-service logistics and C³I supporting complements.

The Clausewitz Factor

There is one final lesson that should be learned from the Gulf War: *Clausewitz was right—military as well as civilian leaders must always be mindful that wars are fought for political ends.* It is time that the cherished American myth of apolitical warfare ended. There are signs that it is. Saddam Hussein still resides in Baghdad because we recognized that a stable Iraq was a desirable political goal. But the bloody and disruptive Shi'ite and Kurdish

rebellions that followed the cease-fire in the Gulf served no possible political or military purpose. Both these incidents were predictable. Both were also counterproductive to the United States' avowed interests of peace and security in the region. The CENTCOM command group, the Joint Chiefs of Staff, and the National Command Authorities themselves, all so well prepared for battle, were less ready for the peace that followed. In preparing itself for future conflicts, the US military should take this lesson of the Gulf War to heart along with the lessons that cast it in a more flattering light.

Thus in applying the new equation of military power, America's current uniformed leaders need to do what their predecessors have consistently refused to do: recognize the reality of the political aspects of international conflict.³⁵ A good beginning would be to develop and systematically employ doctrinal methods intended to influence what Dennis Drew and Donald Snow call the "better state of the peace," the eventual political outcome rather than simply the immediate military result of wars and battles.³⁶ Even when we are fighting with rifles against spears, Clausewitz's admonition remains unchanged: politics rules.

NOTES

1. International Institute for Strategic Studies, *The Military Balance 1991-1992* (London: Brassey's [UK], 1991), pp. 212-13.

2. James W. Pardew, Jr., "The Iraqi Army's Defeat in Kuwait," *Parameters*, 21 (Winter 1991-92), 17.

3. Martin van Creveld, *Technology and War: From 2000 BC to the Present* (New York: The Free Press, 1989); and Bernard and Fawn M. Brodie, *From Crossbow to H-Bomb: The Evolution of the Weapons and Tactics of Warfare* (Bloomington: Indiana Univ. Press, 1962).

4. Jacquelyn K. Davis, "Technology and Strategy: Lessons and Issues for the 1990's," *The Annals*, 517 (September 1991), 203.

5. Korea and Vietnam demonstrated the superiority of firepower mass over manpower mass and the increasing importance of tactical air power. The Arab-Israeli conflicts, though always indecisive owing to superpower restraints, showcased several features of mid-intensity conflict: high rates of ammunition expenditures and the importance of logistics, timely resupply, and forward-based maintenance. US air confrontations with Libya in the Gulf of Sidra in 1981 and the air strikes over Tripoli in 1986 showed the relative ease with which the American military could dismantle a Third World country's ostensibly modern military at small cost to itself.

6. Daniel Bell, "The World and the United States in 2013," *Daedalus*, 116 (Summer 1987), 11.

7. Donald M. Snow, "High Technology and National Security: A Preliminary Assessment," *Armed Forces and Society*, 17 (Winter 1991), 243-58.

8. Bernard Brodie, *War and Politics* (New York: MacMillan, 1973), p. 91.

9. William J. Perry, "Desert Storm and Deterrence," *Foreign Affairs*, 70 (Fall 1991), 66-82.

10. James Blackwell, *Thunder In the Desert: The Strategy and Tactics of the Persian Gulf War* (New York: Bantam Books, 1991), pp. 215-20.

11. The problems with conscripted troops in the early 1970s are well known. See, e.g., Shelby L. Stanton, *The Rise and Fall of an American Army: U.S. Ground Forces in Vietnam 1965-1973* (New York: Dell Publishing, 1985), p. 350.

12. "Red Flag," USAF Fact Sheet 83-41 (Washington: Secretary of the Air Force, Office of Public Affairs, December 1983).

13. See Perry, p. 78; Blackwell, p. 218; and Norman Friedman, *Desert Victory: The War for Kuwait* (Annapolis: The Naval Institute Press, 1991), pp. 244-45.

14. Perry, p. 68.

15. For a discussion of some of the many current problems facing the Third World, see John Chipman "Third World Politics and Security in 1990: 'The World Forgetting, By the World Forgot?'" *Washington Quarterly*, 14 (Winter 1991), 151-68.

16. Friedman, pp. 249-51.
17. US sources indicated that Iraq had over 1000 Soviet "advisors" when Desert Shield began, the bulk of whom were probably maintenance personnel. They were withdrawn prior to Desert Storm. See Graham E. Fuller, "Moscow and the Cold War," *Foreign Affairs*, 70 (Summer 1991), 60.
18. Friedman, p. 251.
19. Though the USSR had substantial capabilities prior to its breakup. See IISS, *The Military Balance 1991-1992*, pp. 12, 30.
20. Friedman, pp. 85-94, gives an evaluation of some of the advantages conveyed by sea power. In the area of logistics, sea power can be especially critical.
21. Pardew, pp. 18-20.
22. There are some who have argued that the Navy and/or USAF might have been able to win the war by themselves if they had been allowed to prosecute it in their own way. James Blackwell terms this a "bogus debate" (Blackwell, p. 222), while Norman Friedman notes "the air campaign could prepare the battlefield, but it could not end the war" (Friedman, pp. 132-34, 217).
23. See Earl H. Tilford, Jr., "Air Power in Vietnam: The Hubris of Power," in Lawrence E. Grinter and Peter M. Dunn, eds. *The American War in Vietnam: Lessons, Legacies, and Implications for Future Conflicts* (New York: Greenwood Press, 1987), pp. 69-83.
24. For a detailed discussion of the problems of air power in Vietnam, see Earl H. Tilford, Jr., *SETUP: What the Air Force Did in Vietnam and Why* (Maxwell AFB, Ala.: Air Univ. Press, 1991); for an analysis of the differing performances of airpower in Vietnam and the Gulf, see Kenneth P. Werrell, "Air War Victorious: The Gulf War vs. Vietnam," *Parameters*, 22 (Summer 1992), 44-54.
25. Friedman, pp. 169-96, and Blackwell, pp. 114-35.
26. The Soviet-style centralized C³I net like the one Saddam Hussein established in Iraq has two major problems. First, it tends to stifle the individual commander's initiative. Second, it is vulnerable to decapitation strategies which attack and disrupt the communications it depends on to function. See Pardew, p. 22; William E. Odom, "Soviet Military Doctrine," *Foreign Affairs*, 67 (Winter 1988-89), 124-25; and Friedman, pp. 18-23, 138, 144.
27. Thomas B. Allen, F. Clifton Berry, and Norman Polmar, *War In the Gulf: From the Invasion of Kuwait to the Day of Victory and Beyond* (Atlanta: Turner Publishing, 1991), pp. 115-47, contains an excellent description of operations in the Gulf War illustrating how the technology of C³I acts as a force multiplier. Friedman's description of the air campaign on pp. 169-96 and his Appendix B on p. 297 are also instructive. For the USS *Blue Ridge*, see "Amphibious Command Ships," Navy Fact File (Washington: Department of the Navy, Office of Information, October 1987), III-15.
28. Max Hastings and Simon Jenkins, *The Battle for the Falklands* (New York: W. W. Norton & Co, 1983), p. 228.
29. See, e.g., Harry G. Summers, Jr., *On Strategy: A Critical Appraisal of the Vietnam War* (Novato, Calif.: Presidio Press, 1982).
30. Hastings and Jenkins, pp. 316-31.
31. While it is arguable whether or not the application of military power is appropriate, or can contribute significantly to a political solution, in the Balkans, the reluctance of the United States to employ force as an integral part of its diplomacy demonstrates vividly that the new reality of Spears vs. Rifles has not yet been fully accepted, and the key lessons not yet learned. Although this paper primarily addresses conventional warfare, where an organized Third World military force is pitted against one from the First World, it is the author's contention that the new equation of military power is applicable in Bosnia, and that the US (and West European) military and civilian leadership continues to underestimate its military capabilities.
32. See Strobe Talbot, "Post Victory Blues," *Foreign Affairs*, 71 (1991/1992), 59; and Martin Indyk, "Watershed in the Middle East," *Foreign Affairs*, 71 (1991/1992), 73.
33. Friedman, pp. 138-39.
34. See Mark Katz, "Beyond the Reagan Doctrine: Reassessing U.S. Policy Toward Regional Conflict," *Washington Quarterly*, 14 (Winter 1991), 169-75.
35. Korea and Vietnam are the most notable examples, and many military officers still openly express the opinion that "we could have won if only the politicians had let us." This opinion ignores the key question of national political objectives. Another example of political shortsightedness in a military context is the lack of provision for mitigating the economic damage (including looting) to Panama during and after the invasion.
36. Dennis M. Drew and Donald M. Snow, *The Eagle's Talons: The American Experience at War* (Maxwell AFB, Ala.: Air Univ. Press, 1988), p. 36.