decide to modernize a particular part of our force. In this way we retain options—we do not wind up empty-handed if we are forced to cancel programs because certain technology gambles have not panned out. To be sure, this approach may require us to spend more initially, and this might sometimes result in political opposition. But it is possible that multiple options, and in some cases competition between candidate systems would help to deliver higher-quality weapons sooner; moreover, the extra initial costs of multiple or competitive development may not be prohibitive (hedging and competition in some cases may even save money in the long run). This certainly has been the case in such programs as the Lightweight Fighter, the A-X close-air-support aircraft, and the advanced-attack helicopter. By contrast, the absence of options has contributed to some noteworthy acquisition disasters—for instance, two candidate follow-on tanks to the M-60 (the MBT-70 and the XM-803).[16]

In sum, concealed in the rhetoric of the reform debate is an important question: are we using technology in military systems in an appropriate way? Some of the most important determinants of design success—the effect of political pressures on weapons chief among them—have not been discussed here because there is probably little we can do about them.[17] Nonetheless, there are a few steps we can take to improve our ability to get the most from our military technologies. I have listed three possible measures here. What technological capabilities to build into a given system probably has to be decided on a case-by-case basis, but if we can conduct debates on operational concepts and doctrine, keep operational tradeoffs in mind, and introduce more competition into our acquisition planning process, we can expect at least slightly better decisions about what technologies are appropriate for a particular weapon and when to incorporate them.

THE MILITARY REFORM MOVEMENT: A CRITICAL ASSESSMENT*

by JOHN J. MEARSHEIMER

There is today much interest in the self-styled military reform movement, a loose grouping of defense contractors, policymakers, members of Con-

[16] Note that the relative lack of options or competition in these cases was not the only factor involved.

[17] For instance, the Pershing II has performed less than outstandingly in its test program not because of any design flaw or acquisition failure, but rather because of the need to deploy the missile on a tight schedule determined by political factors.

* I would like to thank Michael E. Brown, Duane L. Knight, Barry R. Posen, and Stephen Van Evera for their most helpful comments.

gress and congressional staffers.[1] This group includes individuals with a wide variety of political views; liberal Democrats and conservative Republicans, who rarely agree on the issues of the day, appear to share similar views on how to improve the fighting power of our armed forces. Although differences certainly exist among the reformers, there is, nevertheless, a common core of ideas concerning the nature of modern warfare and how best to prepare for it. Basically, the reformers' theory of war is concerned with land warfare and, to a lesser extent, air warfare. Although certain reformers have definite views on naval warfare and questions of grand strategy, the movement does not appear to have a common position on these matters. I would like to examine the reformers' ideas about armies and land warfare and assess the advisability of their ideas and the likelihood that they will be adopted.

The Reform Movement's View of Warfare[2]

At heart, the reformers believe that the key to success on the modern battlefield is having the "right" strategy and that such a strategy is discovered by individuals whom students of military affairs call "great captains."[3] The reformers have two bêtes noires: technology and bureaucracy. Their hostility to these two basic elements of modern industrial society is directly related to their views on strategy and the individual. Specifically, they maintain that the U.S. military has come to view technology as a panacea for its problems, thus obscuring the importance of strategy, which is their solution. At the same time, they argue that bureaucracies or large-scale formal organizations stifle individual initiative; without the creative individuals, whose importance is paramount, it is impossible to discover the right strategy. In fact, heavy reliance on tech-

[1] Senator Gary Hart is probably the most well-known politician in the reform movement, and it is clear that he has been greatly influenced by his staff assistant, William Lind, who has written numerous articles on reform. Edward Luttwak, a widely known defense contractor, has also written widely on the subject, as has his business partner, Steven Canby. It is James Fallows, however, who has undoubtedly done the most to popularize the ideas of the reform movement. For a description of the "Congressional Reform Caucus," see Alton K. Marsh, "Military Reform Caucus Seeks Targets," *Aviation Week and Space Technology*, March 29, 1982, p. 55. See, also, Morton Kondracke, "Defense Without Mirrors," *The New Republic*, January 24, 1982, pp. 11-13.

[2] In this section, I have attempted to provide an accurate and concise description of the reformers' arguments. It is important to note, however, that the reformers have not provided any studies developing their arguments in a comprehensive or scholarly way. One is forced to rely on a handful of articles presenting arguments that are not developed systematically. Such arguments are frequently vague, a point I will develop at some length when discussing the reformers' views on strategy, but which also applies to their views on bureaucracy and technology. It is possible, nevertheless, to determine the basic outline of their arguments. In presenting *their* views, I have tried to avoid (for purposes of brevity) using quotations from their writings. It would not be difficult to provide documentation to support my description of their views. I cannot, however, provide much more detail about their ideas, since they have not done so in their writings.

[3] For a list of some of the reformers' most important writings, see John J. Mearsheimer, "Maneuver, Mobile Defense, and the NATO Central Front," *International Security*, Winter 1981-82, p. 104, note 2.

nology and bureaucracy is almost certain to result in the adoption of the wrong strategy.

For the reformers, the key to unlocking the secret of military success lies in the realm of strategy, or what is sometimes referred to as the operational level of warfare.[4] They maintain that the military, whether on the offense or the defense, is faced with a choice between two basic strategies—attrition and maneuver.[5] Attrition strategy calls for wearing down the opponent's forces in a direct engagement, and places a premium on the efficient application of firepower. The two sides in a conflict match strength against strength in what is ostensibly a protracted slugging match. In the end, success presumably goes to the side with more materiel and the larger number of soldiers. A maneuver strategy, on the other hand, starts with the premise that the opponent has an Achilles' heel, which, when struck, will lead to his collapse. Thus, it is not necessary to defeat the opponent's main forces in a series of bloody engagements. Instead, an army can defeat the enemy by finding his weak points and exploiting them. "The key to victory in maneuver is force disruption rather than destruction."[6] Victory promises to be swift, thus reducing the cost of war.

Not surprisingly, the reformers have undisguised contempt for attrition warfare, which they identify as "the American style of warfare."[7] Conversely, they praise maneuver warfare, which they hope to see the U.S. military adopt. Actually, for the reformers to speak of an attrition strategy is almost a contradiction in terms, since attrition warfare is so abhorent to them and strategy is so sacrosanct. If anything, one would think that for them an attrition strategy, the name notwithstanding, reflects an absence of strategy. It seems clear that when they talk about strategy, the reformers mean a maneuver strategy.

In the reformers' view, two obstacles impede the adoption of a maneuver strategy. One of these is bureaucracy or large-scale organizations.[8] This includes bureaucracy within the services as well as peripheral civilian bureaucracies. There are two related reasons that the reformers believe strategy and large-scale organizations are antithetical. First, such organizations are peopled by "managers" or staff officers whose entire modus operandi is geared to attrition warfare. With its emphasis on mas-

[4] See Edward N. Luttwak, "The Operational Level of War," *International Security*, Winter 1980-81, pp. 61-79.

[5] For a lengthy discussion of this matter, see Mearsheimer, "Maneuver, Mobile Defense, and the NATO Central Front," pp. 104-22.

[6] Edward N. Luttwak, "The American Style of Warfare and the Military Balance," *Survival*, March-April 1979, p. 59.

[7] Ibid.

[8] For some examples of the reformers' general views on bureucracy, see James Fallows, *National Defense* (New York: Random House, 1981), chap. 2, and Edward Luttwak, "The Operational Level of War," pp. 62-64. I have not discussed the reformers' attack on systems analysis in this article. For a discussion of this matter, see Richard K. Betts' excellent critique of the reformers, "Conventional Strategy: New Critics, Old Choices," *International Security*, Spring 1983, pp. 140-62.

sive amounts of troops and materiel, attrition warfare is ideally suited to the military bureaucrat. Thus, given the imperatives of organizational politics, these bureaucrats are naturally biased toward attrition warfare.

Second, bureaucracy stifles the individual military leader, the combat warrior, so essential for battlefield success. For the reformers there are two types of military officers: managers and leaders, and one is the enemy of the other. The reformers, of course, have declared war on military managers or staff officers, who, they believe, now control the U.S. armed forces. They hope to return control of the military to traditional leaders.

Another important point is that one cannot have maneuver warfare without a system in which individual combat leaders completely dominate their managerial counterparts. There are two reasons for this. First, it is the individual and not the organization who *discovers* strategy. Since "the Way of Strategy is not given to all," it is necessary to create a system in which the great captain, the military genius, can rise to the top and make his presence felt.[9] Second, it is individual commanders at all levels of the chain of command, acting with great independence, who will *execute* the maneuver strategy. Thus, there is much emphasis in the reformers' writings on decentralization of the command-and-control system and much emphasis on individual initiative. Their goal is clear: to free individual combat leaders at all levels (including the top) from control by a large-scale central organization. In other words, it is essential to decrease the importance of managers, who are identified with attrition warfare, and increase the role of leaders who are synonymous with strategy or maneuver warfare.

The reformers' hostility toward bureaucracy points to a strong element of antirationalism in their argument. Systematic planning for achieving any kind of military efficiency is scorned. Instead, there is much emphasis on concepts like instinct, wisdom, ingenuity, character, and intuition.[10] Edward Luttwak, for example, complains that there is too much "striving to substitute logic and calculation for military instincts and bureaucratic goals."[11] Elsewhere, he writes that "the best of our forces [the marines and certain parts of the army] are precisely those which are most obdurately traditional and least 'intellectual.'"[12]

[9] Edward N. Luttwak, "Why We Need More 'Waste, Fraud and Mismanagement' in the Pentagon," *Commentary*, February 1982, p. 25.

[10] See, for example, ibid., p. 20.

[11] Luttwak, "American Style of Warfare," p. 60. One can only wonder what Luttwak means when he marries "bureaucratic goals" with "military instincts" and then contrasts the two with "logic and calculation."

[12] Luttwak, "Waste, Fraud and Mismanagement," p. 23. He never specifies the criteria he uses to judge these parts of the armed forces to be "the best."

This line of thought is a direct assault on the notion that war is basically a scientific enterprise and that careful planning with general staffs is the best guarantee of success. The reformers, clearly, consider war to be an art and not a science; it is an endeavor in which individuals naturally endowed with good strategic sense (that is, those with "the Way of Strategy") discover the optimal way of securing success on the battlefield. War, for the reformers, does not lend itself to what Max Weber called "rational-legal" calculation. Moreover, bureaucracy, with its emphasis on this kind of thinking, encumbers the brilliant individual who has an understanding of the art of war. Here, again, we see the importance of the individual for the reformers' theory of war.

Technology is the second major target for the reformers' scorn. Their argument is straightforward. The U.S. military has come to see technology as the principal means of winning wars.[13] Consequently, little attention is paid to strategy. The reformers believe that strategy should dictate in a very strict way the kind of technology the services procure. They believe that technology has instead become the independent variable for the U.S. military and, in fact, has taken on a life of its own. Strategy has become technology's handmaiden.

Furthermore, a heavy reliance on sophisticated technology, with its logistical demands and emphasis on constantly increasing firepower, subverts maneuver and leads directly to the adoption of an attrition strategy. This then reinforces the need for better and more technology. A vicious circle has developed. The reformers also maintain that military bureaucrats are enamored of sophisticated technology, not only for reasons of organizational self-interest, but because it supports the preferred attrition strategy. Thus, technology, large-scale organization, and attrition warfare are inextricably linked in the reformers' logic.

The reformers argue that the U.S. military should end its reliance on highly sophisticated technology and, instead, build greater numbers of simple, inexpensive weapons.[14] Naturally, the reformers believe that such weapons, with their ease of operation, are ideally suited for implementing a maneuver strategy. In short, it is not necessary to rely on technical superiority to gain success because that end is best achieved by superior strategy.

[13] For some examples of the reformers' general views on technology, see Fallows, *National Defense*, chaps. 3-4; Senator Gary Hart, "What's Wrong With the Military?" *New York Times Magazine*, February 14, 1982, pp. 16ff; and William S. Lind, "Some Doctrinal Questions for the United States Army," *Military Review*, March 1977, pp. 54-65.

[14] It should be emphasized that Edward Luttwak does not appear to share the views of his fellow reformers on the subject of sophisticated technology. See, for example, his "Waste, Fraud and Mismanagement," especially pp. 19-20.

Assessing the Reformers' Views on War

The reformers have some worthy ideas. Their claim that the U.S. military should place greater emphasis on encouraging initiative among its commanders is a point well taken, and their charge that strategy is *often* neglected by the national security community is true. Such points aside, their views on modern war are vague, and, in part, anachronistic — and thus not likely to serve as a prescription for reform. Specifically, their views on military strategy, the bedrock of their theory, are obscure and not likely to be of much use to military professionals. Furthermore, their views on the nature of the military and the conduct of war are more relevant for the eighteenth than the twentieth century. Theirs is clearly a very romantic view of war.

The root of the problem is that the reformers view military affairs in isolation, failing to take into account the broader economic, social, and political forces that greatly affect the military. Specifically, they have failed to understand the impact that industrialization and democratization have had on the military over the past two centuries. To their credit, the reformers emphasize the importance of studying military history. It is not enough, however, to study only famous battles and great commanders. The military is not an isolated element in society, and changes in society at large invariably have a profound impact on the military.[15] An examination of the military's problems cannot be reduced to a discussion of the operational level of warfare. It is also necessary to consider the nature of industrial democracy and its impact on the military. The reformers' failure to do so is a fatal flaw in their theory.

Maneuver Strategy

Although the reformers' axiom that the sine qua non of success on the battlefield is adoption of a maneuver strategy seems very appealing at first glance, close examination reveals major problems. As I have discussed elsewhere,[16] it is impossible to determine exactly what the reformers mean by a maneuver strategy. The description they provide is highly abstract, and they fail to give any indication of what a manuever strategy would entail for the defense of Western Europe — the most relevant contingency. Reading through the reformers' writings, one gets the impression that they simply label any military success as an example of

[15] For a discussion of this matter, see Felix Gilbert, "From Clausewitz to Delbruck and Hintze: Achievements and Failures of Military History," *Journal of Strategic Studies*, December 1980, pp. 11-20, and Peter Paret, "The History of War," *Daedalus*, Spring 1971, pp. 376-96.

[16] See Mearsheimer, "Maneuver, Mobile Defense, and the NATO Central Front," pp. 107-8.

maneuver.[17] The following excerpt from an article by William Lind provides an example of just how wide the boundaries of their definition are: "In the 1950s, the Israelis developed effective tactics against Arab fortified positions. They attacked frontally, got into the trenchworks, and engaged the enemy in hand-to-hand combat. This may not sound like maneuver warfare, but it was."[18] There are numerous other examples that could be used to illustrate the vagueness of the reformers' concept of maneuver warfare.

Vagueness is a particularly egregious sin when one is dealing with strategy because military commanders, who are responsible for designing concrete plans, must be able to discern exactly what maneuver strategy is to be able to implement it. As Leon Trotsky, one of the century's most important military thinkers, noted, "military affairs are very empirical, very practical affairs."[19] The difficulty in translating the reformers' maneuver doctrine into practice is highlighted by the U.S. Army's recent attempt to develop a new fighting doctrine, referred to as the "AirLand Battle."[20] The army's revised version of Field Manual (FM) 100-5 and a number of associated documents contain numerous passages remarkably similar to various passages in the reformers' writings.[21] In light of this, it seems altogether reasonable to assume that the army has adopted maneuver theory as its doctrine.[22] Edward Luttwak appears to accept this point, yet, paradoxically, his fellow reformer, Steven Canby, is sharply critical of the "AirLand Battle." He argues that "on the rhetoric, I think the Army has bought off on it foursquare. But air-land battle is not maneuver warfare at all."[23] Perhaps it is not; but why this is the case is difficult to comprehend.

Although the reformers have not clearly defined maneuver strategy, certain inferences can be drawn about their views. It is clear, for instance, that they are discussing the classic notion of grand-scale ma-

[17] There are marked similarities between the reformers' views on strategy and B. H. Liddell Hart's "theory of the indirect approach." Not surprisingly, the principal criticism leveled at Liddell Hart's theory is that it is tautological. See Brian Bond, *Liddell Hart: A Study of His Military Thought* (London: Cassell, 1976), pp. 54-61. See, also, Brian Bond, "Further Reflections on the Indirect Approach, *Journal of the Royal United Services Institute*, December 1971, p. 70, and R. A. Mason, "Sir Basil Liddell Hart and the Strategy of the Indirect Approach," ibid., June 1970, p. 41.

[18] William S. Lind, "Tactics in Maneuver Warfare," *Marine Corps Gazette*, September 1981, p. 38.

[19] Leon Trotsky, *Military Writings* (New York: Pathfinder Press, 1971), p. 42.

[20] See *The Airland Battle and Corps 86*, TRADOC Pamphlet 525-5 (Fort Monroe, Va.: U.S. Army Training and Doctrine Command, March 25, 1981), and *FM 100-5: Operations* (Washington: Department of the Army, August 20, 1982).

[21] Edward Luttwak, for example, told the *Wall Street Journal* that he was "startled to see 'whole paragraphs' of his work showing up in the doctrine." John J. Fialka, "Army Shifts Strategy to Give Small Units Room to Maneuver," *Wall Street Journal*, January 22, 1982.

[22] This is clearly implied in ibid. and in Deborah Shapley, "The Army's New Fighting Doctrine," *New York Times Magazine*, November 28, 1982, pp. 37ff.

[23] See Luttwak's comments in his correspondence with Richard K. Betts in the Fall 1983 issue of *International Security*. Canby's comment can be found in Michael R. Gordon, "Many Battles Still to Fight," *National Journal*, July 3, 1982, p. 1182.

neuver, or what is frequently referred to as strategic maneuver. Basically, the objective is to force an opponent to move into a position where he can be enveloped. The reformers are certainly not advocating small-scale tactical maneuvers. Strategic maneuver, however, is of limited utility on the modern battlefield: contemporary armies, which are large and cumbersome, are difficult to maneuver; and they usually confront each other across wide fronts, where it is often impossible to turn a flank. Consider, for example, the NATO and Warsaw Pact forces located in Europe. It is hard to imagine a commander successfully maneuvering either one of these forces around the battlefield in the fashion described by the reformers.

When discussing the use of maneuver for offensive purposes, the reformers point to the success of the blitzkrieg as executed in the past by the Israelis and the Germans. The blitzkrieg, however, is *not* based on maneuver in the classic sense.[24] It is based, rather, on deep strategic penetrations, which call for the attacker to mass his forces at a specific point, pierce the defender's front, and then drive deeply into his defense. The objective is to destroy the vulnerable lines of communication throughout the defender's rear, thus rendering him incapable of coordinating his forces for a subsequent engagement. No attempt is made to outflank the defender or to lure him around the countryside until he is in a vulnerable position.

Regarding the reformers' position on maneuver and defense, I have argued elsewhere[25] that what they are calling for is, in effect, a classic mobile defense—which is one of the riskiest and most demanding strategies. A mobile defense is not an appropriate strategy for a heterogeneous alliance like NATO. Moreover, it is also a matter of historical fact that few armies have employed a mobile defense. Consider, for example, the Israeli and the German armies, which the reformers most often point to as practitioners of maneuver warfare. After the 1967 war, the Israelis specifically rejected a manuever-oriented strategy, or mobile defense, for defending the Sinai. They chose instead a forward defense, which, of course, has always been the preferred strategy for defending the Golan Heights.[26] Similarly, the Germans did not employ a mobile defense on the Eastern Front in World War II.[27] The reformers' call for a maneuver-

[24] For a detailed discussion of this matter, see John J. Mearsheimer, *Conventional Deterrence* (Ithaca: Cornell University Press, 1983), pp. 35-43.

[25] Mearsheimer, "Maneuver, Mobile Defense, and the NATO Central Front," p. 110-14.

[26] See Jonathan Alford, *Mobile Defence: The Pervasive Myth* (London: Department of War Studies, King's College, 1977), pp. 239-78. As Alford makes clear, the Egyptians managed to cross the Suez Canal in 1973 because the Israelis failed to employ their forces in accordance with the planned forward defense.

[27] See ibid., pp. 104-45.

oriented defense, then, is not a practical solution to the strategic problems facing the United States in places like Europe and Korea.

One final point needs to be made about strategy. Let us assume that it is possible to make the concept of maneuver warfare operational; assume that the offensive version is a blitzkrieg like the one described above, and the defensive version is a mobile defense. There is little doubt that a first-rate army might employ either of these strategies to achieve a rapid and decisive victory. Whether or not an army can successfully employ a blitzkrieg or a mobile defense, however, is as much a function of the opponent's capabilities as of its own skills. More specifically, when directed against a formidable opponent, it is highly unlikely that any strategy could effect a quick and decisive victory. For example, if the Israeli army had been matched against the Wehrmacht in 1967, the war would not have been a six-day one. When two evenly matched opponents lock horns on a battlefield, the result will almost invariably be a war of attrition.

The reformers assume that the Soviet army is a large cybernetic machine that can be brought to a grinding halt with a maneuver strategy. They believe that there is an alternative to fighting a war of attrition against the Soviets in Europe. This is wishful thinking, as the Germans learned in World War II. And if the Germans, whom the reformers praise as practitioners of maneuver warfare, could not decisively defeat the Soviets in a major land war, it is hardly likely that NATO could do so. Although the Soviets certainly have major weaknesses in their force structure, they are not so glaring that the entire military structure will collapse after one or two well-delivered blows. Even if NATO were to score some initial victories through the skillful employment of maneuver, the Soviets would learn to parry such blows with the third and fourth echelons of their army. For NATO, there is no alternative to fighting a war of attrition against the Soviets. Thinking strategically, as the reformers implore us to do, does not always provide attractive solutions to one's dilemmas. Strategy, too, has its limits.

Bureaucracy

When the reformers talk about moving armies about the battlefield as if this were as simple as moving pawns on a chessboard, one catches a glimpse of the romantic element in their theory of war. They seem to have forgotten that the military force the modern commander must maneuver is not the army of Frederick the Great, but a mass army. Their romanticism, however, is most pronounced when they are

denouncing bureaucracy and praising the individual combat leader who understands the art of war. Here, too, their ideas are more relevant for the age of Frederick than for the twentieth century.

Before the Napoleonic wars, the size and needs of an army were, relatively speaking, quite small. There was not, therefore, much bureaucracy within an army, and, to a great extent, individual commanders exercised considerable control over their armies.[28] This was the age of great captains, when war was very much an art.[29] All of this changed radically in the nineteenth century when industrialization and democratization effected a "great transformation"[30] in the military, not to mention in society at large. Armies became too large and, as a result of the application of such developments of the industrial revolution as the railroad, too complex for a single individual to control. The individual commander was not only unable to control an army in battle, but planning for war became so complex that no single individual was capable of devising a comprehensive strategy.[31] The problem was not one of mere scope; it also had much to do with the fact that increasing functional specialization made it necessary to delegate responsibility. In response to these developments, the military evolved into a real profession. A high premium was placed on expertise, and military bureaucracies, often known as general staffs, proliferated. The idea that a state could rely on a military genius who grasped the art of war to lead its armies was no longer relevant. War became much more of a science and it became clear that success in war was dependent on having first-rate managers in command. It is hardly surprising that the two classic American works on

[28] Nevertheless, even in the centuries before Napoleon, armies did have bureaucrats, and they had an important role to play. These forebears of the modern staff officer were established, for the most part, to meet logistical needs—a subject rarely ever mentioned by the reformers. See, for example, Geoffrey Parker, *The Army of Flanders and the Spanish Road, 1567-1659: The Logistics of Spanish Victory and Defeat in the Low Countries' War* (Cambridge: Cambridge University Press, 1972), and Martin Van Creveld, *Supplying War: Logistics from Wallenstein to Patton* (Cambridge: Cambridge University Press, 1977), chap. 1.

[29] See R. R. Palmer, "Frederick the Great," in *Makers of Modern Strategy*, ed. Edward Mead Earle (Princeton, N.J.: Princeton University Press, 1971), chap. 3.

[30] The term is from Karl Polanyi, *The Great Transformation* (Boston: Beacon Press, 1957).

[31] The reformers' failure to understand this point is underscored by Gary Hart's laudatory comments about Admiral Sir John Fisher, who, before World War I, instituted a number of controversial and very positive administrative reforms in the British navy. See Gary Hart, "What's Wrong with the Military?" p. 43. Nevertheless, historians roundly criticize Fisher, who "resolutely refused to create a Naval Staff to formulate any war plans." Michael Howard, *The Continental Commitment* (Hammondsworth, Eng. Penguin, 1972), p. 42. Fisher, like the reformers, believed that strategy was the responsibility of the great captain alone. Consequently, there were significant shortcomings in British naval strategy before World War I. See Paul Haggie, "The Royal Navy and War Planning in the Fisher Era," *Journal of Contemporary History*, July 1973, pp. 113-31. Also, the British army was plagued with the same problem in the early stages of World War I, when Field Marshal Kitchener, another believer in great captains, ran the War Office. See Peter Simkins, "Kitchener and the Expansion of the Army," in *Politicians and Defense*, ed. Ian Beckett and John Gooch (Manchester, Eng. Manchester University Press, 1981), pp. 87-109.

military professionalism[32] define officership in terms of the "management of violence."

A cursory examination of the German army reveals the relevance of these developments. Few would dispute the fact that the German army has been one of the most formidable fighting forces of the past 150 years. Although there are certainly a number of factors that account for this, there is no doubt that their general staff system accounts for much of that success.[33] The excellent German staff system contributed greatly to the German victories against Austria (1866) and France (1870). Shortly thereafter, the German general staff became a model for other European states to follow. So highly regarded was the German general staff that the Allies actually tried to outlaw it after World War I. Obviously, they failed, and the general staff system played a key role in World War II.

The German military, therefore, which the reformers respect so much, owes much of its past success to its military bureaucracy. The Germans were the first to recognize that the complexity of modern warfare makes it essential that trained experts with functional specializations play a key role in formulating and executing strategy. Simply put, there is no alternative to heavy reliance on a large bureaucratic structure and technical efficiency. The matter is perhaps better summarized by Max Weber, who wrote: "The decisive reason for the advance of bureaucratic organization has always been its purely technical superiority over any other form of organization. The fully developed bureaucratic mechanism compares with other organizations exactly as does the machine with the non-mechanical modes of production."[34]

Although the days of the great captain endowed with a sixth sense about strategy are long gone, this does not mean that there is no need for combat leaders or battlefield warriors. Obviously, no war is going to be won by an excellent staff system alone. The point is that one needs first-rate military bureaucrats as well as talented battlefield commanders. These are not mutually exclusive categories. On the contrary, they are complementary, as is clearly demonstrated by the history of the German military over the past two centuries.

Two final points are in order regarding bureaucracy. First, the reformers argue that a powerful staff system will create a situation in

[32] Samuel P. Huntington, *The Soldier and the State* (New York: Vintage, 1964), and Morris Janowitz, *The Professional Soldier* (New York: Free Press, 1960). See, also, Walter Millis, *Arms and Men* (New York: Putnam, 1956), chap. 3.

[33] See, for example, Trevor N. Dupuy, *A Genius for War* (Englewood Cliffs, N.J.: Prentice-Hall, 1977), and Dallas D. Irvine, "The French and Prussian Staff Systems Before 1870," *The Journal of the American Military History Foundation*, Winter 1938, pp. 192-203.

[34] *From Max Weber*, ed. H. H. Gerth and C. Wright Mills (New York: Oxford University Press, 1971), p. 214. Ironically, as Weber points out, it was the "needs . . . of standing armies" that were the chief influence in the growth of the "bureaucratic tendency" in European states. Ibid., p. 212.

which battlefield commanders are unable to take initiative—that ingredient so important for achieving success. Centralization of control, they feel, stifles initiative, which the reformers believe has been so important for the Germans and the Israelis. They are correct in stressing the importance of initiative; they are wrong, however, when they claim that an efficient and strong staff system is inconsistent with initiative or with what the Germans call *Auftragstaktik*. In fact, the Germans have demonstrated that initiative and a top-notch staff system are fully compatible. This point is made well by Samuel Huntington, who notes that the German system "on the one hand, subordinated the individual to the collective will and intelligence of the whole, and yet guaranteed to the individual wide freedom of action so long as he remained upon his proper level and within his sphere of responsibility."[35]

Finally, putting aside the issue of performance on the battlefield, the United States will always need a large and efficient military bureaucracy because of its geopolitical position. The United States is separated by great distances from the areas of the world where it might be involved in conflict. It is for this reason that we are so interested in power projection, which, by definition, requires a huge logistical apparatus. There is no escaping this requirement, as there is no escaping the fact that in the twentieth century, battlefield success is directly linked with the technical efficiency of the managers who comprise the staffs that Spenser Wilkinson called the "brain of an army."[36] The only choice is whether one will have good or bad managers.

Technology

A sizable segment of the national security community tends to view technology as *the* solution to our major defense problems.[37] To the extent that the reformers provide an antidote to such unbounded technological optimism, their skepticism is welcome. The problem, however, is that they greatly underestimate the importance of technology for success on the battlefield, and they misunderstand the relationship between technology and strategy.

Basically, the reformers are hostile to the notion that technology is an important factor in warfare. They believe that it is possible to rely on relatively unsophisticated weaponry. Given the choice, for example, between a fighter with advanced missiles and advanced avionics and a stripped-down fighter with more primitive systems, they would opt for the

[35] Huntington, *Soldier and the State*, p. 51.

[36] Spenser Wilkinson, *The Brain of an Army* (London: Constable, 1913).

[37] For two examples, see *Strengthening Conventional Deterrence in Europe*, report of the European Security Study (London: Macmillan, 1983), and Paul F. Walker, "Precision-Guided Weapons," *Scientific American*, August 1981, pp. 37-45.

latter. Their argument, in part, is based on the assumption that greater numbers (which are affordable because of the low cost of unsophisticated weaponry) compensate for the qualitative advantages that are given up. More important, however, is their belief that it is the individual and the strategy, not technology, that really matter.

While the reformers are correct in their assessment that technology alone is not a panacea, they fail to recognize that in an age of great technological change, it could be disastrous not to have the latest technology. One only has to look at the developments in naval technology that took place before World War I to ascertain the importance of staying on "the cutting edge" of military technology.[38] A more relevant example is the present action-reaction cycle between tanks and anti-tank guided missiles (ATGMs). Since the Egyptians had such success with ATGMs in the 1973 war, tank designers have been working on developing "special armor" that can withstand a direct hit from an ATGM. Concomitantly, ATGMs are being redesigned so that they can pierce this new armor.

It is absolutely essential for the United States to be in the forefront of developing both "special armors" and new ATGMs so that it can secure any advantage that accrues from new developments in these competing systems. We would be in very serious trouble if the Soviets developed an ATGM that could penetrate U.S. armor, while U.S. ATGMs could not pierce Soviet armor. Conversely, the Soviets would be at a marked disadvantage if the situation were reversed. For this reason, the United States has no choice but to stay in the forefront of armor and anti-armor technology.

This logic, of course, applies to other weapons as well. Although it is an uncomfortable fact of life, it is nonetheless true that to some extent we are prisoners of technology. We have no choice but to stay on "the cutting edge" of weapons development and to at least explore all possible avenues of development. This does not mean that every system on the drawing board should be deployed, that the most sophisticated version of a weapon is the one that should be built, or that technology should be allowed to obscure the importance of strategy or how the weaponry is used to achieve success on the battlefield. On the contrary, we should choose the systems we build wisely and pay very careful attention to the relationship between technology and strategy. This intention, of course, is admirable in theory but difficult in practice. Let us consider these matters in greater detail.

The reformers are almost always unequivocal in their enthusiasm or disdain for different weapons. Often, however, it is very difficult

[38] See Bernard Brodie, *Sea Power in the Machine Age* (Princeton, N.J.: Princeton University Press, 1943), especially part 3.

to be sure about the worthiness of a particular weapon. There are basically two reasons for this. First, since the United States has been fortunate enough to have been spared a general conflict with the Soviet Union, most of our weapons have not been tested in the arena for which they were designed. It is therefore difficult to determine what the demands of a U.S.-Soviet conflict would be. In this regard, consider the F-15 aircraft and the M-1 tank, two weapons that the reformers would like to throw on the scrap heap. It is possible that in a war the reformers might be proved correct. It is also possible that the F-15 and the M-1 will prove to be very valuable weapons. For this reason, there will be tremendous pressure on the prudent defense planner to procure both of these systems. Uncertainty is a powerful reason for staying in the forefront of weapons development.

It is also difficult to ascertain the worthiness of a weapon because there is often a lengthy gestation period in the development of new technologies. There is, in other words, usually a gap between invention and full utilization of the invention. Weapons are complex systems, and it frequently takes time to eliminate the problems associated with early development and to add new features. Also, weapons are sometimes not used because their value is not readily apparent. Air-launched guided missiles and ATGMs were in military inventories well before their real value was recognized in the Vietnam War and the 1973 War, respectively. These considerations work to reinforce the prudent planner's proclivity for deploying sophisticated weapons.

Two further points regarding technology are in order. First, the reformers maintain that technology should be completely subordinated to strategy. Technology, for them, should be the dependent variable. Although this may be a desirable situation, the world unfortunately is not so well ordered. Whether we like it or not, technology often evolves in unplanned and unforeseen directions. The idea that the growth of technology can be simply fitted to the demands of strategy is mistaken. Often, but of course not always, strategy must be changed to accommodate technology. The tank, for example, which was developed in World War I, was not developed to facilitate a blitzkrieg; it was to be used in support of the prevailing strategy of broad frontal attacks. It was not until after the war that certain individuals recognized the revolutionary potential of the tank. Here, the technology preceded the strategy. In short, the relationship between technology and strategy is a complex one where neither factor completely dominates the other.[39]

[39] One example of this complexity is provided by Michael Brown in his excellent study of bomber development in the United States. He argues that in this realm, strategy *has* dominated technology, but to the detriment of the bomber programs themselves as well as the nation's overall force posture. See Michael E. Brown, "Flying Blind: Decision-Making in the U.S. Strategic Bomber Program" (Ph.D. diss., Cornell University, 1983).

At a general level, one gets the impression that the reformers, in their efforts to emphasize the importance of strategy over technology, do not understand the importance of economic factors for military strength. This is reflected, for example, in Edward Luttwak's discussion of "the true source of British naval supremacy."[40] Luttwak maintains that "certainly it was not by an economic superiority" that Britain achieved its pre-eminent position. "The true source," he argues, "was the statecraft that kept the major powers of Europe divided. . . . It was the ceaseless effort of diplomacy, the subsidies . . . , the bribes—and the willingness to change sides . . . that made the British so powerful at sea, and not the mere building of ships." In other words, British hegemony at sea was due to an intelligent grand strategy, not superior economic might. This analysis is simply incorrect. The decline of British naval mastery had little to do with the absence of good strategy or smart diplomacy and almost everything to do with the steady erosion of Britain's economic base over the past century.[41] It is hard to imagine a serious historian arguing otherwise.

Strategy is certainly an important variable, and the reformers are correct to insist on that point. Good strategy, however, is not going to make much difference if a state does not have an economy powerful enough to produce the raw military power that the strategist must use to achieve his ends. Luttwak's views notwithstanding, excellent strategy will not make Britain a world power again. The United States, in addition to choosing wise strategies, must remain on "the cutting edge" of the industrial revolution. We need to stay abreast of the latest developments in military technology, and we need new technologies to fuel the growth of our economy—the ultimate source of our military strength. Technology and strategy, like bureaucracy and strategy, are compatible, not mutually exclusive categories.

Conclusion

What can be said about the prospect of the reformers' views being adopted? The answer is quite simple: on other than a rhetorical level their ideas will not have much impact. The reformers' ideas on strategy, the cornerstone of their theory, are vague and, therefore, it is very difficult to see how they will be translated into concrete strategies. As best as one can tell, they are calling for NATO to adopt a mobile defense. From

[40] This discussion can be found in Luttwak, "Waste, Fraud and Mismanagement," p. 24.

[41] This point is made clearly in Paul M. Kennedy's superb study of the British navy, *The Rise and Fall of British Naval Mastery* (New York: Scribner's, 1976). It should also be noted that those "subsidies" and "bribes" that Luttwak points to were made possible by a robust British economy. See J. M. Sherwig, *Guineas and Gunpowder: British Foreign Aid in the Wars with France* (Cambridge: Harvard University Press, 1969).

a military perspective, this strategy is ill-suited to NATO. On the political level, the Germans will never allow NATO to substitute a mobile defense for the present strategy of forward defense.

This is not to deny that the U.S. Army and the Marine Corps have not paid homage to the rhetoric of maneuver warfare. They certainly have, as a perusal of the army's 1982 FM 100-5 and the pages of the *Marine Corps Gazette* make clear.[42] This is hardly surprising, since adopting some of the reformers' rhetoric serves to placate a vocal body of critics.[43] Also, arguing against the abstract concept of maneuver, which promises a quick, almost bloodless victory, is much like arguing against apple pie and motherhood. It is much easier to sing the praises of maneuver. There is no evidence, however, that this change in rhetoric has resulted in any meaningful change in the way the United States would fight a war in Europe or elsewhere.

Regarding the reformers' ideas on bureaucracy and technology, the United States military will continue to be a highly bureaucratized institution that places great emphasis on deploying sophisticated technology. Modern militaries have no choice on these counts. Those ineluctable forces, democratization and industrialization, have made it imperative that a military rely heavily on staff officers and the most up-to-date weapons. The reformers' desire to turn back the clock and return to an age when the brilliant individual and simple weaponry were the keys to success in war is a hopeless cause. Ideas that do not recognize the impact of the broader forces that shape the military institution remain nothing more than ideas.

[42] Over the past few years, the *Marine Corps Gazette* has published many articles extolling the virtues of maneuver warfare, a number of which were written by William Lind. It is clear from the articles and the correspondence in the Gazette that the Marine Corps is quite sympathetic to the reformers' views on ground warfare. Thus, it is not surprising that the reformers are favorably disposed toward the marines.

[43] In this regard, the army has gone out of its way to solicit the views of the reformers. For example, the reformers were asked by the army to review a draft version of FM 100-5. See Michael R. Gordon, "Budget Crunch Gives Shot in the Arm to Growing Military Reform Movement," *National Journal*, September 5, 1981, pp. 1572-76.