

A Climate for Innovation

by Williamson Murray

Insights on keeping America strong, drawn from Dr. Murray's 6 November 1997 testimony to the House Subcommittee on Modernization.

The U.S. Military confronts an uncertain and ambiguous future. The ending of the Cold War has resulted in the removal of a strategic framework that provided certainty and stability for half a century. In the new strategic environment it is crucial that the United States maintains the military edge that it gained at such cost over that period. This testimony will address three factors that will play substantial roles in the processes of modernization and innovation, if the U.S. Military is to maintain its position as the premier military power in the world: first the emerging strategic environment; second, what history suggests about the processes of military modernization and innovation; and third, the troubling cultural and intellectual proclivities within the Services today, proclivities that may prevent innovative conceptions from reaching fruition and which also may lead the Services down dangerous paths by a refusal to address the real world, as opposed to the imaginary hopes of generals and admirals.

The Strategic Environment

Let me begin with the strategic environment because unless the Services obtain some clear idea of the framework within which they are modernizing and innovating, the U.S. Military may well possess wonderful operational and tactical capabilities—but capabilities that are largely irrelevant to the challenges of the next century. Modernization and innovation demand a context within which military organizations can focus on specific tactical, operational, and doctrinal issues.

The United States, as Eliot Cohen and I have been arguing over the past several years, has established a great

commercial empire. The continued stability of that political and economic system will determine to a great extent whether the United States will maintain its democratic, capitalistic system. That economic and political system will, undoubtedly, be challenged in the next century from two directions. First, in the short term, ethnic conflict, messianic religions, overpopulation, and economic and political collapse throughout much of the Third World and even in the Second World will challenge global stability. It does matter to U.S. interests whether the Balkans recede into the terrifying ethnic conflicts that have characterized the history of that region for the past 500 years. It does matter to U.S. interests whether fundamentalist religious leaders desta-

without good arms.”

But it is also certain that sometime in the next century, peer competitors will arise to challenge U.S. interests. The Pentagon's current focus on major regional contingencies, with North Korea and Iran as bogey men, is largely unrealistic for the short term. In the long term, the threat of a peer competitor, even in regional terms, represents the greatest challenge to global political stability. The United States may well not confront such peer competitors for 30 or 40 years or even longer. In addition, such peer competitors may only be regional threats, with ambitions analogous to those of Saddam Hussein, but with military capabilities and strategic sophistication at a far higher level. But the United States might also confront China, and that possibility poses threats more dangerous and more difficult than the Soviet Union represented at the height of the Cold War—particularly if the Chinese economy continues growing at its current rate. What makes the

“In no sense have the Services created the climate for innovation; consequently, all the new weapons and all the research and development will only lead to faulty concepts and inappropriate doctrine . . .”

bilize much of the Middle East. It does matter to U.S. interests what happens in Eastern Europe.

Unfortunately, American success in the Cold War has placed the United States in a position where it is the only nation with the capabilities to maintain stability in many areas of the world. That, of course, does not mean that the United States must intervene in every crisis or catastrophe. But it demands an American presence across the globe—or at least the capability to project U.S. military force where it is needed. The longer the United States maintains the current order, the longer economic growth and technological advance will continue. As Machiavelli suggested: “One can not have good governance

possibility of a China threat even more alarming is the continuing collapse of Russia in military, political, and economic terms.

In this case, the United States will require military forces in many respects quite different from what it needs for the present. While the present strategic situation requires a manpower intensive force, the contest with peer competitors will require expensive, redundant systems and military expenditures dwarfing those of the Cold War.

The difficulty for the U.S. Military will be that it must modernize and innovate with these very different threats in mind. Already, the Services are being pulled in two different directions: the Army's Force XXI or its “Army After

Next" does not deal with the commitments at present confronting the United States, but the process they have begun may well be decisive in winning—or, even better, deterring—a conflict in 2030.

There are two other political and strategic factors that defense policymakers must also keep in mind. On one hand, the more successful U.S. policy is in maintaining stability in the short term, the greater will be the pressures to bring the troops home. Either the American people, through a continuing decline in the defense budget, or foreign pressure—and probably both working synergistically—will ensure that almost the entire U.S. Military will be back in the continental United States early in the next century. Then, to an even greater extent than presently, the U.S. Military will confront that difficult and intractable problem of projecting military power from North America across two great oceans.

But equally difficult will be the fact that defense budgets will continue their decline well into the next century—perhaps gradually, but steadily nevertheless—until the United States actually confronts a direct threat to its security. If the Services fail to modernize without those two harsh realities in mind, they will cast unrealistic programs, buy the wrong weapons, and prepare to lose the next war. The Department of Defense [DoD] is already going in that direction. A huge portion of DoD's modernization budget for new equipment is already ticketed for replacement fighter aircraft—according to post-QDR [Quadrennial Defense Review] estimates in the \$250–\$350 billion range. The Navy is dropping the largest amount on the F/A-18E/F—to purchase an aircraft that represents 1970s and 1980s technology, that has no substantial increase in range, that has no stealthy qualities, and that may kill off procurement that the Navy really needs to support its own concept of "From the Sea." Equally, distressing is the fact that the Air Force is pushing for an air superiority fighter, the F-22, to replace the F-15, when in fact there is no challenger to the F-15 on the horizon.

The Coming Decades

The most difficult task that the U.S. Military will confront in the next century has to do with how it addresses the

question of modernization—in other words how well it innovates. The last interwar period of the 1920s and 1930s provides useful lessons on thinking about innovation in the next century. That historical experience underlines that modernization involves much more than buying technology or coming up with jazzy systems and buzzwords.

Successful innovation is not a linear, but rather a complex, multilayered, synergistic process. The most important elements in that process are professional thinking, coherent and realistic training, and sensible doctrine based on a thorough examination of past experience—not simply technological development. "Revolutions in military affairs" are made by intellectual debate and thorough, realistic experimentation. In the opening campaigns of World War II, the French and Soviet Armies possessed superior technology, but the results were catastrophic for both.

The Germans, on the other hand, won the early campaigns because they had studied the lessons of past wars with considerable thoroughness—in 1920 they established no less than 57 committees to study the lessons of the last war, in contrast to the British, who established one committee in 1932. Moreover, the German military leadership took the study of war and the profession of arms with great seriousness. A military culture that encourages innovation then is a culture that prizes thinking and debate; it is one in which the intellectual study of the profession of arms is as prized as operational experience; and it is one that has a solid grasp of what the past suggests as well as dreams of the future.

It was not only the Germans who innovated successfully in the interwar period. The United States Navy in its development of the carrier did a superb job in stretching the minds of senior officers to think about the increasing significance of air power to naval war. The process of carrier development began in war games at the Naval War College in Newport in the early 1920s before the Navy ever possessed a carrier. The development of carrier capabilities depended on a close relationship between the thinking at the Naval War College and the conduct of yearly exercises, the results of which were fed directly back into the War College for planning sub-

sequent exercises. Consequently, the educational and the operational navies were in the closest touch—something which is absolutely not the case today. In fact, the interwar U.S. Navy so prized thinking that it allowed the future Adm Raymond Spruance to serve not one, but two tours teaching on the faculty of the Navy War College.

On the other hand, considerable innovation in the interwar period was didactic and ahistorical. Both the Royal Air Force and the U.S. Army Air Corps believed that the past was irrelevant to the future of war, because airpower had negated the lessons of the previous 3,000 years of military history. Consequently, those military organizations attempted to leap into the future without any reference to past experience. Their almost ideological belief in strategic bombing substantially minimized the potential contribution that airpower might have made in the early years of World War II and measurably contributed to the disaster of the early war years.

Modernization for the foreseeable future should not be a matter of buying large amounts of equipment or expensive technologies. Given the demands that will be made on U.S. forces, modernization requires innovation and changes within organizations that already confront serious commitments. Nevertheless, the Services must be willing to innovate and adapt to technological changes by changing force structure, doctrine, training, and basic concepts. Congress and the Defense Department will have to challenge the Services by rewarding those who are willing to experiment and test new concepts in a realistic and thorough fashion.

Above all the new concepts and approaches to warfighting must fit in with the requirements of U.S. strategy and the geographic position of the United States. Consequently, the Services' focus should be on the projection of military power across great distances to achieve American objectives in the outside world. The United States cannot expect future opponents to give U.S. military forces 6 months to deploy before beginning operations. Nor can the United States expect that airfields and ports through which it deploys its military forces not to come under sustained enemy attack. The next war will look lit-

tle like the Gulf War—the crucial determinant will be time, and the United States will have substantially less of that dominant factor in military and political outcomes.

To achieve the Nation's vital interests in the next century, the U.S. Military will have to do a substantial reordering of current priorities and ways of doing business. For example, there is simply no challenger in sight to the U.S. Navy's position of dominance over the world's oceans. Consequently for the foreseeable future, the most important justification for the resources that it receives from the American people lies in its ability to project and support Marine and Army forces ashore.

Similarly, it is unlikely that any rogue nation or peer competitor will challenge American military forces in the air. In view of the Air Force's advertising slogan of "global power, global reach," its support for the F-22 over the B-2 appears to be a serious mistake. Moreover, with the C-141 nearing retirement age, it would seem more important to replace the 141s with C-5s, C-17s, or even 747s than to buy a fighter which may prove of little real utility because there may be no challenge to U.S. air superiority. The more important requirement over the next several decades is the necessity to get U.S. ground forces to the war in a timely and expeditious fashion.

This does not mean that the Air Force should discard the F-22 entirely (as would seem to be the most sensible case for the F/A-18E/F), but it might instead acquire a few dozen aircraft for experimentation and as test beds. Then, if there is an increased air-to-air threat, the Defense Department could procure the F-22 in larger numbers. The point is that the Pentagon may not want to procure substantial numbers of the weapons that it develops, largely because they might not address immediate challenges. Such an approach would of course require major changes in a procurement system that Congress has mandated, and the Pentagon has developed.

The Army has displayed the least willingness to address the questions of modernization and innovation in the next century. This may have disastrous consequences for U.S. foreign policy, because ground forces—Marines as well as Army—will be the final arbiter of political payoff of conflict in the next cen-

tury, no matter what the contribution of air forces or distant strike. Unfortunately, besides cancellation of its disastrous light tank program and a refusal to come up with an acceptable light armored vehicle, the Army has produced the "Crusader" artillery system, which weighs as much as an Abrams tank and which will undoubtedly be as difficult to transport. From the outside, in terms of its organization, equipment, and operational concepts the Army appears firmly mired in the Fulda Gap, waiting for an enemy who has gone home and will not ever return.

The Culture of Innovation

In my view the largest issue that has to do with the prospects of modernization and innovation over the coming century has to do with a subtle and controversial point. To be frank, the present cultures within the Army, Air Force, and Navy are anti-intellectual, hostile to serious study, and unsupportive of serious debate. Consequently the climate at present is not at all conducive to innovation in either the short or long term. Much of the present military leadership regards professional military education as peripheral in the development of the officer corps. The reward system is geared to reward everyone except serious thinkers, while Service journals with few exceptions spout the party line for fear of punishment from on high.

The current state of professional military education is suggestive of the problem. The Air Force has largely discarded the major reforms that occurred in the Air War College in the early 1990s; Maxwell Air Force Base indeed has a wonderful golf course that its officers are making full use of. The Army has a first rate college of social science at Carlisle Barracks devoted to the study of everything but war. As a senior Marine who attended the college suggested: ". . . since you studied law at law school and medicine at medical school, I believed that when you went to a war college, you studied war. Boy was I wrong." Finally, the Navy, which has the most impressive war college in the world, particularly as far as the study of strategy goes, refuses to send the majority of its best officers to senior Service schools.

But it is more than attendance at staff colleges or war colleges that creates the intellectual climate for moderniza-

tion and innovation. At present the Services are actively discouraging debate and intellectual vitality within their ranks. Policy review dominated the Air Force. Army generals parade through staff and war colleges suggesting to the students that they take their packs off and not take the academic work seriously. Of all the Services, only the Marines have developed a reading list that their officers buy and read. The Army's reading lists receive neither publicity nor attention from that Service. To my knowledge the Navy has no reading list at all for its officers, while the Air Force's list could best be described by the word parochial.

In a nut shell substantial communities with the officer corps of the Services are not taking their profession, the profession of arms, seriously—as deserving sustained study throughout their military careers. In writing about the British Army in the 1930s, the great British military historian, Sir Michael Howard, has suggested:

the evidence is strong that the [British Army in the interwar period] was still as firmly geared to the pace and perspectives of regimental soldiering as it had been before 1914; that too many of its members looked on soldiering as an agreeable and honorable occupation rather than a serious profession demanding no less intellectual dedication than that of doctor, the lawyer, or the engineer.

The British paid a terrible price for that lack of serious study on the battlefields of France, the Middle East, and Malaysia between 1939 and 1942. I am afraid that we too may pay a similar price in the next century.

In no sense have the Services created the climate for innovation; consequently, all the new weapons and all the research and development will only lead to faulty concepts and inappropriate doctrine, and inevitably to military ineffectiveness. The most fundamental step that Congress could take towards pushing along the process of modernization and innovation would be to pressure the Services to change the intellectual climate and culture within their organizations.



>Dr. Murray, a professor emeritus of history from Ohio State University, is currently the Charles Lindbergh Fellow at the Air and Space Museum in Washington, DC.