

CHAPTER 1

TRANSFORMATION AND PROFESSIONAL MILITARY EDUCATION: PAST AS PROLOGUE TO THE FUTURE

Dr. Williamson Murray

This book represents the third in a series that began in the Army War College's academic year 2000-01. As in the past, it contains the papers of the students of the Advanced Strategic Arts Program, a special program within the war college dedicated to the study of the strategic and joint environment within which America's military will fight in the 21st century.¹ This year's essays, however, cover a wider variety of subjects than has been the case in the past. The students of the 2002-03 academic year were not asked to address the single theme of army transformation, but rather were allowed to address a wide range of issues and problems confronting the United States in a fractious and difficult world.²

Those essays range in subject matter from basing in Europe, to several addressing the critical issues in Homeland Security. All of them raise critical issues with regards to national security and the nature of war itself. One of the essays won a prize at this year's graduation ceremonies. That honor suggested a great deal about the quality of the students in the Advanced Strategic Art Program (ASAP) as well as the importance of intellectual excellence in the curricula of America's war colleges. The very breadth of the essays, covering topics from the implications of a nonlinear world on the conduct of military operations to close examinations of the strategic framework of U.S. strategic policy in Europe and Asia, underline the character and intellectual breadth of the best students at the Army War College.

Now more than ever, it would appear that America needs officers who possess a deep understanding of the difficulties involved in the use of force in the international arena as well as understand the complex problems involved in the political and strategic challenges confronted by the United States in the post-Cold

War World. Over the past decade, a number of major study groups in Washington—to include the Defense Science Board, the National Defense Panel, and the Hart Rudman Commission—have all argued that the United States needs officers, more widely educated not only in the profession of war, but in understanding foreign cultures, languages, international affairs, and military history.

Moreover, a number of senior civilian officials in the Department of Defense (DoD) as well as in the Congress have become interested in the subject of professional military education. It would appear then, that an examination of the period when professional military education rendered signal services to the armed forces of the United States in their preparation for war would be useful in thinking about how serious education could contribute to the preparation of officers for an uncertain and ambiguous future. That is the subject of this opening chapter.

PAST CONTRIBUTIONS

Professional military education in the United States appeared in the late 19th century for a number of reasons, quite different from those lying behind its appearance on the European Continent.³ For American military reformers of the late 19th century, education represented a tangible sign that their profession fit within the larger context of the systemization through education of other professions in the United States. That process included the professions of medicine, law, and even business. If officership in either the Navy or the Army were a profession, then the services needed some form of serious professional education. The fact that even the British had seen fit to establish a staff college in the 1850s to educate their officers also suggested to American reformers the need for serious professional military education.⁴ However, it was not until the 1920s that professional military education came into its own in the United States as a major factor in preparations for war. And because the contribution of professional military education was so significant, it is well worth examining the attitude of the services in the interwar period towards professional military education as well as the nature of that contribution.

THE MARITIME SERVICES AND PROFESSIONAL MILITARY EDUCATION IN THE INTERWAR PERIOD

The Development of the Carrier.

Almost from the period immediately after the end of World War II, historians have understood the importance of professional military education in the development of the Wehrmacht's battlefield capabilities.⁵ What, however, has only become clear in the 1990s, as the result of recent research by scholars, was the extraordinary role that professional military education played in the processes of transformation and innovation that took place within the American armed forces during this period. The most interesting and important case was that of the Naval War College—an institution that provided the intellectual engine for the Navy's transformation efforts and innovation from the early 1920s through to the start of World War II. In the interwar Navy, not only attendance, but teaching on the faculty, was considered career enhancing for officers. Virtually every admiral of note in World War II was a graduate of the college, while the future admiral Raymond Spruance served not one, but two, tours on the faculty.⁶

The impact of this emphasis on professional military education showed directly in the Navy's efforts to transform its combat capabilities. If it had had little opportunity to test its battle fleet in combat during World War I—only one squadron of U.S. battleships made it to Scapa Flow well after the Battle of Jutland—the Navy had at least had the chance to observe what the British were doing. Moreover, the admiral in charge of U.S. naval efforts in European waters, William S. Sims, was one of the most intelligent and innovative officers ever to wear the Navy's uniform. Interestingly in terms of his priorities, Sims chose to return from Europe to the presidency of the Naval War College rather than to a fleet command.⁷ There at Newport, he set about adapting the war games at the college to educate naval officers not only in current capabilities, but in those that the future might hold. The games provided surrogate decisionmaking experience in naval warfare and examined the operational and strategic possibilities open to the Navy with the

advent of significant new technologies. Thus, Newport probed the framework of emerging concepts and technological change. In particular, the games tested the possibilities that aircraft carriers might offer to revolutionizing the conduct of maritime operations.⁸ Serious honest red teaming lay at the heart of the approach to the wargaming and testing of these new capabilities.⁹ There was virtually no effort to validate preconceived notions; rather the emphasis was on the testing of ideas and concepts until they failed. The resulting culture of intellectual honesty was to carry over into the Navy's fleet exercises throughout the interwar period.

The most important operational insight in these wargames was that the dynamics of offensive carrier operations would differ fundamentally from those involved in battleship engagements. When battle lines of dreadnoughts engaged, the fires from the two sides involved more or less steady streams of shells. Each side could redirect its "streams" of fire on the enemy's surviving ships as the engagement progressed. However, the wargaming of the air power assets that carriers would bring to the fight suggest a very different picture. The execution of potential carrier operations suggested that air strikes should come in discrete pulses of combat power rather than in continuous streams. Thus, the effectiveness of such strikes on the enemy would be a function of the number of aircraft that the attacking carrier or carriers could launch in a given pulse.¹⁰

Crucial to this insight was the fact that those running the war games at Newport were open to new ideas and approaches:

As [Captain Harris] Lanning [the director of the Tactics Department at Newport] noted in his memoirs, "a group of the cleverest tacticians among the students came to see me and said that . . . they believed there were better methods and intended to find them." Instead of being offended Lanning backed them. As he recalled, "In investigating aircraft [in the war games] we gave the officers commanding miniature fleets a rather free hand in the use of aircraft . . . the only restriction being that planes had to operate in accordance with the capabilities and limitations as established by aviators familiar with planes."¹¹

A game at the end of 1923 suggests the willingness of those designing the fleet games at Newport to experiment with the possibilities that could come with significant changes to the

composition of the fleet. In this exercise the Blue (American) fleet possessed five carriers; the Red fleet, four. While much of the game emphasized the maneuvers of the battle fleets, the Blue fleet launched 200 aircraft at Red and damaged all of Red's carriers and one of its battleships. Besides pointing to the need for concentrated strikes against the enemy fleet, the game suggested the need for a coherent air defense plan and the importance of gaining control of the air—thus the conclusion that the enemy's carriers must be the first target of carrier strikes.¹²

The insight that the number of aircraft launched by a carrier would be the critical factor in naval combat in the future had far reaching implications for the development of naval aviation. It suggested that in fleet engagements, striking first with one's aircraft would confer considerable advantages. It also indicated that, range, payload, and sustainability of aircraft would be essential enablers in the future naval equation.¹³ Newport's relatively simple wargaming also suggested that the more aircraft a carrier could take to sea, the better, and that reduction of aircraft launch, recovery, and on-board handling times would have a significant impact on the carrier's effectiveness. And all of these insights were gained *before the U.S. Navy possessed a single operational aircraft carrier* in the fleet.

What was particularly impressive about the Navy's transformation efforts was the direct connection between concept development at the Naval War College and the exercises and experiments that its fleet units carried out throughout the interwar period. In turn, the lessons learned from the exercises more often than not were fed back directly to the school, where real world experience could refine doctrine and concepts. The insight that air power on the carriers should come in pulses had an almost immediate effect on experimentation in the fleet.

In 1925, the future admiral Joseph M. Reeves went to sea in command of the Navy's first carrier, the USS *Langley*. Significantly Reeves had attended the senior officers' course at Newport in 1923 and after graduation had become the head of the tactics department, where he supervised the 1924-25 games.¹⁴ Reeves immediately set about shortening take off and landing times for ever larger numbers of aircraft. In the period of a year, Reeves, his officers, and the crew

of the *Langley* figured out how to use arresting cables to maximum effect, had invented crash barriers, developed the concept of a deck park, and developed procedures and equipment to refuel and rearm aircraft at much faster speeds. The result was, that while the *Langley* had only taken to sea 14 aircraft when Reeves assumed command, it was handling 48 aircraft a year later in simulated combat conditions.¹⁵ By the early 1930s, the *Lexington* and *Saratoga*, newly arrived in the fleet, were handling nearly 100 combat aircraft each in exercises. It is doubtful whether the United States military has ever seen a more impressive use of low-cost resources than the inexpensive games that Sims had created at Newport to examine the possibilities open to the use of new technologies like air power.

Strategic and Other Insights.

The war gaming and examination of new concepts at Newport involved more than just the insights that involved the potential use of carriers and aircraft. They created a mind set that prepared the Navy and eventually the Marine Corps to deal with a number of significant problems that a future war in the Pacific would raise. The future fleet admiral and commander of the great drive across the Central Pacific from 1943 through to the end of the war, Admiral Chester Nimitz, noted the following in his 1923 thesis at the Naval War College about the operational and strategic framework of a future war in the Pacific:

[T]he operations imposed [in a future Pacific war] on Blue [the United States] will require the Blue Fleet to advance westward with an enormous train, in order to be able to seize and establish bases en route. . . . The possession by Orange [Imperial Japan] of numerous bases in the Western Pacific will give her fleet a maximum of mobility while the lack of such bases imposes on Blue the necessity of refueling at sea en route or of seizing a base from Orange for this purpose, in order to maintain even a limited degree of mobility.¹⁶

Thus, the games and strategic analysis at Newport led to the conclusion that the fleet would have to capture a number of islands in the Central Pacific to support a drive on the Japanese Home Islands. And that task would require amphibious capabilities.

Here the Marines, and their emergence as a significant military force, became a significant part of the interwar story of professional military education.

Almost immediately after the demobilization following World War I, the Marines had begun focusing on the possibilities offered by amphibious warfare—partly to survive as an independent military organization. The Commandant of the Marine Corps in the early 1920s, General John Lejeune, who proudly wore the combat patch of the Army's 2nd Infantry Division on his right shoulder, charted the way ahead. The foremost historian of the Corps has noted the following about Lejeune's attitude toward professional military education and its importance in preparing the Corps for the future:

The Commandant intended that Marine officers study their profession, and he also intended that school completion be regarded as part of an officer's fitness for key assignments. It might also serve as a moral equivalent of promotion and the key to rapid advancement if the Corps went to war again.^{17,18}

Thus, the Marine Corps Schools at Quantico became the one place in the world where the implications of the British assault on the Gallipoli Peninsula were studied, not only for their failures, but for what might have gone differently, had the British possessed a more aggressive and better trained force.¹⁹ Between the mid-1920s and the mid-1930s, the Schools at Quantico saw an increase in the proportion of the curriculum devoted to the study of amphibious operations from 25 percent to 60 percent.²⁰ Thus, Gallipoli became one of the major foci with an increasing emphasis on the tactical and operational movements once the amphibious force had achieved a beachhead. Significantly, the Marines placed a number of their finest officers and future leaders on the faculty at Quantico. Among others, the faculty included in 1938 Lemuel C. Shepherd, Jr., O. P. Smith, Merrill B. Twining, David M. Shoup, and Gerald Thomas.²¹

Again as with the development of carrier aviation, experiments, exercises, and their connection with Newport and Quantico had a considerable impact on the development of the amphibious warfare capabilities, though these developments came more slowly than did those for carrier warfare. Part of the explanation, undoubtedly, lay in the fact that the Marine Corps spent much of the 1920s policing the

Caribbean for the United Fruit Company. But with the withdrawal of Marine units from that role in the early 1930s and their redesignation as the “Fleet Marine Force,” the maritime services began an active program of designing the fleet exercises—FLEXs in the acronym of the time—to experiment with the possibilities of amphibious landings. By 1934 the Marines had developed a manual for such operations, entitled the “Tentative Manual for Landing Operations,” while increasing tensions in the Pacific made it increasingly likely that there would be a great conflict between the United States and Imperial Japan in the not too distant future.

The result of these efforts was that the Marine Corps and the Navy explored most of the difficulties that they would confront in launching amphibious operations, and if they did not have answers to many of these problems, at least they knew what they had to solve. By the outbreak of the war, the FLEXs had laid out the principles of the amphibious doctrine which would play such an important part in the winning of World War II.

In the course of the FLEXs the Navy and Marine Corps experimented with about every imaginable amphibious technique and tactical approach allowed for by their equipment. They tried day and night landings, smoke screens, varieties of air and naval gunfire support, concentrated assaults and dispersed infiltration, the firing of all sorts of weapons from landing craft, and an array of demonstrations, feints, subsidiary landings, and broad front attacks.²²

All the while, debates went on throughout the maritime services, fueled by the experiences gained in the FLEXs. By 1940 the parallel development of doctrine in the schools and experimentation in the fleet were well on their way to creating serious amphibious capabilities. Those capabilities would eventually play a crucial role in Allied victory in World War II in both the Atlantic and the Pacific.

The Army.

Like the maritime services, the Army placed considerable emphasis on the education of its officers, although there was a less coherent focus on transformation, innovation, and the development

of new capabilities. On paper the school system for officers was even more impressive than that possessed by the Navy. For example, the staff college at Leavenworth was a 2-year course for a considerable period of time during the interwar period. Nevertheless, the length of the staff college's curriculum had more to do with the fact that promotion through the army's grades proceeded at a glacial pace, while there were not enough positions for the officers the army had. For much of the interwar period the Army War College displayed little intellectual vigor. Yet, one should note that academic performance at Army schools was considered important enough in an officer's evaluation, for Dwight Eisenhower to expend great effort to graduate first in his class at Leavenworth.²³

The real intellectual engine of the Army's efforts at transformation in this period came at Fort Benning's Infantry School during the 5-year period that George Marshall served as the assistant commandant. One hundred and fifty of the Army's future generals in World War II attended the school during this period, while an astonishing 50 future generals worked for Marshall on the faculty.²⁴ An observer noted the following about the atmosphere of the school under Marshall's leadership and encouragement:

An infantry lieutenant colonel . . . in 1930 . . . was struck by the opportunity given officers to disagree at times on questions of military education, regardless of rank, and an attitude of tolerance of ideas which encourages free and open discussion. [The faculty was] thinking seriously about matters, old and new, that may find application in our Army of the future. They are not afraid to look outside the field of what is generally considered military education for ideas to help in solving the problems of national defense.²⁵

One can find Marshall's own summation of his belief in the importance of history and education to the military profession in the forward he wrote to the classic book on infantry tactics, *Infantry in Battle*:

By the use of numerous historic examples which tell of the absence of information, the lack of time, and the confusion of battle, the reader is acquainted with the realities of war and the extremely difficult conditions under which tactical problems must be settled in the face of the enemy.²⁶

Marshall's support for institutions like the Army War College in his first year as the Army Chief of Staff—at a time when the United States, and the Army in particular, were confronting the massive problems occasioned by rearmament in the face of the looming Japanese and German threats—suggests a great deal about how he felt about professional military education. Out of the seven senior officers teaching at that institution over the 1939-40 academic year, Colonel W. H. Simpson would go on to command the Ninth Army in the European Theater of Operations, while Major J. Lawton Collins would become one of the Army's most distinguished corps commanders in World War II and eventually, after the war, the Army's Chief of Staff. The following year would see Alexander Patch, soon to be a three-star general in the coming war, teaching on the faculty.

In some respects the Army Air Corps may have done even better than the Army as whole in its respect for professional military education. To a great extent, this may have been driven by a desire to achieve an independent air force that would be free of its ties to the Army. Its main school, the Air Corps Tactical School, located for much of the 1920s at Langley Field, moved to Maxwell Field in Alabama in the early 1930s. That professional school for airmen was the essential driver in the creation of the doctrinal concepts of high-altitude, precision attacks against the enemy's industrial web—to all intents and purposes the precursor to today's conceptions of effects-based operations.²⁷ And like its parent, the Army Air Corps was willing to put a number of its best officers on the faculty of that institution. Among other future Army Air Forces (and Air Force) generals, George Kenney, Haywood S. Hansell, Jr., Claire Chennault, Harold George, Kenneth Walker, and Hoyt Vandenberg, all served tours on the faculty.

LESSONS FOR THE FUTURE

The Present Landscape.

There are a number of things that the services are doing right in professional military education at present, but the overall attitude at best appears to be that education is a luxury for the American

military rather than a necessity.²⁸ What is going right emerged mostly in 1970s and 1980s when senior officers, most of whom had been badly burned by their experiences in Vietnam, turned to professional military education as a means of addressing what they saw as the glaring deficiencies in how the American military—and system—had performed in the war in Southeast Asia.²⁹ The revolution at the Naval War College, driven by the Chief of Naval Operations, created a truly graduate level approach to educating officers in strategy. That was followed in the early 1980s by the creation of the School of Advanced Military Studies (SAMS), an intensive second-year program at the Army's Command and Staff College.³⁰ SAMS was in turn followed by similar programs at the Air Command and Staff College and by the Marine Corps Staff College. All of these second-year programs have maintained their vibrancy.³¹ Finally, in the late 1990s, the Commandant of the Army War College created the Advanced Strategic Arts Program. All of these programs involve intensive education at a graduate level for their students. They should serve as a model for the other institutions of professional military education. Unfortunately, they do not.

Two substantial problems lie at the heart of the difficulties that marginalize the staff colleges, war colleges, and professional military education in general: The first major problem is that the Services have failed since World War II to enunciate a clear vision of why they believe professional military education to be important. Without a vision or a philosophy, it is relatively easy to follow almost any path. As that old country saying runs, "If you don't know where you are going, then almost any path will do." The second has to do with personnel systems that to all intents and purposes still rest on laws drawn up in the late 1940s and early 1950s.

The failure to enunciate clear goals for professional military education has had a number of deleterious effects. To begin with, it has helped to enshrine the "Pecos River" approach—a mile wide and an inch deep. Pedagogically, a year is a very short period of time for a student to grasp a serious subject in any sort of depth. Thus, without a clear educational sense as to what officers absolutely have to know, it becomes all too easy to justify a wide range of subjects, all of which it would be nice to have officers know something about, but which in fact are not essential to the military profession.³² The

result is that important subjects often get short shrift: Thucydides or Clausewitz in an hour's seminar with 20 pages of reading to back up seminar discussion.

In fact, the lack of clear goals often reflects a benign neglect for professional military education on the part of the senior leadership. If professional military education doesn't matter, then any generic colonel can serve on the faculty.³³ And a faculty that does not have a reasonable claim to intellectual expertise is not likely to have much self-respect, much less the respect of the student body. The combination of a lack of interest in professional military education at the top with faculty who have no clear intellectual focus can be deadly. It often leads to a student attitude that their purpose at the war college is to work on their athletic skills; students have often jokingly commented that "they are at the war college on an athletic scholarship." Such attitudes are only reinforced when senior generals comment on the speakers platform that they had had a great time playing soft ball and golf at the war college and wish the students a restful year.

There are, however, a considerable number of students attending such institutions who are deadly serious about their profession. As one Marine Corps Lieutenant General commented to this author in the late 1990s: "Since you studied law when you went to law school, and medicine when you went to medical school, I believed that I would study war when I went to the war college. Boy was I wrong!"³⁴ It is this group of officers, who deserve the very best in serious professional military education, because they are the ones who will provide the intellectual leadership for the American military in the 21st century. Without a challenging educational experience at staff college or war college, some of the brighter students can become suspicious of what serious academic pursuits can contribute to widening their horizons as well as those of their fellow officers. Others find their own way to some coherent intellectual vision of the world, but the road is more often than not tortuous and difficult—a road populated by as many wrong turns and dead ends as highways to learning.

The second problem that blocks the development of a more coherent and wider-ranging program of professional military

education has to do with the nature of the personnel systems and, as suggested above, those are driven by laws that were designed in the industrial age for industrial age organizations. If the Services are to develop officers who possess greater intellectual agility and flexibility, then professional military education should become much more than an obligatory year of attendance at a staff college, followed eventually by another year at a war college. Professional military education must become a cultural attribute that the services inculcate in their officers from the beginning of their career through to the end.³⁵

Moreover, serious professional military education must in many, rather than a few cases, involve serious graduate level study in the major graduate schools of the United States. It should involve the study of military history, foreign languages, area studies, and international relations. It must also involve professional reading lists that officers take seriously.³⁶ But few officers can afford to widen out their careers at present by following such a career path because of the iron laws of personnel systems and the myriad jobs officers must hold in order to climb the ladder to higher ranks.

What Is to Be Done?

The most important element in improving professional military education in order to create a more open and flexible military culture demands a massive overhaul of the personnel systems, starting with Title 10's entire framework. Such an overhaul represents the only possible path towards providing avenues of graduate education that would stretch the intellectual framework of the best officers throughout their careers. The task of addressing a reform of the personnel systems, however, lies beyond the scope of this chapter. There are, however, a number of things that the services could do without such a reform that would substantially improve military education and create climates within their organizations that would be more conducive to the kind of transformation and innovations that took place in the 1920s and 1930s.

To begin with, one should note that the current situation of professional military education represents a considerable

improvement over what existed in the 1980s.³⁷ At that time only the Naval War College possessed both the pretensions and the academic excellence to be considered a first rate academic institution of graduate education. The remainder of the landscape represented an academic wasteland.³⁸ The creation of second-year programs and other programs have filled some of the gaps. Moreover, the reforms initiated by Congressman “Ike” Skelton have had an impact in improving the general level of military education. Unfortunately, for the most part the system has atrophied over the past decade. So what needs to be done?

First, the services and the joint world need to form a larger vision, a basic philosophy if you will, of what professional military education should represent in its contribution to the preparation of American officers to the professional of arms. Admiral Stansfield Turner, the reformer of the Naval War College in the early 1970s, best expressed how to think about both the whats and the hows of professional military education:

War Colleges are places to educate the senior officer corps in the large military and strategic issues that confront America . . . They should educate these officers by a demanding intellectual curriculum to think in wider terms than their busy operational careers have thus far demanded. Above all the war colleges should broaden the intellectual horizons of the officers who attend, so that they have a conception of the larger strategic and operational issues that confront our military and our nation.³⁹

What is needed at present is a basic philosophy of professional military education that encompasses its purposes and aims for the entire Department of Defense—not just in terms of the staff and war colleges, but rather for career-long efforts by officers.

Second, the services need to select only the very best of their officer to attend their staff colleges and war colleges. Such a process of selection needs to involve much more than selection boards. Rather the American military needs to follow what virtually every military in the first-world is at present doing: a selection process that involves an intellectual hurdle as well as selection boards. Such a hurdle could involve examinations (which was the method used to gain entrance to the *Kriegsakademie* in Germany), performance

in a nonresident course, involving both examinations and papers, performance in branch schools, or some combination of the above.

The aim would definitely not be to select pointy headed intellectuals from the officer corps, but rather to select those officers, who have managed to combine tactical and operational excellence with intellectual curiosity in their careers. As Lieutenant General Don Holder, U.S. Army retired, commented in an article written jointly with the author: "Requiring officers to qualify for attendance at the staff and war colleges would shock the officer corps at first, then stimulate great improvement."⁴⁰ In every respect entrance to staff and war colleges must become an attainment towards which officers strive.

Third, the size of the institutions of professional military education needs to be scaled down. Smaller institutions, with a student body limited to the best and the brightest, would make it far easier to assemble first class faculties. For the most part, the staff and war colleges contain too many military faculty who are simply riding out their time until retirement. Moreover, while there are a considerable number of first-class, intellectually motivated officers who would make wonderful teachers at staff and war colleges, there are few incentives for them to remain on active duty. The Army War College has recently begun to address this problem, by selecting a small number of its best students to attend some of the nation's best graduate schools to earn doctorates in subjects like military history and international relations. Those officers then return to the war college to finish out the remainder of their careers on the faculty.

The fourth element of a reform of professional military education would be that the academic performance of student officers would play a direct role not only in their eventual promotion, but in assignments as well. As in all other assignments, officers would receive a regular fitness report on their performance in school. That fitness report would not be limited to generalities, but contain how the officer actually performed in the classroom, in his written assignments, and in his examinations. It would remain as a basic report card on his or her intellectual suitability for further assignments and promotion. Would such a system result in a grade grubbing?⁴¹ In some cases perhaps, but in fact virtually everything else in an officers career is judged or graded by his superiors—why

not his intellectual acuity?

CONCLUSION

Perhaps the most important enabler of transformation and innovation in the past has been the culture of the military organizations that have grappled with an uncertain and ambiguous future, a future made more complex and difficult by tactical, operational, and technological changes, the impact of which are almost impossible to predict under peacetime condition.⁴² Yet, the evidence is clear that those military institutions that developed organizational cultures where serious learning, study, and intellectual honesty lay at heart of preparation of officers for war, were those best prepared for the challenges that they confronted on the battlefield.⁴³ The example of the American military in the 1920s and 1930s underlines this point in spades. The example of an officer corps, where honest, intellectual efforts to deal with intractable problems characterized many of its officers and virtually all of those who led so well in the coming war, should provide the American military of the 21st century with an incentive to follow a similar path. An officer corps, where not only learning but teaching in schools of professional military education is career enhancing, is an officer corps that is preparing itself, at times unconsciously, for the challenges of the future.

Transformation and innovation are not a matter of just technology. At best technology can yield modernization, and it is well to remember that in 1940 the French Army possessed tanks that were for the most part far superior to those possessed by the Wehrmacht. But with a doctrine that almost entirely misinterpreted the lessons of the last war, the French suffered a catastrophic military defeat on the banks of the Meuse in May 1940.⁴⁴ And the American military should not forget that its nation's worst defeat resulted largely from a military and civilian leadership that prized modern technology over the lessons of the past; a leadership that was not only contemptuous of the Vietnamese enemy, but largely ignorant of his motivations, culture, and ideology. Thus, it was the enemy of the United States, who was willing to "bear any burden, pay any price," and who understood his American enemy far more coherently and effectively than Americans understood him. If the

American military does not desire to repeat the mistakes of the past, then it needs to create a learning culture, where intellectual preparation is as prized as tactical preparation.

There is, of course, another road, down which it can choose to go. The performance of America's military institutions from 1991 to the recently completed war with Iraq represent the triumph of a systematic approach to training and education that the services put in place in the 1970s and early 1980s. And yet its very success carries with it considerable dangers. At present the leadership of the American military have grown up within the current system. They know no other approach. Yet one can ascribe the results of the present system to any number of other causes than the schoolhouses that educate America's officers. In the recent past, senior civilian leaders have written memos suggesting that the services can replace entirely in-residence schools with distance education, all at immense savings in funding, personnel moves, and faculty salaries. There are many among current senior military leaders who believe that serious education is simply a waste of an officer's time—an attitude the Navy has enshrined in its complete disinterest in sending its officers to schools of professional military education.⁴⁵

The difficulty with any such dismissal of the educational system of the past 30 years is that we will not know the results of a radical wasting of the current system until it is too late. As one of the most respected professors At the Army War College suggested in a recent e-mail to the author:

Consider now, that even as the educational successes of the past twenty-five years are on display, there are those who would dismantle the Army's educational programs in pursuit of short-term economies of questionable worth based on unproved or unfounded assertions. All across the Army there are initiatives afoot to curtail time in school for all grades, officer and enlisted, to save money and increase numbers of personnel out with the fielded force. In place of the months and years in the school house the Army seeks to leverage technology and supplant the resident educational experience with distributed learning or distance education. In this information age there is a belief that approaches a theology that one can learn as much by sitting at a computer as in a classroom. . . .

At risk in this exercise is the future.⁴⁶

“At risk in this exercise is the future.” But should we go down such a road, it will be another generation that will bear the burden and pay the price of a military leadership no longer possessing the intellectual depth or wisdom to address intelligently the questions of strategy and complex operations that the U.S. military will confront two or three decades in the future.

ENDNOTES - CHAPTER 1

1. Major General Robert Scales, Commandant of the Army War College until June 2000, created the Advanced Strategic Arts Program to address a major need at the highest level for strategic planners who understood grand strategy, past, present, and future as well as the emerging joint world. The program was enthusiastically supported by his successor as Commandant of the Army War College, Major General Robert Ivany.

2. These words were being written in Tokyo, Japan at a time, March 18, 2002 when Japan and the United States were grappling with the serious problems raised by a North Korean government that appeared on the brink of building its own nuclear weapons, and at a time when U.S. and Allied forces were about to start their campaign against Saddam Hussein’s regime.

3. In Europe serious professional military education first appeared in Prussia in the first decade of the 19th century, as a result of the catastrophic defeat of the Prussian Army in the double battle of Jena-Auerstadt in October 1806. The creation of the *Kriegsakademie* represented the first attempt to educate officers in the art of strategic and operational planning. Similarly the creation of the staff college in France reflected the catastrophic defeat of that nation in the Franco-Prussian War of 1870-71. For the impact of the 1806 military defeat on the Prussians, see Peter Paret, *Clausewitz and the State*, Princeton, NJ, 1985. For the French defeat in 1870, see particularly, Michael Howard, *The Franco-Prussian War, The German Invasion of France, 1870-1871*, London, 1962.

4. The British Army established a staff college in 1854, as a result of its debacle in the Crimean War. However, the Navy failed to follow suit until 1911, when that service’s dismal performance in the debate over British strategy before the Committee of Imperial Defense led the liberal government, Winston Churchill and Lloyd George in particular, to force a staff college on an unwilling naval service. By then it was too late to influence the nonexistent intellectual preparation of the Royal Navy for the coming war. For the creation of the Army Staff College, see Brian Bond, *The Victorian Army and the Staff College, 1854-1914*, London, 1972; for the Royal Navy’s less than sterling intellectual preparation for the coming war, see Andrew Gordon, *The Rules of the Game, The Royal Navy and the Battle of Jutland*, London, 1999.

5. This was largely the result of the German military leadership's emphasis in post-world War II accounts of the role that professional military education played in their preparations for war. What, of course, they did not mention was the fact that that education had completely failed to prepare German officers for the strategic, logistic, and intelligence challenges which the war they had unleashed presented them and their nation. For a discussion of these issues, see Williamson Murray, *German Military Effectiveness*, Baltimore, MD, 1992, chpt. 2. See also James S. Corum, *The Roots of Blitzkrieg: Hans von Seeckt and German Military Reform*, Lawrence, KS, 1994.

6. The author has been told by members of the faculty of the Naval War College that over the past 40 years only *one* future admiral actually taught on the faculty of the Naval War College before promotion to admiral. As recently as 3 years ago, the biographies of admirals on active duty released by the Navy's Office of Public Relations indicated that over half of the admirals on active duty had never attended a senior service college.

7. Admiral Raymond Spruance, also upon completion of his fleet command at the end of the World War II, chose to return to Newport as the President of the Naval War College. The choice by two of America's leading admirals during the course of the first half of the 20th century to focus their last years of military service on the professional education of officers says a great deal about the organizational culture of the Navy during this period.

8. One expert on the history of war games has noted about these games that they "contributed substantially to the development of ideas about how to employ the aircraft carrier." Peter P. Perla, *The Art of Wargaming: A Guide for Professionals and Hobbyists*, Annapolis, MD, 1990, p. 71.

9. For the importance of red teaming in history to the success of military institutions in innovating during periods of peace, see Williamson Murray, "Red Teaming: Its Contribution to Past Military Effectiveness," Dart Paper, Hicks and Associates, November 2002.

10. Norman Friedman, Thomas C. Hone, and Mark D. Mandeles, *American and British Aircraft Carrier Development, 1919-1941*, Annapolis, MD, 1999, p. 34.

11. *Ibid.*, p. 34.

12. See, particularly, Stephen Peter Rosen, *Winning the Next War, Innovation and the Modern Military*, Ithaca, NY, 1991, p. 69.

13. The problem of the sustainability of aircraft at sea would force the Navy to develop radial engines which eventually proved as efficient as in-line engines, but much easier to maintain. This fact was to play a major role in the successful

sustainment of U.S. air power (army air forces as well as Naval air) over the great distances involved in the projection of American military force.

14. *Ibid.*, p. 42. Reeves' innovations were to be critical in showing that carriers could handle large numbers of aircraft under the most trying circumstances. With that proof of the concept, the Navy was in a position to take full advantage of the huge carrying capacity that the new aircraft carriers *Lexington* and *Saratoga* would offer upon their completion as aircraft carriers (they had originally been laid down as battle cruisers) and arrival in the fleet in the late 1920s.

15. *Ibid.*, pp. 40-43.

16. Chester W. Nimitz, "1923 Naval War College Thesis," *Naval War College Review*, November-December 1983, pp. 12-13.

17. Allan R. Millett, *In Many a Strife, General Gerald C. Thomas and the U.S. Marine Corps, 1917-1956*, Annapolis, MD, 1993.

18. It is also worth noting that Lejeune also played a considerable role in the founding of the *Marine Corps Gazette*.

19. Along these lines, Winston Churchill in his great memoir and history of the war (*The World Crisis*, 5 vols., London, 1928-31), of course, did examine the Gallipoli campaign in great detail—as he suggested, "the terrible if's accumulate." But the British system of professional military education displayed little interest in the Gallipoli campaign except to prove that amphibious operations were impossible in the 20th century and, therefore, there was no reason for the British services to prepare for such operations. For the negative attitudes in the British military towards the possibilities of amphibious warfare in the late 1930s, see Williamson Murray, *The Change in the European Balance of Power, 1938-1939, The Path to Ruin*, Princeton, NJ, 1984, chpt. 2. Those attitudes, of course, changed with the fall of France and Winston Churchill's demand that the British military think seriously about a return to the European continent.

20. Allan R. Millett, "Assault from the Sea, The Development of Amphibious War between the Wars, The American, British, and Japanese Experience," in Williamson Murray and Allan R. Millett, eds., *Military Innovation in the Interwar Period*, Cambridge, 1996, p. 74.

21. Millett, *In Many a Strife*, p. 128.

22. Millett, "Assault from the Sea," p. 77.

23. Carlo D'Este, *Eisenhower, A Soldier's Life*, New York, 2002, pp. 176-183.

24. Forrest C. Pogue with the editorial assistance of Gordon Harrison, *George C. Marshall, Vol. 1, Education of a General, 1880-1939*, New York, 1963, p. 248.

25. Quoted in *Ibid.*, p. 256.

26. Major Harding, *Infantry in Battle*, Fort Benning, GA, 1930, p. ix.

27. For an examination of the development of Army Air Corps doctrine, see Williamson Murray, *Luftwaffe*, Baltimore, MD, 1985, Appendix 1.

28. Nothing underlines this better than a memorandum that appeared under the signature of a very senior civilian official in the Department of Defense. The memorandum argued that much of the education that occurred in-residence could be replaced by distance education and nonresident courses. Part of the problem was the fact that the services have been claiming for a number of years that nonresident course completion was the same as resident course completion—a fact that even those making the argument knew was patently untrue.

29. For a discussion of the evolution of American military culture and attitudes toward professional military education, see Williamson Murray, "Clausewitz Out, Computer In, Military Culture and Technological Hubris," *The National Interest*, Summer 1997; see also Williamson Murray, "Does Military Culture Matter?" *Orbis*, Winter 1999; and Williamson Murray, "Military Culture Does Matter," *Strategic Review*, Spring 1999.

30. To a certain extent the creation of SAMS represented a defeat for the TRADOC commander at the time, General Don Starry, who wanted to restructure entirely the curriculum at the command and staff college.

31. Not surprisingly, the Navy, which has consistently refused to send its best officers to schools of professional military education, has failed to create a second-year program for its officers.

32. Or which one could expect serious officers to know something about. But since the staff colleges and war colleges often pitch their curricula to the lowest common denominator—in other words officers who have not bothered to learn the basics of operational art or the political framework of national strategic decision making, they end up in dispersing their focus over a myriad of subjects—some relevant to the military profession, many not.

33. One of the stranger aspects of military education is that both the Air Force and until recently the Army, expend considerable effort to provide serious graduate education for the captains who are going to serve on their faculties of West Point and the Air Force Academy, but have required no academic credentials for the faculty who teach at their war colleges. However, the Army is now

attempting to rectify that situation by sending a number of lieutenant colonels and colonels from the war college classes to get Ph.D's before beginning a tour on the faculty at Carlisle.

34. Conversation with Lieutenant General Paul Van Riper, USMC, Quantico, VA, May 1997.

35. General Anthony Zinni, USMC Retired, has been arguing for such an approach over the course of the past decade.

36. Only the Marine Corps at present has produced a list of books, in what one might best term war studies, that it actively encourages its officers to read.

37. See, in particular, Committee on Armed Services, House of Representatives, One Hundredth Congress, "Hearings before the Panel on Military Education," Washington DC, 1990.

38. For the general lack of academic rigor and academic qualifications at the time, see Williamson Murray, "Grading the War Colleges," *The National Interest*, Winter 1986-1987. For the failure to follow up fully on the recommendations of the Skelton Committee, see Leonard D. Holder, Jr., and Williamson Murray, "Prospects for Military Education," *Joint Forces Quarterly*, Spring 1998.

39. Quoted in Williamson Murray, "Grading the War Colleges," *The National Interest*, Winter 1986/1987.

40. Holder and Murray, "Prospects for Military Education," p. 88.

41. That was certainly the argument at some of the war colleges that did not give grades in the early 1990s, but in fact grades do demand that students seriously address their work, as the disastrous collapse of America's schools under the influence of the 1960s educational philosophy has underlined in spades.

42. Under the direction of Mr. Andrew Marshall, the long-time director of the Office of Net Assessment in the Pentagon, the author and his colleague, Professor Allan Millett of The Ohio State University, have been struggling to tease out the lessons of past military history to understand the processes of innovation and transformation. See, in particular, Allan R. Millett and Williamson Murray, eds., *Military Effectiveness*, vol. I, *World War I*; Vol. 2, *The Interwar Period*; and Vol. 3, *World War II*, London 1988; and Williamson Murray and Allan R. Millett, eds., *Military Innovation in the Interwar Period*, Cambridge, 1996. It is worth noting the Mr. Marshall has also supported a wide-range of historical studies, many of which have extended our understanding of how the processes of innovation have worked in the past in the real world.

43. For military institutions that made virtually no effort to prepare themselves for the coming war and the dismal results that their culture engendered in the battles of the second World War, see MacGregor Knox, *Mussolini Unleashed, 1939-1941, Politics and Strategy in Fascist Italy's Last War*, Cambridge, 1982; see also the same author's *Hitler's Italian Allies, Royal Armed Forces, Fascist Regime, and the War of 1940-1943*, Cambridge, 2000. Italian military incompetence resulted entirely from the general lack of intellectual interest in the profession of arms.

44. For French doctrine, see particularly Robert Allan Doughty, *Seeds of Disaster, The Development of French Army Doctrine, 1919-1939*, Hamden, CT, 1985; for the defeat on the banks of the Meuse, see, particularly, Robert Allan Doughty, *The Breaking Point, Sedan and the Fall of France, 1940*, Hamden, CT, 1990.

45. In 1997 a perusal of the biographies of the admirals on active duty indicated that fully half of them had *never* been to a staff or a war college.

46. E-mail from Colonel Leonard J. Fullencamp, U.S. Army Retired, to Williamson Murray, April 17, 2003.