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Employee Warriors and the Future of the American Fighting Force

HUGH S. VEST
Major, USAF

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Foreword

Gen Muir S. Fairchild, for whom this series of papers is named, would indeed have had great interest in Maj Hugh S. Vest's *Employee Warriors and the Future of the American Fighting Force.* The leadership and vision of General Fairchild, the conceptual father of Air University, played a key role in shaping the culture of both Air Force officers and American fighting forces of the future.

As the nation's campaign against terrorism proceeds, our military services continue to embrace high technology, advanced sensors, and precision weaponry for use on current battlefields. The term *cyber warrior* has truly stepped from the pages of science fiction into reality. Equipment and technology do not constitute the only developments, however, because today's cyber warriors emerge from a society and military culture very different in many respects from those of past generations of warriors.

In the spirit of Samuel P. Huntington's book *The Soldier and the State,* Major Vest's paper takes a practical and conceptual look at some of the deep cultural patterns of change within today's military society. The adoption of civilian business paradigms and attitudes of social democracy into the realm of the modern military has ushered in a host of changes and conflicts.

Major Vest highlights the need to continue the dialogue on shaping the military culture of tomorrow's cyber warriors. Air University Press is pleased to include his work as one of its Fairchild Papers.

Dr. Shirley B. Laseter
Director
Air University Library/Air University Press

About the Author

Maj Hugh S. Vest

Maj Hugh "Huge" Vest, born on 25 October 1964, is a native of Independence, Missouri. A distinguished graduate of the United States Air Force Academy in 1986, he entered undergraduate pilot training at Vance Air Force Base (AFB), Oklahoma, after which he completed pilot instructor training (again, as a distinguished graduate) and served as an instructor and check pilot in the T-37 aircraft. Named Vance's instructor pilot of the year in 1990, he transitioned to the F-16 and then served at Kunsan Air Base (AB), Republic of Korea; Shaw AFB, South Carolina; and Luke AFB, Arizona, where he was instructor pilot of the year for the 309th Fighter Squadron in 1998. A senior pilot with over 15 consecutive years of flying assignments; 3,400 flying hours; and 2,000 hours in the F-16, Major Vest has served as an instructor pilot, flight commander, and assistant operations officer. In 1999 he completed his master's of liberal studies degree at the University of Oklahoma as the outstanding graduate of the College of Liberal Studies. This paper is based upon his master's thesis, which represented the University of Oklahoma in the Distinguished Master's Thesis Award competition sponsored by the Western Association of Graduate Schools. Currently stationed at Langley AFB, Virginia, where he serves as an F-16 operations inspector with the Headquarters Air Combat Command Inspector General Team, Major Vest is married to the former Tracy L. Freeman of Creedmoor, North Carolina, and is the proud father of a daughter, Delaney.

Preface

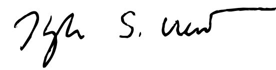
This work is unique in its synthesis of research into a framework that addresses perhaps the most urgent contemporary issue facing modern military theorists—what military culture do we need to equip tomorrow's cyber warriors?

Popular media issues of retention in the services, the adaptation of new technology, and gender equality within combat specialties are most often the subject of current military dialogue. But these issues are merely indicators of deeper cultural patterns of change within modern military society. Military research has devoted itself to civil-military relationships, institutionalism, occupationalism, technological effects, and gender/racial studies. No body of knowledge, however, has addressed the conflicts inherent in a changing modern military culture. Furthermore, no studies exist that chart the military's adoption of civilian business paradigms and attitudes of social democracy.

The modest goal of this work is that it will focus current debate beyond the issues and onto the deeper cultural roots of the conflict. Hopefully, it can serve as a beacon in the current void of research, sparking much-needed, long-term studies on modern military culture and the social forces that will shape tomorrow's warriors. The molding of future American cyber warriors has already begun. As the traditional and modern business cultures continue to collide, a unified, forward-looking sense of purpose must emerge. Given the uncertain security environment of the twenty-first century, America can afford to do no less.

I wish to thank Dr. Donald J. Maletz of the University of Oklahoma's Political Science Department for serving as my thesis advisor for this project. His patient mentoring proved invaluable to the completion of this paper. I also wish to thank the College of Liberal Studies and its staff at the University of Oklahoma for their outstanding support and understanding. Most of all, I thank my wife, Tracy, and my daughter, Delaney, who patiently endured many missed

weekends and evenings while I attempted to balance my thesis writing and research with the demands of being a full-time fighter pilot.



HUGH S. VEST, Major, USAF
F-16 Operations Inspector
Headquarters ACC/IGS

Abstract

The rapid expansion of social democracy and technology, as well as changes in the social/political patterns of American society, has drawn the military closer to civilian society. One element of this dynamic relationship is the military's adoption of commercial business paradigms and identities, resulting in the institutionalization of what one can describe as a business-scientific/management-professional culture that surrounds the warrior of the 1990s. This culture seems to contrast and oftentimes openly conflict with the values and traditional culture that once embraced the professional military. This paper dedicates itself to a conceptual and practical exploration of selected elements of the new business-scientific/management-professional culture within the American military and its conflict with and effect upon the traditional values and culture once associated with a successful fighting force. This practical analysis then proceeds to the question of whether the modern occupational military can consistently fulfill the demands of soldiers in the twenty-first century, or whether it is adversely affecting the development of the heroic leaders and followers we need for future military endeavors.

Chapter 1

Employee Warriors

In January 1781, a hodgepodge American militia found itself in dire circumstances. British forces led by Lt Col Banastre Tarleton were in full pursuit and would soon trap the Americans with their backs against the Broad River. Brig Gen Daniel Morgan, in command of this ragtag cluster of American warriors, knew the time had come to pick his ground and fight. With courage, will, and tactical expertise, he engineered an upset that would long mark the pages of military history.

The flat grounds of Cowpens, South Carolina, allowed plenty of room to maneuver, and having the Broad River at their backs ensured that Morgan's men would turn and fight. By deploying his militia in depth with orders to fire and withdraw, Morgan forced Tarleton forward with exposed flanks. The American general kept his cavalry reserves hidden within the trees near the river to hold his flanks.

On the morning of 17 January, Tarleton rode "straight with the sun" into Morgan's ready militia.[1] With accurate volleys, the Americans left the cascading British falling at the heels of their retreat. As Morgan's infantrymen regrouped, his cavalry then pounded the flanks of the British cavalry now in pursuit.

The day clearly belonged to Morgan, who "with his thousand men crushed Tarleton's army [which] suffered 110 casualties with 830 prisoners taken. Morgan's losses were 12 killed and 61 wounded."[2] The American fighting spirit, buttressed by heroic leadership, courage, and sheer will, did indeed have a grand beginning.

Over 200 years later, this warrior spirit heralds debate in a multitude of circles. Cyber warriors have replaced militias, and soldiers straight out the pages of science fiction now roam battlefields. These warriors are equipped with integrated headgear, body armor, thermal sights, and computers that provide near-complete battlefield information and allow for semiautonomous operations.

Equipment and technology, however, do not represent the only changes. These cyber warriors have their origins in a modern "business-scientific/management-professional" culture very much removed from that of past generations. In the midst of this vast change, military leaders and scholars now find themselves asking which pillars of the traditional warrior spirit today's soldiers need to maintain.

This paper is a conceptual and practical exploration of selected elements of the business-scientific/management-professional culture within the American military and their conflict with, and impact upon, the traditional values and culture once associated with a successful fighting force. The paper also addresses the question of whether the modern occupational military is fulfilling the demands of twenty-first-century soldiers, or whether it is adversely affecting the heroic leaders and followers that this nation needs for its future military endeavors.

Values Crisis?

In many instances, dialogue concerning the modern American warrior has expressed itself in terms of a conflict in values. The American military's leadership seems to need to remind its members about what values they should possess. In 1986 an Army white paper made "values" its theme for the year.[3] More recently, the Air Force published its "core values" pamphlets, to be reviewed by all personnel. The service academies, which often serve as microlaboratories in military sociology, also mirror these trends. Senior academy leaders seem to perceive significant changes in the values of cadets: "The raw material is not coming in the door with the same values that our grandparents and parents taught us 30 and 35 years ago."[4] Reporting on changing values in the academies, the *Air Force Times* noted, "The notion that today's cadets lack some of the character of older officers creates a generation gap. While the academy brass and its earlier graduates wonder what has gotten into kids these days, today's cadets wonder what the fuss is about."[5] As the modern American military services struggle with retention, increasing numbers of its personnel are joining and identi-

fying with the civilian community, alienated from the ideals of a professional military they had carried into their tour of duty.

Harnessing a Different Military

This paper addresses the simple question, What has changed within the services? Why does today's service member seem to identify more with the managerial lampoons of the comic strip "Dilbert" than with the traditional military humor in "Beetle Bailey"?

The analysis of change within the American military has lent itself to a wide variety of conceptual models conjured up by historians and sociologists. Some view the military as a profession, a community, a culture, an organization, an occupation, and a way of life.[6] "Explanations of the military using these perspectives are limited because they tend to focus on factors related to the specific type of social organization presumed."[7] Seen together over time, however, these structural views depict some significant changes. Although this paper does not presume to adopt any single comprehensive model, it does analyze a variety of paradigms and takes "snapshots" of the changing organizational culture of the US military. The analysis focuses on several significant elements of this culture—specifically, the changing language, norms, modes of communication, beliefs, values, philosophies, and worldviews held by soldiers. It also narrows its application to combat and combat-support roles within the services.

Recognized by both soldiers and sociologists alike, modern military society, together with its values and patterns of interaction, differs markedly from the traditional military society of the pre-Vietnam era. The rapid expansion of social democracy and technology, as well as changes in the sociopolitical patterns of American society, has drawn the military increasingly closer to civilian society. The adoption of selected civilian business models and identities into military society has played a part in this close and dynamic association. Participatory management, management by objectives (MBO), scientific management, professionalism, total quality management (TQM), and operational

risk management have become part of the language of the modern soldier. Many of these practices and attitudes have expanded the military's efficiency and ability to communicate with the civilian world, but they have also resulted in the institutionalization of a business-scientific/management-professional culture that surrounds today's warriors.

Cultures in Conflict

This culture seems to contrast and often openly conflict with the values and traditional culture that once embraced the professional military. Embedded within the analysis of these two societies lies the perhaps more critical question of which culture should shape the American fighting force of the twenty-first century. Will traditional values and interactions remain intact? Will some elements survive permanently altered? Or will they be abandoned as archaic remnants of a military that failed to perceive the dawning era of modern combat?

The modest goal of this paper is to redirect and spark long-term research that shapes the warrior of the information age. Winning the war of the future may involve the containment of conflicts and the politicized use of limited violence. Is today's military society producing the values demanded of tomorrow's warriors? Specifically, is it technical, specialized, politically sensitive, and group- and team-motivated? Can the American warrior spirit, which had its roots in Daniel Morgan and his militia years ago, survive in the information battlefields of the twenty-first century? One idea remains constant: those who embrace the future and remember the lessons of the past shall find success. "Victory smiles upon those who anticipate the changes in the character of war, not upon those who wait to adapt themselves after the changes occur."[8]

Notes

1. W. J. Wood, *Leaders and Battles: The Art of Military Leadership* (Novato, Calif.: Presidio Press, 1984), 17.
2. Ibid., 27.

3. Department of the Army Pamphlet 600-68, *Values: "The Bedrock of Our Profession": White Paper 1986,* June 1986, 5.
4. Jeff Thomas, "Values: How They Changed," *Air Force Times,* 7 March 1994, 12–14.
5. Ibid., 14.
6. Frank Ray Wood, "U.S. Air Force Junior Officers: Changing Professional Identity and Commitment" (PhD diss., Northwestern University, 1982), 8.
7. Ibid.
8. Giulio Douhet, *Command of the Air,* trans. Dino Ferrari (1942; new imprint, Washington, D.C.: Office of Air Force History, 1983), 30.

Chapter 2

Traditional Military Culture

> The message was clear: to join America's warrior elite would mean some harsh treatment, much physical and perhaps emotional discomfort, and not sympathy. I did not expect to be appreciated for any "diversity" I might bring to the Corps or to get much "sensitivity" in return. Like tens of thousands before me and thousands since, I was not to be disappointed. And, although it may seem hard for many of today's critics of the military to imagine, I didn't want it to be otherwise.[1]

Expectations such as these held by young soldiers entering the profession of arms indeed seem almost foreign to today's military. They seem as distant as the military society remembered by today's aged veterans—one of dedicated sacrifice, authority, suffering, and fraternity. Were these revered warriors of yesteryear so truly different from the military professionals of the twenty-first century?

Before proceeding to this question, one must pause to examine the culture and values that once seemed to surround the modern American military—the traditional military culture that encompassed American warriors prior to the Vietnam War. The process of defining the values and interactions that shaped modern American military society should produce a picture of this traditional culture.

Professionalism and Homogeneity

The language, methods, and models used to study the values and culture of military society have taken many forms. The bulk of early research on pre-Vietnam American military culture involved the application of paradigms of homogeneity. Analysts viewed the military as a social unit isolated from civilian society. In the 1950s, C. Wright Mills studied the "military mind," which he describes as "the product of a specialized bureaucratic training . . . the results of a system of formal selection and common experiences and friendships and activities—all enclosed within similar routines . . . the sharing of a common outlook."[2]

In 1957, military society received perhaps its greatest modern critique in Samuel P. Huntington's *The Soldier and the State,* which made the civilian term *professionalism* synonymous with modern military thought. Huntington focuses his research on members of the officer corps who were concerned primarily with the "management of violence and not the application of violence."[3] His study identifies the officer corps as a professional body and details its relationship with a liberal civilian society. The "professional body" he describes is ideologically different from the rest of society and homogeneous in composition. His description of the orientation and values of the "military mind" provides the basis for modern thought on traditional military culture.

Huntington lumps his traditional values under the label of the "professional military ethic."[4] Given the limited availability of psychological and historical research on actual values once possessed by military officers, his assumed values were obviously "implied by the performance of the military function."[5] Based on the service they provide society in terms of managing violence, officers must be inherently Hobbesian realists in their thinking. They must emphasize the importance "of society over the individual and the importance of order, hierarchy and the division of function."[6] Further, they must "exalt obedience as the highest virtue and, in brief, be realistic and conservative."[7]

Huntington also uses his description of the history of civil-military relations in America to highlight the differing values between its political and military societies. American political society, he claims, is dominated by the persistent notion of "liberalism,"[8] most often expressed in the ideas of individualism. As liberal thought and its emphasis on the individual became infused throughout society, it found itself in marked contrast with military values (e.g., subordination, loyalty, duty, hierarchy, discipline, and obedience),[9] which seemed almost the antithesis of liberal thought.

This emerging chasm between perceived military values and those of civilian liberal and commercial society is perhaps best described by an officer's comments in the early twentieth century: "The cardinal vices of the American Soldier are personal independence, rebellious spirit, excessive wants, deficient sense of

obligation, criticism of authority, self-interest and ambition."[10] Indeed, these values, expressed in slightly different terms, sound like a description of the modern national character.

Following Huntington's landmark work, other commentators often defined the values traditionally associated with the military in terms of degrees of professionalism. Morris Janowitz uses the term *military professional code* in his depiction of traditional military values. According to Janowitz, this code does not necessarily reflect reality but "seek[s] to draw inspiration from its own historical achievements."[11] It is "an interpretation of past events designed to justify its missionary zeal, its emphasis on authority and ceremony, and its suffering and hardships."[12]

Like Huntington, Janowitz assumes that many of the values associated with this code flow from their function within military society—to prepare a soldier for a heroic career. Although he focuses on the merging of military and civilian societies, Janowitz is much less specific in his definition of the traditional military professional code. The basic elements he mentions include dedicated patriotism; an almost mystical allegiance to national identity; and a sense of fraternity, intimacy, social solidarity, and political conservatism.[13]

Fraternity

As a sociologist, however, Janowitz does devote considerable research to the fascinating notion of military fraternity, one aspect of which he labels the "Buddy Relationship."[14] Defined in an organizational context, "Buddy Choices" were often observed between members of the same organizational level when they had the free choice to associate. These patterns, widely documented in combat scenarios, perhaps best reflect the extremes of military solidarity. Referring to a platoon studied during the Korean War, Janowitz notes that "in a crisis and if forced to make a choice, a man would think first of his loyalty to a buddy, and second to his obligations to the organization."[15] As long-time special forces veteran Col David Hackworth once wrote, "Sure, I was fighting for America, for all that was 'right' and 'true,' for the flag, the national anthem, and mom's apple pie. But all that came second to [the] fact . . . that I fought for my friends."[16]

Institutional Values

Charles Moskos's introduction of the "institutional/occupational" model in 1977 caused us to view the process of defining traditional military values in yet another light. Precipitated by the emergence of the all-volunteer force, this paradigm sought to chart shifts in social organization and structures within military society. One finds traditional military values and the professional code in Moskos's definition of the American military as an institution. In theory his "institution" mirrors Huntington's notion of "professionalism," but Moskos goes a step farther in his comparison of military social norms with those of an occupation.[17]

Moskos's military institution is organized vertically. Members are expected to perform tasks not limited to their specialty, and they remain under the umbrella of the military, whether on or off duty. Work and residence locations are close together, and frequent relocations are understood to be part of military life. Membership in the institution extends, in a way, to spouses and military families. Career patterns within the institutional military are gender-specific, and women service members are limited to support positions. Finally, a military institution "tends to evaluate its personnel according to whole person criteria."[18]

Value Studies of the Military

In addition to historical models offered up by sociologists, one must also review the military's own studies of institutional values: "Value studies of the military are usually concerned with the unique values of the professional military subculture. Emphasis is placed on honor, courage, obedience, and sense of duty, those values which bond the member to the military organization in training and in combat."[19]

The rigors of actually getting military research approved, though, have made the study of military values an unrewarding endeavor for outside agencies. Protection of privacy in the military and the need for researchers to win the support of both the military and the Department of Defense (DOD) have truly hampered any existing studies.

In similar studies, Wright and Murray surveyed the attitudes of selected groups of military members toward ethical

values traditionally assigned to the military profession. Values surveyed included honesty, loyalty, subordination of the individual to the group, integrity, respect for authority, courage, trust, and obedience.[20] Wright compared only priority listings of 10 institutional values in his sample populations, and Murray surveyed only members selected to attend a senior-officer command school. Not surprisingly, these limited surveys of homogeneous groups yielded very little significant data. In his survey of military values in 1975, Robert B. Weaver listed the instrumental values of honor, courage, responsibility, ambition, logicality, capability, and obedience.[21]

Surprisingly enough, the relatively few other value studies have focused on value differences controlled for sexual or racial identification. The long-term study of military institutional values remains virtually unexplored.

Traditional Culture

Writers have used the notions of traditional military and institutional values and the military professional code to convey a wide variety of concepts and characteristics. Seen together, these models paint a picture of the values, beliefs, and worldviews of a traditional military culture and society that have played a significant role in American military thought and organization. The traditional military—a vertically aligned organization that encompasses its members' homes, families, and lives—emphasizes obedience, order, hierarchy, authority, discipline, ceremony, suffering, and fraternity. Its members are realistic, conservative, and religiously patriotic. Perhaps Moskos's comment regarding Col Dandridge Malone's narration of a soldier's life story best summarizes the uniqueness of traditional military values:

> He tells the soldier's story from the time he leaves home, a young recruit, on his way to boot camp . . . the anxiety and confusion at training schools, the friendships, the coarseness, the constant reassignments and promotions, the compromises and satisfactions of the military marriage; on to Vietnam, the fire fights, the fear again, the deaths of friends; survival and return; the first glimpse of children unseen for a year—and if all these wondrous things Malone draws at the end . . . which thousands of us share in whole or part, can, by the mindless logic of a soulless computer, programmed by a witless pissant ignorant of effect, be called just another job, then by God, I'm a sorry, suck-egg mule.[22]

Notes

1. John Luddy, "Sensitive Killers: A New Age Dawns at the Pentagon," *World & I* 9 (November 1994): 379.

2. Quoted in Frank Ray Wood, "U.S. Air Force Junior Officers: Changing Professional Identity and Commitment" (PhD diss., Northwestern University, 1982), 18.

3. Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1957), 18.

4. Ibid., 62.

5. Ibid.

6. Ibid., 79.

7. Ibid.

8. Ibid., 90.

9. Ibid., 258.

10. Ibid., 269.

11. Morris Janowitz in collaboration with Roger W. Little, *Sociology and the Military Establishment* (Beverly Hills, Calif.: Sage Publications, 1974), 127.

12. Ibid.

13. Ibid.

14. Morris Janowitz, ed., *The New Military: Changing Patterns of Organization* (New York: Russell Sage Foundation, 1964), 199.

15. Ibid., 201.

16. Quoted in Lt Col James M. Fisher, "Combat Leadership," Defense Analytical Study (Maxwell AFB, Ala.: Air War College, May 1990), 10.

17. Charles C. Moskos and Frank R. Wood, eds., *The Military: More Than Just a Job?* (Washington, D.C.: Pergamon-Brassey's International Defense Publishers, 1988), 18.

18. Ibid., 18–19.

19. Kaye L. Ekman, "A Comparative Study of Value Priorities in a Sample of United States Air Force Personnel and Their Spouses" (PhD diss., American University, 1982), 21.

20. Cited in ibid., 22.

21. See Robert B. Weaver, "The Contemporary American Military Mind: The Role of Values in Military Behavior" (PhD diss., Rensselaer Polytechnic Institute, 1975).

22. Moskos and Wood, 71.

Chapter 3

The New Business-Scientific Culture

In *The Soldier and the State,* Huntington describes the clash of values between the American military and American commercial society in the early 1900s. Reacting harshly to the prevailing national spirit of industrialism and business, the military sought to withdraw from society lest its traditional code become contaminated. Officers deplored the infiltration of business practices and "warned that the insistent requirements of business, society, and pleasure would enervate the nation and leave it wealthy and powerless."[1]

Oddly enough, the American military of the post-Vietnam era now finds itself embracing the civilian business society it once rejected. Many scholars even claim that military and civilian societies overlap in so many key areas that they are much more closely aligned than ever before. Much to the horror of Colonel Malone (see chap. 2), some have even gone so far as to project an "occupation" model onto military life. The business-scientific/management-professional culture that surrounds today's warriors is truly far removed from the traditional culture that enveloped soldiers of yesteryear. This chapter focuses on the origins and constitution of this culture, probing for an answer to the question, What has changed within military society?

New World Order

In their effort to analyze military society, as well as its organization and value systems, sociologists often fail to include the global-strategic scene as an external variable. Although little data exists that charts changes in service members' attitudes brought on by a post-cold-war international order, one can assume that it has had a significant impact. As one strategic study concludes, "A threat deficit accurately describes the changes in the Soviet-American bipolar relationship. Yet, as this threat recedes, the Third World and Eastern Europe grow

more unstable and volatile, endangering U.S. interests with diffuse challenges at constantly shifting points on the map."[2]

This shift from a centralized and clearly articulated global threat to decentralized, undefined, and diverse regional conflicts does serve to challenge the individual and organizational sense of mission: "The major function of the military is now to accomplish some limited political objective. Hence, the military must share responsibility with politicians and diplomats. Military force has become an option of last resort."[3] This "threat deficit" and a vague sense of mission also challenge the American military's sense of identity in an uncertain world, drawing it ever closer to professional civilian society. The management of violence, when the violence is unclear, can become just management.

Volunteer Fighting Force

Perhaps the most significant historical development influencing the emergence of a new military culture has been the adoption of the all-volunteer force. The end of the draft sparked a myriad of theorizing about who would compose this new fighting force: "A democratic society requires an armed force which is broadly representative of the larger society but would the enlisted ranks now be over-represented by minority groups and would the officers now have selective civilian contact and distinct political orientations?"[4]

The military and its relationship with society as a volunteer organization represented another concern to scholars. Would this all-volunteer force remain a homogeneous unit separate from society, and, if not, how would its process of socialization occur? Most sociologists during that time adopted some version of a divergent-homogeneous model, which viewed the military as a homogeneous body separate from society.

In 1972 Bengt Abrahamsson noted that officers underwent an extensive period of socialization during which time they molded their attitudes into a common outlook.[5] Some researchers even warned of the development of a "near monolithic military mind" in the all-volunteer force.[6] In 1976 Janowitz warned that changes in military and political society

and technology would create a more isolated military body that would possess selective linkages to civilian society.[7] In 1977, however, Moskos challenged these views with his claims that one could conceptualize this new all-volunteer force as more of an occupation than an institution.[8]

Even more important than the theories and models born after the creation of the all-volunteer force was the underlying philosophy: "The current all-volunteer military in and of itself need not be correlated with an occupational model except that the architects of the present American [all-volunteer force] have chosen the occupational model as their paradigm."[9] *The Report of the President's Commission on an All-Volunteer Armed Force* (the Gates Commission) in 1970 was heavily influenced by commercialism and the "reliance on recruiting and retaining an armed force based on monetary inducements guided by labor force realities."[10] Business realities would now clearly determine relations between this new all-volunteer fighting force and the society it served. Uncle Sam would compete with civilian businesses for the employment of people needed to defend the nation; marketing strategies for recruitment now offered civilian career preparation as an incentive; and college-tuition bonuses and slogans such as "It is a great place to start" or "See the world" became the norm.

Occupational Identity

Indeed, it was no surprise when the military began to mirror the characteristics that now guide its existence. During military-family conferences and in works such as *Families in Blue,* a study of Air Force families, this value shift toward an occupational identity repeatedly surfaced. In a 1981 conference, "members stated their subscription to the idea of Air Force service as an occupation rather than or as well as a profession. Conferences were dominated by expressions of priority needs for increased pay and allowances comparable to the civilian sector."[11] The civilianization of the military was rapidly under way, and the business of fighting wars began to resemble any other business.

Technology and the Great Engineering Venture

Beyond changes in the political nature of the military task and occupational trends in recruitment and retention, military sociologists Frank Wood and Morris Janowitz also note the social impact of technology on the modern military establishment. The age of technology and information has brought about enormous change in a military society for which the element of change is a constant. Smart bombs, lasers, stealth technology, nuclear weapons, satellites, and personal computers have launched a revolution in the way wars are fought and managed. "Evolving technologies may result in a transition from information-in-warfare to information-as-warfare in which attrition and maneuver become supporting elements of military, political, and economic leverage through information control."[12]

According to Wood and Janowitz, technological change has also fragmented the military into varying specialties while narrowing the distinction between what is civilian and what is military. Perhaps the hidden goal of technological innovation in military society has been to mold the organization into a massive engineering venture. As one soldier remarked as early as World War II, "We go at this thing just like it was a great engineering job."[13]

Civilian Military

Indeed, the immense complexity of technology in modern warfare has increased the "reliance on nonmilitary experts (defense contractors and technical representatives) for the development and operation of weapons systems."[14] The requirements of maintenance, manning, and support have resulted in the military's use of civilian agencies to such a degree that the line separating the military and civilian realms has become less than clear: "The civilian character of the military establishment increases as larger numbers of its personnel are devoted to logistical tasks, which have their parallels in civilian enterprise."[15] One example of such crossover involved the levels of civilian personnel devoted to the Distant Early Warning Line in the early 1970s. Ninety-eight percent of the 600-person force

manning this critical air defense line in the Arctic were civilians. The level of technical specialization was so great that the Air Force had to hire civilians, doubling their pay with bonuses to compensate for the harsh living conditions.[16]

Wood points out in his research on the civilian-military overlap that the two worlds have not completely melded: "The pervasive requirements of combat set the limits to civilianizing tendencies."[17] Combat will still require heroic leaders and their sense of duty and honor; usually, such leaders will vehemently reject the application of engineering models to their war-fighting tasks.

Force of Specialists

Although the modern military has increased its dependence on civilian support, it has also divided its own society into needed specialties. At the macrolevel, new commands such as Air Force Space Command are emerging. At the microlevel, technical specialization is leading to isolation within organizations, even for functions that should overlap. Soldiers within a given service, base, wing, platoon, or squadron find few common threads. According to one flying officer, "They don't even know what we do—even the maintenance officer who gets the airplane ready to go. The complexity of jobs has gotten to the point we can't even understand what the other guy is doing."[18] In one study conducted by Wood, officers were asked if they thought of themselves as officers or specialists working for the Air Force. Amazingly, almost half of them answered "specialists"![19]

Corporate Language

The military's adoption of selected business paradigms and identities reflects the close and dynamic association between military and civilian societies. In the ever-present battle for limited resources faced by any modern bureaucracy, the reliance on business practices has increased the military's efficiency and its ability to communicate with the outside world: "Even within the military organization, business techniques are used

extensively. In a tight resource environment, these practices manifest themselves in the 'do more with less' syndrome."[20]

These corporate models have provided a common ground of management practices throughout a diversified military and have allowed it to garnish resources in a budgeted world—but at great cost. Scientific management, quality, marginal analysis, systems analysis, and cost-benefit analysis have created a business-scientific/management-professional culture in the military, predictably resulting in significant changes in the nature of that profession and its officers. An Army War College study of 1970 described shifts in traditional values toward a new corporate ethic of survivability: "In their model, officers have become 'middle-tier managers' whose primary concern is their own careers."[21] Further, James Fallows notes that the most devastating result of the emphasis on management in the officer corps has been the shift toward occupational attitudes. The implication of this thinking is that service members will become absorbed with self-interest and career advancement.[22]

Careerism, the break from traditional military values, and the emphasis on business practices are all indicative of the civilianization of the modern military. Noticeable fallout has included recurring issues of retention, frustration, and "employee" benefits. It remains to be seen to what extent this civilian culture has influenced the combat specialties and heroic orientation necessary for future conflicts.

Organizational and Sociological Trends

Even before the application of occupational paradigms to military organization and society, Janowitz charted five basic areas of analysis for viewing the modern military. His five "hypotheses" lend insight into organizational and sociological trends facing the military over the last half century. The first element of change involved the "basis of authority and discipline within the military establishment where a shift was seen from authoritarian domination to a greater reliance on manipulation, persuasion, and group consensus."[23] As the nature of authority becomes increasingly based on "good management"

practices, what consequences will this have for the traditional heroic leadership required by the combat specialties?

Two other hypotheses relate to the previously explored issues of careerism and technical specialization. Janowitz addresses the changing notions of careerism within modern military society from the perspective of career patterns.[24] Although traditional military society was not free from careerism, attaining elite status was based on "the realization of pure military conduct."[25] People considered service in the infantry or assignment to a battleship or aircraft carrier "more military" than duty on supply ships or in engineering.

In today's military, career management takes on entirely new forms. One attains elite status by pursuing a broad career through existing institutions. The experience demanded of modern elites requires skill in personal relations, management, decision making, and political negotiations. Officers develop these traits and a concern with broader military issues through a slightly unconventional career that maximizes the "breadth of contacts and sympathies with outside agencies."[26]

Janowitz's final two trends are related to the new political character of the modern military. The composition of the officer corps represents one unique change. Notions of liberty and social democracy as expressed in modern American society have influenced the recruitment of officers. Once comprised exclusively of men of high social status, the body of officers now seeks men and women from a broader social pool.

Furthermore, Janowitz notes that as the function of the military becomes increasingly political, the attitudes, training, and indoctrination within the military begin to mirror the change in missions. Current indoctrination is now "designed to eliminate the civilian contempt for the traditional military mind."[27] The new political doctrine of the military is entirely consistent with that of the society from which it receives its mandate. Military professionalism now embraces such concepts as social democracy and nonethnocentrism. Human factors, human relations, and management have replaced discipline and authority. "In short, the new indoctrination seems to be designed to supply military professionals with opinions on

many political, social, and economic subjects, opinions which they feel obliged to form as a result of their new role."[28]

Modern Military Society in Focus

Although these changes are still in progress, the emerging military culture finds itself quite removed from the world of traditional warriors. Modern American soldiers are much more occupationally oriented, and political considerations not only dominate the heart of the military's new mission orientation, but also infiltrate every aspect of its culture. Today's military professionals are far more socially and politically conscious, more technically specialized, and more likely to have ties to civilian businesses and society. The military society now surrounding these professionals is dominated by commercial business paradigms and theories of scientific management. As Wood concludes in his detailed study of junior officers, "The force will become more occupational, attrition will be high, and the members will become more like 'professionals in the military' than 'military professionals.' "[29]

Amidst this vast business-scientific/management-professional culture that envelops today's warrior, one wonders what kind of soldier will fight tomorrow's wars. The percentage of military personnel engaged in "military" specialties has definitely shrunk. In the Civil War, 93.2 percent of service personnel performed military specialties, but in the post-Korean US Army, only 28.8 percent do so.[30] Will those few individuals in the modern combat specialties find their traits of heroism and cohesion suppressed by a culture that does not understand them? Is a more politicized and technical modern soldier better equipped for the battles of the twenty-first century? Before turning to these questions, one would do well to explore the clash between traditional and modern cultures in today's military.

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Chapter 4

Quality and Leadership

> The actual tactics used in Vietnam—a little more of this, slightly more bombing here, try and see, and so forth—are normally identified far more with the civilian marginal approach toward things than they are with the military man's instinct for the jugular. For better or for worse, Vietnam was not exactly fought the way in which most military people who were involved in it were actually recommending that it be fought.[1]

At the end of the long, bitter Vietnam campaign, as American society searched for answers, political and military leaders alike vowed that future conflicts would never be fought or managed in a similar fashion. Little did they realize, however, that the scientific management of military affairs was in many respects just taking root and would soon play a much more integral role in American military culture than they ever could have imagined.

The increased adoption of corporate language and business paradigms into the once-sacred realm of military leadership has become a battleground in the clash of traditional and modern military cultures. The attempted melding of new corporate theories of scientific management with the demands of combat military leadership has highlighted several key elements of the unique conflicts inherent in a changing military society. This chapter charts the origins of scientific management; the rise and fall of total quality management—one such corporate theory within DOD; and attitudes toward its applicability in combat units.

Marginal Analysis

Current trends in scientific management owe much of their success to the tight resource environment following World War II. By the 1960s, the American military bureaucracy found itself no longer *the* national priority but simply another organization competing for a piece of the pie: "Each new weapons system was weighed against various public social programs which were also being proclaimed to be national priority items."[2] In 1972 more

than six times as many Americans felt that cuts should be made in defense spending as they did in 1962.[3]

In this competitive scenario, the survival of defense programs demanded that the military justify its positions in a cost-benefit business language that would communicate with the civilian leadership responsible for cutting the pieces of the pie. Business terms such as *systems analysis; Planning, Programming, and Budgeting System; cost-benefit analysis;* and *marginal analysis* became a prominent part of the American military language.

McNamara and Systems Theories

Although many of these terms had surfaced earlier during the resource planning used to fight two world wars, they reached their peak during the heart of the post–World War II era. This trend is perhaps best illuminated by the career of Robert McNamara: "During that fateful period, McNamara rocketed to fame as a standard-bearer of the capacity of expert management to solve problems."[4] An avid proponent of systems theory, McNamara was recruited during World War II from his teaching position at Harvard into an Army Air Corps planning group.[5] "This operation was an experiment, designed to test the potential of the emerging field of statistical control techniques to give managers a new level of command over the factors of production, human as well as material."[6] McNamara and his team enjoyed great success. *Fortune* magazine applauded their achievement of modern systems thinking, calling it the application of "proven business methods to war."[7]

McNamara's scientific management again proved its mettle when it engineered a dramatic comeback in the struggling postwar Ford Motor Company. Thus, it came as no surprise when McNamara became an object of the Kennedy administration's effort to recruit the "best and brightest" to rejuvenate America.[8] He quickly applied his genius to reorganizing DOD around systems theory, marginal analysis, quantification, and principles of scientific management. New systems of control and quantitative measures soon gained ascendancy over traditional military objectives: "McNamara's program was designed to modernize the

organization of the military services themselves, to bring them into line with the latest management theory and practice. The goal was to recast the military profession as something more like civilian management on the business model. The new system, however, worked to play down just those structures of tradition, loyalty, and esprit de corps which had given the armed forces their distinctive ethos and effectiveness."[9]

Scientific Management

This application of the scientific-management theory proved tragically unsuccessful during the Vietnam conflict. After McNamara resigned in 1968, efforts to align military leadership with civilian business-management practices continued: "In a tight resource environment, these practices manifest themselves in the 'do more with less syndrome.' It is the application of marginal analysis. Over a given time period, the theory suggests, resources are reduced, and productive goals are increased."[10]

This basic theory of scientific management has become the foundation for an almost endless variety of models and practices that have widely influenced the civilian business community and military society. Paradigms, terms, and ideas such as MBO, systems analysis, cost-benefit analysis, TQM, participatory management, employee empowerment, and operations risk management have become synonymous with military professionalism. "In a large measure the practice of management has been substituted for military professionalism over the last thirty odd years"; in fact, "it will be difficult for the modern military man to think objectively about management."[11] Management practices have become an increasingly powerful force in military planning and policy making. Indeed, it is almost impossible today to find literature on modern military professionalism that does not refer to management theories or practices.

Limits of Management

Although military-management theories and practices can claim successes in efficiency and communication from inside and outside the services, they have their limits. Wholesale

applications of social-science theories such as management often find it difficult to quantify and predict the highly random human variable involved. One commentator has described management "as an impersonal, rationalistic process which attempts to quantify variables and allocate resources to maximize efficiency, tends to exclude factors which are difficult to measure, and views manpower as a commodity."[12]

Traditional military leadership, which scholars have described as an art rather than a process, brings an almost religious zeal to mission accomplishment. Its focus on difficult-to-define human elements of authority, hierarchy, cohesion, pride, and discipline seems to conflict with management theories and their emphasis on quantification, persuasion, process, and analysis. In some ways, the rather vague art of military leadership serves as a critique of many elements of management theories.

Within modern military society, however, management has become so infused into military professionalism and leadership that few have dared to mount any intellectual challenges to it. Similar to the situation in civilian corporations, the military's bureaucratic tendency to discourage critiques of management practices championed by its senior leadership has also contributed to the growth of some theories into virtual miniature empires. TQM was one such empire that took the business world and DOD by storm in the early 1990s. The paucity of critical research on TQM and other management theories reflects the extent to which the military culture has embraced those practices. In an Air Force listing of 173 books, government documents, and periodicals relating to TQM, no more than a handful offers any viable critique of its theories and practices. In such a climate of near-universal acceptance of scientific-management practices and extensive bureaucratic roadblocks to outside studies, objectivity in research—even critical research itself—becomes an elusive goal at best.

Total Quality Management

Quality-management theories date back to the 1930s, while statistical process control and the plan-do-check-act

cycle developed by Dr. Walter Shewart,[13] a statistician at Bell Telephone Laboratories, appeared in the early 1920s.[14] The relationship between quality management and the military first blossomed during World War II, when defense industries sought ways to regulate and control production. This partnership, though, was short-lived in the postwar environment, in which quality became watered down to "final product inspection."[15]

Much of the current thought on TQM originated conceptually in America but has its practical roots in Japanese soil. The occupation years following World War II were truly a time of upheaval and regeneration. Struggling Japanese industry eagerly searched for new technologies and ideas to spark production. This rebuilding economy became an ideal proving ground for the theories of quality and quality control now abandoned by postwar US industry. In the 1950s, American thinkers W. Edwards Deming, Joseph M. Juran, and Armand V. Feigenbaum exported quality teachings to Japan.[16] Well suited to the adaptive and industrious Japanese worker, quality principles and their customer focus were soon embraced by all facets of Japanese industry.

By 1989 Japanese assets amounted to over $350 billion, and US debts totaled $650 billion.[17] The Tokyo Nikkei market surpassed Wall Street, and the top 10 world banks were Japanese. In a 1989 poll, "two-thirds of those interviewed remarked that Japanese companies were better managed, their workers were more industrious, and their technology was superior."[18] Although it is difficult to analyze quality management's true role in this Japanese economic miracle, competitive pressure in the late 1980s forced US industry and business to consider Eastern management techniques. Resurrected and given a distinctive American spin, the Japanese management philosophy of total quality control was adopted by most major progressive businesses, such as Ford Motor Company, Hewlett-Packard, Campbell Soup Company, AT&T, General Electric, Westinghouse, and Proctor & Gamble, to name just a few.[19]

Quality and the Defense Department

With most American businesses and the defense industry touting the virtues and language of quality, it was only a matter of time before it entered the world of military society. As the traditional American military culture gave way to a new business-scientific culture, senior military leaders began to see their goals mirrored in those of US companies. Civilian businesses and the US military moved toward quality due to competition that challenged the life of their organizations, customer complaints, and the high cost of conducting recalls and redoing completed work.

In the late 1980s, Secretary of Defense Frank Carlucci noted that DOD would emphasize "the satisfied quality-equipped, quality-supported soldier, sailor, airman and marine," and on 30 March 1988, the department officially embraced TQM. DOD chose it because "it was powerful enough and universal enough in scope to achieve the cultural change required for the DOD to meet the unprecedented levels of quality required for future weapons systems and equipment. It marshals the creativity of workers together in a drive for quality excellence."[20]

TQM in the Trenches

As one might expect, quality management found its most comfortable niche and least resistance in the support, logistical, and technical agencies, whose functions and customers more closely resembled those of civilian businesses. TQM encountered greater cultural and conceptual challenges in attempts to apply its theories and emphasis on the customer to combat units. Although a review of the literature reveals very little critical research in this area, a few studies highlight some of these cultural and conceptual challenges.

A Naval Postgraduate School thesis of 1991 examined the application of TQM to a fleet squadron. Although the study primarily deals with the beneficial implementation of Dr. Deming's 14 points in a squadron, one finds several key conflicts in this blueprint for selling TQM. Properly defining the customer—the focus of quality management—is a conceptual challenge for many industries. For a fighting squadron accustomed to accomplishing a "sacred" and well-defined mission,

identifying a customer and shifting to a customer focus represent a major organizational leap.

Several of Dr. Deming's points easily translate into the language of military leadership, while others require considerable organizational and cultural change.[21] The first points cover the importance of creating a living statement of objectives and teaching TQM throughout the organization. They also stress the necessity of inspection, a staple of military culture. Other points are more business oriented and involve refraining from awarding business on the basis of price alone, improving the system of production, and evaluating processes. Culturally related points address training, education, self-improvement, innovative environment, and pride in workmanship. The final point involves accomplishing the TQM transformation. The thesis authors note that "the above points are difficult to adapt to the squadron, but they must be implemented."[22]

A 1991 research project that studied changes in institutional values among service members also highlighted the many challenges TQM faced in its mandated application to military units. TQM is based on a participatory-management philosophy that sees human nature as rational and seeks to involve all members as equals: "A rigid chain of command, span of control, hierarchical delegations of authority, and a caste structure of rank which is traditional in military organization will have difficulty adopting TQM. The objectives of TQM are not incompatible with expectations of military leadership; however, the means to accomplish the objectives can be significantly different and in some instances mutually exclusive as a means of military leadership."[23] Required to practice both TQM and military leadership simultaneously, most senior officers and enlisted members were left struggling in a quandary of expectations.

A Navy thesis that surveyed marines' resistance to the application of TQM sheds further light on this dilemma. Like previous studies, this survey approaches TQM uncritically, concentrating on its beneficial implementation. After surveying 338 marines, the thesis concludes that a "general level of support existed for the changes in the work place based on Deming's principles."[24] However, it does not attempt to measure the

marines' responses to the implementation of TQM within the corps and does note several considerable hurdles that had to be overcome: marines could be "expected to resist to some degree a comprehensive leadership philosophy that a first glance appears qualitatively different from the ideals held by generations of their predecessors."[25]

Specific areas in which surveyed marines showed resistance to TQM included the use of quantitative methods of decision making, the idea of giving lower-ranking individuals responsibility for the long-term operation of the organization, the reduced emphasis on individual performance, the notion that quality already existed, and the belief that traditional leadership fundamentals apply to any situation.[26] Other objections to TQM were identical to those raised by civilian business—specifically, the fact that it adds considerable work and disrupts the organizational culture.

The thesis also describes the incredibly broad range of change that must occur to fully implement TQM in the traditionally oriented Marine Corps: "[TQM] requires discarding many of the 'old' ways of doing things. It will require changes in top leadership emphasis, organizational structures, goals, orientation, vision, inspection requirements, and changes in people's attitudes."[27] In sum, it requires a complete reshaping of the service's culture.

The Fall of TQM

Just as the military experienced organizational resistance to the imposition of TQM principles and the shift from traditional leadership, so did civilian business begin to discover the limits of quality. Like its predecessor MBO and other all-encompassing management theories, by the mid-1990s TQM found itself in the graveyard of big-business ideas that had burned out.

The case of Florida Power & Light delivered the first stunning blow to TQM. This company's implementation of a wall-to-wall TQM program led to its becoming the first American business to earn the Japanese Deming prize. Shortly after Florida Power & Light won the award, however, "an employee mutiny led the new management team to dismantle TQM."[28] Quality, it seemed, had become a "tyrannical bureaucracy

with too much emphasis on indicators, charts, graphs, and reports resulting in employees working extraordinarily hard merely to fulfill the basic requirements of their jobs."[29] The Wallace Company, winner of the Baldridge Quality Award in 1990, also followed in the footsteps of Florida Power & Light. The prestigious business-consulting firm Arthur D. Little conceded that many companies are now struggling to extend the application of TQM tools to areas outside manufacturing.

In the 1970s, MBO was championed as the savior of the business world, but in less than 10 years it had become a passing fad. Like MBO, TQM had become a "thing in itself, highly mechanistic in its mindset and methods, seeming to view the organization as an apparatus rather than a human culture. It lacked an element of 'heart,' required a great deal of 'selling' and training, and was imposed rather than co-determined."[30] Lagging slightly behind the civilian business culture, the military began to drift from TQM in the late 1990s by curtailing quality inspections and canceling mandatory training sessions.

Now that the TQM military experiment has become a thing of the past, it leaves behind some perplexing issues: Why would the American military embrace a business-management theory so diametrically opposed to its traditional culture of leadership? Will historical principles surrounding the art of military leadership survive this onslaught of scientific-management theories, or will they remain forever altered? Perhaps most of all, was the acceptance of TQM just a breeze signaling a storm of transition in a military culture that is becoming more business, scientific, management, and professionally oriented? Is this new culture able to prepare tomorrow's cyber warriors for the missions and threats of the twenty-first century? Or does future success now demand a rediscovery of the principles of the traditional military culture? These questions will be explored in the following chapters.

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Chapter 5

Equality, Authority, and Fraternity

In 1990 a Marine major sent the following message to Officer Candidate School recruiters in his command: "Effective immediately . . . do not contract non-minorities. . . . Once we receive enough minority applicants to complete the district mission we will start approving majority applicants. . . . This is a team effort. . . . If you have minority applicants above your assigned mission, submit them. Let's get the minority mission complete ASAP. Concentrate on minorities. . . . This plan has been blessed by the powers that be."[1]

Such statements would indeed seem odd to the military society of the past, which sought values of cohesion, unity, masculinity, authority, and fraternity—not diversity. In truth, the underlying fabric of equality that runs throughout today's "politically correct" military would render that society nearly unrecognizable to warriors of yesteryear.

The modern military contains elements of diversity, managerial equality, persuasion, sensitivity, isolation, individualism, and inclusion. One could argue that this society is more closely aligned with popular social trends in the American civilian world than at any other time in recent history. This has not always been the case; Huntington notes that in the early 1900s, the "proper cultivation of the military spirit required the military to withdraw from contact with the materialistic society which they served lest they be corrupted by the 'spirit of the age' and become simply a 'fighting industrial association.'"[2]

The social chasm that once separated military and civilian societies in the early 1900s no longer seems to exist. The assimilation of liberal democratic principles into modern military society, however, has ushered in its share of clashes with tradition. Current media headlines and debates showcase this battle of changing cultures, highlighting stories of women in combat, sexual harassment, treatment of homosexuals in the services, and other equal-opportunity issues.

Although the mass media dwells on these specific issues, they are only small indicators of major upheavals in how the

American military culture has come to view the notions of equality, authority, diversity, fraternity, and individualism. This paper has previously described modern military society as having become occupationally rooted, politically conscious, and technically specialized, with functions and paradigms that overlap those of the civilian business community. That is, the modern military now reflects much of the vast social change taking place in civilian democratic society.

As American political society has struggled with changing ideas of liberalism and democracy, military society has often served as an experimental social battleground where these new ideas challenge the norms of traditional military culture. Before exploring these ideas, one would do well to describe some of the changes in American liberal political society. In *The Radicalism of the American Revolution,* Gordon S. Wood eloquently describes how American society has moved from republicanism toward social democracy.[3] This chapter uses this theoretical construct to chart changing patterns in American society and describe how they have influenced military notions of equality, diversity, authority, fraternity, and individualism.

Revolutionary Society

In 1831 the Frenchman Alexis de Tocqueville toured a booming America and in his short stay offered one of the most insightful and lasting critiques of American culture and society ever produced: "Amongst the novel objects that attracted my attention during my stay in the United States, nothing struck me more forcibly than the general equality of condition among the people. The more I advanced in the study of American society, the more I perceived that this equality of condition is the fundamental fact from which all others seem to be derived."[4] Tocqueville saw the unique nature of American democratic culture as the driving force behind society and political life in the United States. Huntington identifies this essential character of American society as "liberalism."[5]

This liberal character has found expression in the "social revolution" engineered in America as it progressed from a monarchical to a republican society and now finds itself seeking

equality and social democracy. Gordon Wood has fashioned a model for this vast social upheaval: "The American Social Revolution was not conservative but radical, based on the amount of social change. The new society was very different from colonial society, producing the most liberal, democratic, and commercial minded people in the modern world. It utterly destroyed aristocracy and gave respectability and dominance to ordinary people and dignity to menial labor."[6]

Aristocracy

The aristocratic world of the founding fathers is lost to Americans in the postmodern era. Eighteenth-century America still favored differences in class and social rank. Members of the constitutional convention, therefore, were not "ordinary" men but elites and aristocratic gentlemen. Members of early colonial society inherited many traits of English society. Most of them lived under the influence of the English tradition of staying in a particular social station in life and adhered to the philosophy that "God in his great wisdom had given a variety of abilities to men suitable to several stations in life."[7] Patriarchal domination was the social norm, extending from the basic family to the limited monarchy, and patriarchal dependence was a "measure of obedience which we owe to those whom providence hath placed over us."[8]

Similar to English society, colonial society consisted of a matrix of personal and private relationships. Young men of average means could find advancement only by soliciting the sponsorship of a patron or noble. Politics was not the sport of ordinary men but of the aristocratic and idle. Personal political appointments were common. For the most part, economic activity was conducted in the private realm, where personal credit and gold ruled, and banks and paper money were distrusted.

Republicanism

The Enlightenment ushered in a new kind of elite. The spirit of republicanism was a child of newly enlightened men of honor. Men such as Thomas Jefferson were first-generation

gentlemen whose status focused on self-proclaimed "qualities of learning, politeness, and character."[9] Others, such as George Washington, were obsessed with honor and public opinion. The tradition of dueling carried all the way through President Andrew Jackson's term of office. This preoccupation with honor, however, is a "notion that makes sense only in an unequal society—exclusive, heroic, and elitist!"[10]

As was the case with citizens of the Roman Republic, the republican spirit also entailed a search for virtuous citizenship. "We the people," placed in the context of republicanism and colonial society, applies only to selected individuals, "autonomous and free from ties of interest and qualified to be citizens."[11] According to strict eighteenth-century republican virtue, the freedom of Americans rested in guaranteeing that only men of society and character held office. Undoubtedly, the greatest testament to elitist, gentlemanly values and republican notions of the constitutional framers was their reaction to social change brought on by popular democracy in the new world. "All the revolutionary leaders died less than happy with the results of the American Revolution," and Alexander Hamilton claimed, "This American world was not made for me!"[12]

Social Democracy

Enlightened republicanism, a short-lived concept, bred social competition and individualism, and Huntington's liberalism came to be expressed more in terms of self-interest. Modern America emerged as an egalitarian, materialistic, and individualistic society. "The spectacular and rapid growth and movement of people weakened traditional society and intensified feelings of equality."[13]

A unique capitalistic spirit and democratic culture emerged under the umbrella of modern American democracy. Pioneers of the great American capitalistic spirit were labeled "Go-Getters" in Daniel J. Boorstin's study *The Americans: The Democratic Experience:* "The Go-Getters made something out of nothing. . . . They discovered new resources, and where there seemed none to be discovered, they invented new ways of profiting from others who were trying to invent and discover."[14]

The marriage of democracy and capitalism left America a vast, limitless frontier of opportunity for the entrepreneur. Around these attitudes an American democratic culture was forged. Even in the early 1800s, as Tocqueville noted, "The first thing which strikes a traveler in the United States is the innumerable multitude of those who seek to emerge from their original condition. The love of wealth is therefore to be traced, either as a principal or an accessory motive, at the bottom of all Americans do."[15]

Another aspect of this democratic culture was an imbedded "consumption culture" and the need of market economies to expand and make every item and every experience available to everyone, a phenomenon Boorstin describes as the "democratization of things." "As never before," he points out, "the world would witness the 'equalizing' of times and places. The American Democracy of times and places meant making one place and one thing more like one another, by bringing them under the control of man."[16] Food from across the continent could be packaged and transported to the average household; the automobile and airplane compressed time and space; windows and skyscrapers brought the outside world inside; and photographs and television captured "repeatable" experiences. Democratic capitalism and technology had brought the world to the fingertips of the average person.

The price paid for this rapid equalization of things within a culture, however, was that they became trivialized. Things "that made experience repeatable could actually dilute experience, dull consciousness, and flatten sensations."[17] Thoreau wrote that "we do not ride on the railroad, it rides on us."[18] He was not simply talking of the new tracks tattooing the countryside of early America. The massive growth of American democratic culture has proceeded like a locomotive, barreling over groups of people in society who, in many ways, have been left out of the democratic experience. Social democracy in the United States has also carried with it some trade-offs: "While there is no denying the wonder and benefits democracy has brought to the masses of common laboring people, the costs have been vulgarity, materialism, rootlessness, and anti-intellectualism."[19]

An engine of revolutionary shifts in attitudes and thinking drove this locomotive of social democratic change: "The result of assaults on elite opinion and celebrations of common ordinary judgment was a dispersion of authority and ultimately a diffusion of truth to a degree the world had never before seen."[20] American liberalism now seemed to express itself in the social dialogues of relativism, acceptance, and inclusion. Political correctness and the popular fears of passing judgment and claiming absolutes seemed to best characterize these trends. Moral relativism, the morality of a commercial-democratic America, differs from traditional republican virtues of civic spirit. Relativism is the new language of a self-interested, egalitarian, and valueless society. It comes as no surprise that postmodern, commercialized American society has left so many people searching for values since it provides none.

Social democracy, liberalism, and the mass equalization of things have permeated every aspect of American society, leveling traditional society and elite republican notions. These attitudes involve "institutional practices in society which promote science, develop technological innovation, idealize certain forms of behavior (competitive, aggressive, opportunity seeking, and acquisitive) deemed necessary if the economic system is to be continually renewed and promote attitudes that are experimental, flexible, skeptical, pragmatic, and secular."[21]

Individualism and Virtual Isolation

Another expression of liberalism that deserves more consideration is the concept of individualism, which lies close to the very center of American culture. More than a social construct, individualism continues to be "basic to the American identity. We believe in the dignity, indeed the sacredness, of the individual. Anything that would violate our right to think for ourselves, judge for ourselves, make our own decisions, live our lives as we see fit, is not only morally wrong, it is sacrilegious."[22]

The proper role of individualism as a pillar of American society, however, is open to a multitude of interpretations. Modern individualism and the commitment to individual dignity have brought individual rights, opportunities, and equality

into new social realms. Although it has ushered out inequalities, aggressive individualism has also seen the end of older civic and republican traditions that bolstered society. "Modern individualism seems to be producing a way of life that is neither individually nor socially viable, yet a return to traditional forms would be to return to intolerable discrimination and oppression."[23]

Out of modern individualism has risen a culture of isolation and individuation. Several factors have combined to leave the individual alone in society. The rise of technology, the equality and availability of experiences and things, a rapidly mobile culture, the fragmentation of modern life into a number of separate sectors, the television and personal computer—all of these have contributed to the development of isolated communities of individuals living in proximity to one another.

In the 1800s, Tocqueville warned Americans of the powerful inward turn toward the self that could plague democracies, leaving people isolated from their history and communities. As this turn became increasingly apparent in modern American society, many intellectuals looked to electronic virtual communities as the saving grace of the collective: "With cellular phones and E-mail, one can be physically alone yet still in the midst of a clamoring invisible crowd."[24] In *The Wired Neighborhood,* Stephen Doheny-Farina finds quite the opposite trend, with technology having the effect of isolating people: "It is no longer American democracy that isolates the individual; it is the simulacrum of democracy, the electronic democracy, the virtual culture, the society of the net that isolates individuals while seducing them with mere appearances of communication and collectivity."[25] Arthur Kroker and Michael A. Weinstein come to the same conclusions in their study *Data Trash:* "[America has become] not a wired culture, but a virtual culture that is wired shut; compulsively fixated on digital technology as a source of salvation from the reality of a lonely culture and radical social disconnection from everyday life, and determined to exclude from public debate any perspective that is not a cheerleader for the coming-to-be of the fully realized technological society."[26]

Democratic Society and Military Tradition

In many instances, people feel that traditional military society, with its aristocratic and republican themes, is the antithesis of American individualism and social democracy. As previously mentioned, the principles that held traditional society together include obedience, order, hierarchy, authority, sacrifice, discipline, and fraternity. These characteristics were driven by the "military's main goal—to transform a group of individuals into an efficient unit for the purpose of inflicting extreme and deliberate violence."[27] Current trends in social democracy and individualism outwardly seem to combat these notions. Themes of social equality, rejection of authority, acceptance, inclusion, diversity, technological and communal isolation, self-interest, and materialism now dominate modern American society. Fashioning an effective fighting unit from these ideals would prove a daunting task, even for the most brilliant military theorists.

Unsurprisingly, the selected adoption of many current social-democratic trends into a traditionally structured modern military has produced strange bedfellows and generated much controversy: "Although diversity and sensitivity are indispensable ideals in a pluralistic society, the military must play by a very different set of rules because it has very different expectations of its members. While the military strives to reflect society's composition and values whenever possible, soldiers inevitably surrender many freedoms that civilians take for granted because, unlike civilians, they regularly face death just because they are told to."[28]

These different sets of rules and the ways in which civilian democratic society changes these rules create some interesting paradoxes for its members. This controversy, existing to some degree in support agencies, is most readily apparent in the military services' combat forces.

Changing Patterns of Authority and Sacrifice

Historically, as Huntington points out, military writers in all the services have aggressively attacked individualism and glorified the military's traditional republican and aristocratic

concepts of authority: "The group was supreme over the individual. The highest glory of the soldier was 'obedience, unthinking, instinctive, prompt and cheerful obedience.' 'Military discipline is invaluable because it never reasons.' "[29] These ideas of domination and subordination are truly difficult to instill in recruits who enter the military world from an egalitarian and individualistic society. The new business-scientific, marketplace mentality that is quickly becoming the norm within military society has almost reduced traditional notions of obedience and authority to archaic remnants.

Shortly after World War II, Janowitz identified a major trend facing the professional American soldier: the "changing modes of authority from domination to persuasion."[30] Management theories, persuasion, and employee participation have become widespread and in many cases have replaced standard, authoritarian lines of communication.

In the Air Force's fighter-pilot community, one of the last bastions of traditional principles, "crew resource management" has replaced the once sacred and unquestioning authority of the flight lead. This new training philosophy being instilled in single-seat fighter pilots emphasizes the involvement and participation of all flight members in decisions, regardless of rank or experience. Such "flying participatory management" for combat pilots has caused confusion in and met with considerable resistance from older members of the community who grew up in an atmosphere in which the flight lead had unquestioned authority. Under the guise of fostering teamwork and involvement, participatory management has entered the realm of even the most traditional of combat units, such as the Marine Corps.

Social equality is indeed gradually seeping into military society, altering traditional patterns of authority. This fascinating trend reflects a military culture that increasingly identifies itself with civilian business society. Equality, persuasive management techniques, participatory management, and employee empowerment cannot exist in a social climate dominated by subordination, obedience, and the unquestioning authority of elites. In light of the fact that our leaders seemingly have charted this course of equality for military society,

it will be interesting to see what pillars of tradition they will preserve to steer this wandering ship.

Diversity and Fraternity

Diversity, inclusion, and sensitivity have become the battle cries of American liberalism in the politically correct era. Throughout American history, the services have traditionally managed to sidestep these terms, citing their overwhelming need to defend the society where liberal thought abides. Such notions also seem to contradict their mission and focus, which they accomplish by "transform[ing] young civilians into warriors. Diversity? In order to form effective units that can win wars as quickly and painlessly as possible, the civilian recruit's individual identity must be subjugated to the needs of the unit. Sensitivity? Because a warrior's principal purpose is killing people, much of the sensitivity must be stripped away."[31]

Applying the principle of equal opportunity to military organizations has long proved a dilemma for most democratic societies. In the United States, this challenge began with racial integration during the War of Independence. Historically, the "massive historical and sociological data from the Revolutionary War through World War II has produced two major proven propositions: (1) Although involved in all conflicts, race relations didn't vary significantly from the unequal treatment in the civilian sector. (2) After participation in conflicts, most minorities were rejected from service when peace returned."[32] The post–World War II environment, however, saw some different trends in integration as the armed services led the way toward racial equality by desegregating in 1948. Cultural diversity or understanding was neither emphasized nor promoted during this military "first."

Just as racial equality has at times mirrored civilian society, so have social trends of "diversity management" and inclusion entered the military realm. These current emphases extend beyond simple equality of opportunity and seem to imply a more aggressive approach toward inclusion and acceptance within military society. "The rationale for 'diversity management' is that an institution is strengthened simply by having

different people in it."[33] Subjects of popular diversity-management themes reaching the mass media have included minorities, women, homosexuals, and their acceptance within the military culture.

A culture of inclusion and acceptance has been generated to support policies of diversification. It promotes mandatory social-actions training, sexual-harassment training, equal-opportunity training, and sensitivity training. In 1994 the Army chief of staff commented, "We are deeply committed to diversity. It's a serious issue. . . . Diversity is fundamental to the strength of the institution."[34]

The central tension in this promotion of diversity and inclusion, however, arises from the military combat unit's need for cohesion, unity, and a sense of fraternity. This conflict operates in much the same way as the social conflict between republican and democratic principles. Actively seeking members of diverse identities and backgrounds requires a new focus in an organization "where[by] people are trained to look and act alike, work towards the same purpose, and be completely interchangeable. . . . Individuals mean nothing and units mean everything."[35] A military service that reported to a socially democratic nation which allowed and practiced discrimination in the name of unity would represent the height of irony, though.

Issues of inclusion and sensitivity training generate similar perplexities. One must coolly examine the issue of breaking down masculinity and the fraternal bonds that have historically embraced success in combat: "Is it realistic to try to fine-tune sensitivity, sensitizing soldiers in some respects while at the same time inculcating an insensitivity to the brutality that they must be capable of inflicting and enduring to survive and win on the battlefield?"[36] Given the changes in the nature of modern combat that have driven the military into a gender-neutral/socially neutral status, would modern pluralistic society tolerate the discrimination that accompanied a return to fraternal unity in the services' combat roles?

Battle lines in the conflicts among authority, equality, diversity, and cohesion have already been drawn on the sides of the civilian marketplace and social democracy. As modern military society increasingly identifies itself with the civilian social

and business sectors, attitudes of equality, technical isolation, individualism, materialism, inclusion, and diversity may soon become prevalent within the services. When these attitudes counter traditional military principles and the conflicts remain unresolved, service members will be faced with confusion and the prospect of teetering between the two extremes. The final chapter addresses the issue of striking a balance between postmodern warfare and the missions faced by cyber warriors of the twenty-first century.

Notes

1. John Luddy, "Sensitive Killers: A New Age Dawns at the Pentagon," *World & I* 9 (November 1994): 390.
2. Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1957), 267–68.
3. See Gordon S. Wood, *The Radicalism of the American Revolution* (New York: Alfred A. Knopf, 1992).
4. Alexis de Tocqueville, *Democracy in America,* ed. Richard D. Heffner (New York: New American Library, 1956), 26.
5. Huntington, 90.
6. Wood, 4–8.
7. Ibid., 20.
8. Ibid., 43.
9. Ibid., 215.
10. Ibid., 40.
11. Ibid., 103.
12. Ibid., 365.
13. Ibid., 316.
14. Daniel J. Boorstin, *The Americans: The Democratic Experience* (New York: Vintage Books, 1974), 3.
15. Tocqueville, 254–55.
16. Boorstin, 307.
17. Ibid., 389.
18. Quoted in ibid., 380.
19. Wood, 369.
20. Ibid., 361.
21. Sheldon S. Wolin, *The Presence of the Past: Essays on the State and the Constitution* (Baltimore: Johns Hopkins University Press, 1989), 50.
22. Robert N. Bellah et al., *Habits of the Heart: Individualism and Commitment in American Life* (Berkeley: University of California Press, 1985), 142.
23. Ibid., 144.
24. Stephen Doheny-Farina, *The Wired Neighborhood* (New Haven, Conn.: Yale University Press, 1996), 8.
25. Ibid., 7.
26. Quoted in ibid., 5.

27. Luddy, 380.
28. Ibid., 381.
29. Huntington, 258.
30. Cited in Frank Ray Wood, "U.S. Air Force Junior Officers: Changing Professional Identity and Commitment" (PhD diss., Northwestern University, 1982), 21.
31. Luddy, 381.
32. Charles C. Moskos and Frank R. Wood, eds., *The Military: More Than Just a Job?* (Washington, D.C.: Pergamon-Brassey's International Defense Publishers, 1988), 119.
33. Luddy, 381.
34. Ibid., 388.
35. Ibid., 381 and 389.
36. Ibid., 384.

Chapter 6

Tomorrow's Cyber Warriors

> Equipment for the cyber warrior is not science fiction. Development is underway—and includes multisensor-aided technology, digital battlefield communications, intelligent minefields, precision munitions, night imaging, and integrated multi-media information transport. The cyber warrior is almost completely autonomous with gear that allows for the collecting, processing, analysis, and interpretation of information critical to a mission.[1]

American warriors of the twenty-first century will most certainly be children of technology and the information sciences. These cyber warriors, however, will also be very much a part of the military and civilian cultures that surround them. The present is indeed a confusing time. Tomorrow's soldiers are immersed in mixed signals from the conflict between a developing business-scientific/management-professional culture and the gradually eroding traditional military culture of yesteryear.

The battlefield of tomorrow is also in constant transition. Warriors may face a myriad of threats, from "non-state actors, such as terrorists, to advanced states."[2] Recent US military endeavors such as the Persian Gulf War of 1991, antiterrorist operations, and the host of peacekeeping efforts from Bosnia to Somalia point to a series of diffuse and highly political challenges facing US interests in the future. Precision-guided munitions; stealth technology; satellites; and advances in computers, communications, and information have affected the conduct of modern military operations as well as their command and control. "New information systems have improved target acquisition and the ability to attack an enemy's infrastructure. As a result, many analysts have suggested the imminence of a *revolution* in military affairs (RMA) brought about by the integration of information" (emphasis added).[3] Information centers may now have become strategic targets for crippling the more advanced states. In the United States, these include the "Federal Fund Electronic Switchboard at Culpeper, Virginia, the Alaska pipeline, the Internet, and the Air Force Satellite Control Network."[4]

With soldiers outwardly draped in technology, perhaps the most difficult question confronting futurists is the "inward" equipment necessary for cyber warriors fighting in the new age of the RMA. This chapter explores this question by examining the differing demands imposed by the RMA upon the military culture. It then compares these demands to lessons learned from Operation Desert Storm—the first large-scale American conflict of the information age.

With these lessons in mind, the chapter then proceeds to the question of whether the current business-scientific/management-professional culture is inwardly meeting the demands of tomorrow's cyber soldier or if we need a rebirth of traditionalism within the military. Both military historians and futurists would agree that technology alone cannot serve as a panacea for a military organization and culture if neither is prepared for the challenges of a new age.

Tomorrow's Battlefields

Envisioning the battlegrounds of the next century and the demands placed upon soldiers is truly a less-than-exact task. We can paint at least a blurred picture of tomorrow's warriors and proving grounds by summarizing current trends and predictions debated by military theorists today.

Although military futurists and historians suggest differing paradigms as they conjure up their images of tomorrow's battlefields, most agree that a new revolutionary or at least evolutionary form of warfare will take place. Alvin and Heidi Toffler predict that a "third wave" of warfare will follow what they label the agricultural and industrial waves.[5] "The Third Wave's distinguishing characteristics are brain force, proliferation of technologies, non-lethal weapons, and knowledge-based warfare."[6]

This view promotes a level of economic determinism insofar as, according to the Tofflers, society pursues warfare based on its economic base. Therefore, a developing "information" economy, such as the one in this country, will seek information warfare. This model also inherently suggests that a society, in the pursuit of its own interests and security, must be able to

conduct warfare on varying levels, according to the economic base of its threats.

William S. Lind and others have proposed a "fourth generation" model to explain warfare in the modern era. According to Lind, warfare has progressed through three generations/tactics of line and column, fire and movement, and nonlinear maneuver.[7] The fourth generation is an extension of the nonlinear nature of the third generation: "The distinction between war and peace will be further obscured and conflict will be dispersed over an even larger battle space. A non-Western, idea-based warfare, including war that resembles terrorism, is in this view a possible alternative to the Western, technology-based mode of warfare."[8]

Thomas X. Hammes looks for a broader basis for Lind's fourth generation of warfare, one in which information warfare dominates the battles of a new era. "In place of Lind's vision of terrorist wars spawned by ideas, Hammes foresees a future of 'netwars'—'societal-level conflicts waged in part through internetted modes of communications.'"[9]

Analysts of recent American conflicts are also quick to highlight several recent trends that will likely affect the structure of future military endeavors. The modern American style of warfare calls for the use of massive force and relies upon technological superiority. Advocates of the RMA "see a future with capabilities that will allow the U.S. military and its allies to win rapid, overwhelming, and nearly bloodless victories, because this changed nature of warfare will decisively favor the side that fields the most advanced technology."[10]

This strategy of technology wars with little human involvement also seems to fit neatly within the framework of achieving popular support for the use of force abroad: "One manifestation of this idea appears to be the growing belief that the American people will not endure casualties suffered in the application of foreign policy for protecting and fostering our national interests."[11] As technology and the modern media have brought warfare into our living rooms, this attitude has expanded to include not only friendly casualties, but also noncombatants and even enemy casualties.

The reliance on technology also carries with it some other significant strategic disadvantages and vulnerabilities. For example, the proliferation of technology can allow smaller adversaries to level the playing field: "Skillful employment of 'off-the-shelf' and arms-market weapons and equipment to serve the requirements of a combat force could make 'technological dominance' by the more lavishly outfitted side unlikely."[12] Additionally, many scholars foresee future adversaries against whom technology carries a limited decisive advantage, similar to what occurred in the Vietnam War: "Opponents are envisioned as rising among 'street-fighter' nations and non-state groups of the world, prepared to wage war in unconventional fashion using small groups unconcerned about humanitarian limitations, innocent civilians, rules of warfare or even their own casualties."[13]

Equipping the Cyber Warrior

What, then, can we assume about equipping cyber warriors for the uncertain demands of the twenty-first century? Projections of current trends in force downsizing and technological advancement suggest that "the high-tech military of the future will be smaller, but more sophisticated and specialized. The military will be comprised of well trained, skilled warrior-technicians who are comfortable operating with advanced electronic gadgetry."[14]

As Wood and Janowitz predicted (see chap. 3), technological change will continue to fragment the military into varying specialties. Technical expertise will undoubtedly become a vital element in equipping these military specialists. This need for specialization will also increase the reliance on civilians within the military to fulfill certain support roles.

The soldier of the RMA likely will be a member of an organizational structure driven by new advances in information. In the past, the hallmark of American military organization was a strict, hierarchical chain of command that encouraged individual initiative within the boundaries of this chain. As the caretakers of violence, the military organization preserved order and discipline with this authoritarian structure. In a

digital battlefield, where precise information about the combat environment is rapidly disseminated to warrior-specialists at the lowest level, the use of multiple layers of command may actually serve to degrade military performance. The Goldwater-Nichols Department of Defense Reorganization Act of 1986 represented one early step in this direction, giving the regional war-fighting commanders in chief more authority and streamlining the war-fighting chain of command: "As information proliferates at faster speeds and is available to a wider array of individuals, hierarchical organizations evolve into networks and power is shifted more to individuals and groups."[15]

Some futurists even foresee a day when traditional command arrangements totally disappear. If this trend is fully realized and if groups, networks, and individuals replace the traditional layered hierarchy, we will still face the challenge of preserving the unity of command necessary to the execution of the military's deadly mission. The responsibility of bearing the public's trust in this critical function demands no less.

Tomorrow's soldiers will also need heightened political consciousness and awareness. Modern conflicts have become increasingly more political. The projection of military force and US interests internationally must deal with a myriad of national political controls and limited objectives, along with additional challenges brought on by joint and multinational operations. During Vietnam, strict and highly unpredictable political regulation played a part in target selection and the use of force. The Gulf War of 1991 saw the development of multinational coalitions, the drawing of a "line in the sand," and the imposition of limited political objectives. In Somalia and Bosnia, warriors assumed the role of peacekeepers and police officers in civil struggles.

Responding to quick, politically limited campaigns; conducting policing operations; and dealing with terrorist actions, as well as a variety of nonstate actors, require an unprecedented level of political, cultural, and social understanding from the soldier in the field. One slight miscalculation or misperception can dramatically alter the political scene surrounding such actions. With the advent of information warfare, war is not just "a real political instrument,"[16] but politics have become a real in-

strument of war. The political dimension in "infowar" rises to a new level as it becomes a strategic target itself. "On the strategic level the United States seeks to acquire, exploit, and protect information to support national objectives. Sectors for exploitation and protection include the economic, political, and military. Cultural as well as social information may also be required to support U.S. interests and strategic goals."[17]

Will these cyber warriors become a different breed of soldier, far removed from those of yesterday's wars? If the predictions of current theorists and futurists hold true, professional American soldiers of the information age will be technical experts and specialists comfortable with the latest technology. They will likely be part of semiautonomous organizational networks and information clusters, and will find themselves increasingly connected to the political, social, and cultural aspects of conflicts.

It is doubtful, however, that infowars and a potential RMA will completely usher out those historical constants of successful military operations. The teachings of Sun Tzu and Clausewitz should ring just as true in the information age:

> Conflicts in the information age will not be less common or less violent. On the contrary, the transition period between the industrial and information ages is likely to be even more chaotic. If committed to war, cyber-warriors will fight as ferociously as their predecessors. Information will enhance the way they operate on the battlefield. These future warriors will quickly outflank and outmaneuver an enemy with knowledge of its position and combat situation. With information age weapons at their disposal, they will engage an enemy precisely and decisively.[18]

Lessons Learned from the Gulf War

Stepping back from the crystal ball of the futurists and theorists, one finds that historical analysis of Operation Desert Storm also offers some insight into equipping tomorrow's warriors. As the first major American conflict in the post-cold-war era and a harbinger of the information revolution, the Gulf War teaches us many lessons that we can apply to future campaigns.

First, however, we would do well to put this military endeavor in perspective. It was a brief war—Iraq invaded Kuwait

on 2 August 1990, and cease-fire talks took place on 3 March 1991. It was also not a very violent war in terms of casualties: 211 coalition soldiers and 60,000 to 100,000 Iraqis were killed.[19] "Culturally, the results of this war will not be substantial. Its significance is in its profound political, economic, scientific-technical, and military impact, which makes it of the greatest importance to us all."[20]

Militarily, the war's many general lessons readily apply to future conflicts. One cannot overestimate the significance of airpower and air superiority—in fact, airpower alone may be enough to win some limited future confrontations. The short ground campaign "reaffirmed what strategists since Sun Tzu have stressed concerning the importance of good strategy, daring, good discipline, and training."[21]

Other lessons learned include the dominance of high-tech weapons and technology. The exorbitant amounts of money spent on electronic warfare and weaponry proved to be a valuable investment: "JSTARS [joint surveillance, target attack radar system] was an overwhelming success, Stealth proved its worth, the Stand-off Land Attack Missile (SLAM), and precision guided munitions were tremendously successful."[22] Electronic warfare and control over the electromagnetic spectrum also contributed to control of the battlefield. In the maritime campaign, the struggle to eliminate Iraqi mines showed that even a small investment in technology could cause great difficulties for a superior opponent.

The need to integrate intelligence caused some frustration among the coalition forces. US information centers performed very well, but the management of intelligence was disjointed and lacked controls. Integration of the political and military realms also provided an important lesson: "Today's telecommunications are such that they have heightened the interrelationship of the political and military aspects of a war, to the extent that the two are now very symbiotic, and an occurrence in one realm can prompt a reaction in the other."[23] Vivid television coverage of the coalition's rout of Iraqi forces, especially of the "highway of death" from Kuwait to Basra, influenced the Bush administration's decision to call an early end to the war.

TRADOC Looks Ahead

Outside of these broad historical lessons, the American military's alteration of its training and doctrine following the Gulf War provides another view of twenty-first-century warfare—witness the changes made in the US Army's Training and Doctrine Command (TRADOC). Led by Gen Fred Franks, TRADOC faced a "new strategic landscape, marked by a broader and much different set of conditions, in a more unstable and ambiguous setting."[24] As R. James Woolsey, former director of the Central Intelligence Agency, remarked, "After forty-five years of fighting a dragon, we finally killed it and now instead, we find ourselves standing in a jungle with a bunch of snakes."[25]

In 1991 TRADOC faced the daunting task of integrating the Gulf War's lessons and developing the Army's post-cold-war battle doctrine. Operation Just Cause in Panama and Desert Storm "had been fought with twentieth-century tactics, technology, and doctrine, but had both shown signs of twenty-first-century warfare."[26] These conflicts showed that potential adversaries of the United States—either small, hostile political groups or nations—could quickly acquire new technologies and advanced weapons. Even in limited form, this technology could pose a serious threat in the modern battlefield: "To counter such threats, the Army had to look ahead to the potential of virtual reality, digitized communications, and other information-age technologies for sharing, retrieving, and transmitting information—they needed to synthesize the various disparate pieces—some new, some old—into a new concept for the battlefield."[27]

Looking to the future, TRADOC pursued four key areas: force projection, operations other than war (OOTW), joint and combined operations, and conduct of the land battle.[28] Desert Storm demonstrated the need to prepare for future military confrontations by focusing on a rapidly deployable force with the separate branches of the services working together as part of larger, multinational coalitions. OOTWs such as Provide Comfort and peacekeeping operations demanded some of the same "discipline, skills, teamwork, and toughness that come from preparing to fight."[29] OOTW missions also demanded more personnel from a rapidly shrinking military force.

TRADOC's research on the land battle of tomorrow produced great insights into the conflicts of a new age. Its development of battlefield laboratories in 1992 involved computer-assisted simulations that focus on future "battle dynamics"[30] and the application of new technology that provides snapshots of future wars. Not surprisingly, many traditional concepts shine through the wizardry: "The outcome of land battles is still decided by physical force. In army versus army, on a given piece of terrain, raw physical courage, physical toughness in all types of terrain and weather, combat discipline, skill with weapons and in units, and leadership in the face of chaos are still very much needed."[31]

Information wizardry, though, and its application in the labs by highly trained, skillful soldiers are revolutionizing modern warfare. Warriors not only will know their position at all times, but also will be able to engage the enemy rapidly, precisely, and directly while simultaneously informing other platforms that also can provide support. Experiments with onboard sensors, communications links, and precise navigation equipment in the battle labs confirmed this vision. Information allowed for greater autonomy, dispersion, and lethality of combat power. This dispersion suggested that some of the futurists' trends in command and control, especially a shift toward a more horizontal flow of information, were being realized: "When all the troops know what is going on, what happens to the hierarchical military command structure? Can you expand the leader-to-led ratio while you disperse units, keep them informed, and place fewer troops in a given battlespace?" In 1994, experimental unit XXI, consisting of cyber warriors, was fielded at Fort Hood, Texas, to seek answers to these and other questions.[32]

Postwar Studies?

At the end of the Desert Storm, a flood of analyses on technology in modern warfare and the political implications of this limited campaign hit the shelves. Outside of selected biographies and personal testimonies, however, one finds very little research regarding the inner characteristics and institutional/

organizational values that led to success or even created confusion in the Gulf War. As was the case following almost every major American military campaign, the nation retreated inwardly after this conflict, implementing a massive drawdown and turning away from things military. These cutbacks and force reductions left little room for analysis.

In July 1993, the Army conducted one of the very few studies regarding lessons learned from the Gulf War on the attributes of a successful modern warrior. Its Research Institute for the Behavioral and Social Sciences asked 357 Gulf War veterans to evaluate a list of leadership competencies with an eye toward judging their relative importance in various situations.[33] The institute compared these rankings, which had high statistical reliability, for combat, combat-support, and combat-service-support units: "Competencies at the top level were professional ethics, decision-making, and technical/tactical skills, while competencies at the bottom level were supervision, teaching/counseling, and use of available systems."[34] In 1992 Kessling and others found similar results after interviewing soldiers returning from an intensive training session at the National Training Center.[35]

These studies, while statistically reliable, have limited applicability because they focus on voluntary samples of primarily junior officers; they confine themselves to leadership issues; and they compare only nine basic competencies/attributes. However, they do demonstrate the relatively lower importance attributed to supervision, planning, and counseling in modern combat scenarios. Ironically, these attributes lie at the heart of the business-scientific/management-professional culture that envelops today's peacetime warrior.

Institutionalism for Tomorrow?

After having examined modern business-scientific culture and traditional military culture, we now turn to the critical question of what elements of each culture should shape the American fighting force of the twenty-first century. Have traditional institutional values and interactions already been permanently altered? Does the changing battleground, previewed

in the Gulf War and described by futurists, require a new business-scientific military?

Sociologists such as Huntington, Janowitz, and Moskos have used a variety of models to paint a picture of the traditional, institutional military subculture and society that has historically played a significant role in American military thought and organization. This military featured obedience, order, hierarchy, authority, discipline, ceremony, suffering, and fraternity.

We found that the ideas and subculture influencing today's military professional are distinctly removed from those of the traditional soldier. Modern American soldiers are occupationally rooted, politically conscious, technically specialized, able to share functions with civilian society, and surrounded by commercial business paradigms and theories of scientific management. The services' wholesale adoption of TQM reflected the extent to which this culture had come to dominate American military thinking. The scientific-management scheme, as applied to combat organizations, was closely related to business/manufacturing, tended to quantify human variables, relied on too many charts and graphs, and simply lacked "heart." Marginal analysis and management theories had a pronounced effect upon traditional principles of military leadership.

Along with upheavals in leadership and management, the modern military subculture has also become more closely aligned with liberal civilian society, especially its notions of equality, authority, diversity, fraternity, and individualism. The progression of American social democracy and the melding of these concepts into military society contrast openly with traditional military principles and the services' goal of "transforming a group of individuals into an efficient unit for the purpose of inflicting extreme and deliberate violence."[36] Modern technology isolates individuals and leaders in virtual crowds and even virtual commands. Patterns of organizational authority have changed from domination to persuasion. In many scenarios, leaders now assume that diversity strengthens the military organization. Patterns of inclusion and sensitivity training have altered elements of fraternity once associated with combat.

Research from military futurists and analyses of the Gulf conflict seem to point to conflicting views over which elements of the traditional or modern military culture should dominate the future fighting force. The rising level of specialty and technical expertise apparent in today's business-scientific culture appears more than consistent with demands of the twenty-first-century battlefield. Changing patterns of organization and authority are less than clear, however. Information on the battlefield will permit the traditional vertically organized hierarchy to dissolve into networks and groups. Although information in the conflicts of the future may lead to greater dispersion and autonomy, a strict and unified chain of command will remain a necessity. Undoubtedly, the art of military leadership and the human elements of interaction, decision making, and ethics will also continue as decisive factors in any conflict. Finally, staying abreast of the military culture's trends in political consciousness and increasing the modern soldier's understanding of the political operating environment will prove critical to the future range of military endeavors.

Blueprint for a Culture in Transition

In this midst of this uncertain fighting environment and clash of traditional and business-scientific cultures, it is indeed easy for theorists and historians to call for a blanket reinstatement of traditionalism. Such an attitude, however, does not fully fathom the degrees to which the traditional subculture has already been transformed: "The problem with deep, fast, and rampant innovation is not getting people to accept the new but to surrender the old."[37]

The first step toward striking a delicate balance between the two subcultures involves achieving an understanding of the new business-scientific/management-professional culture and its implications for the future conduct of the military. This realization, however, must look beyond simple indicators of change, such as retention problems, a perceived "values crisis," or increasing occupational attitudes. It must probe critically and progressively into the roots, focusing on the internal

and external variables that have created and shaped this new military culture.

By remaining clearly focused on the demands of the future battlefield, many elements of this emerging culture will prove beneficial to the crafting of tomorrow's cyber warriors. The changing nature of military authority, for example, which may seem detrimental to the traditional culture of an older generation of warriors, can actually favor the future soldier: "The technology of warfare is so complex that the coordination of a group of specialists cannot be guaranteed by authoritarian discipline. The complexity of the machinery and the resultant interdependence produce an important residue of organizational power for each member."[38] In the mid-1970s, Janowitz noted this change in the nature of authority from domination to manipulation, the latter referring to influencing behavior based on achievement, goals, indirect techniques, and group persuasion.[39]

A proper analysis of any change within the military subculture can begin only with information provided by long-term studies. Currently, we have no such studies on changing values or patterns of interaction within military society that could prove useful in shaping the warrior of the information age.

One finds many barriers to critical research within the military. In such an organizational bureaucracy, driven by so many external variables, establishing long-term programs and studies can become a daunting task. Given the rank structure and vertical hierarchy within the services, a certain level of top-down "groupthink" produces studies that tend to support current policies. For example, no one interested in career advancement in the early 1990s dared question the need for TQM. Extensive bureaucratic barriers, such as the Privacy Act and the oftentimes hard-to-obtain cooperation and support of DOD and the military services, also discourage critical studies from outside agencies.

Striking a balance in the clash of military cultures also involves seeking out new modes of building institutionalism in an increasingly occupational organizational climate. Moskos's institutional/occupational thesis identifies several key areas in which the American military can foster an institutional identity, one

that is not always driven from within the military: "On both the military and civic sides, military people must be given justification for the utility of the armed forces which may be enhanced by patriotic and military rituals. They must be accompanied by a civic identification with the nation and an appreciation of the service member's role in the military organization."[40]

Moskos also notes that immediate leaders, who are an "institution to their subordinates," play the most significant role in the socialization of military personnel.[41] Promotion criteria, he claims, must favor those leaders most concerned with group improvement and willing to devote extra time to mentoring subordinates.[42] Leaders must not view themselves as "pawns in the grip of larger forces" but must emphasize the distinctive, value-driven nature of the military forces. "After they have articulated the unique and awesome responsibilities of the military institution, the senior military leaders must be seen as concerned and effective in protecting members' rights and entitlements."[43]

Moskos's final method of increasing socialization and institutionalism involves the system of professional military education (PME). Finding that "no real evidence exists that [PME] programs, as presently designed, increase holistic or institutional thinking in the career force," he proposes necessary changes in the content, format, and tracking of PME.[44] To avoid "ticket-punching" quality education, he advises not even entering it in the service member's formal record. Continuing-education programs should include both formal and informal seminars, realistic reading lists, and programs designed and administered by local commanders. Such programs would be less selective and more voluntary, and they would seek to broaden experience over simple preparation for promotion. Building institutionalism, according to Moskos, does depend upon "spending time at the officers' club, spouse's participation in the military community, or on-base residence. It does not imply a turning back of the clock, but it entails the establishment of a new balance after a long period of indiscriminate acceptance of the marketplace mentality."[45]

Preserving institutionalism from the "marketplace mentality" also involves a commitment of the services to define, shape, and

communicate to civil society those attributes valued as necessary in their combat soldiers. In terms of values and motivation, many elements of traditional combat roles hold true for both today's and tomorrow's warriors. In the early 1960s, Janowitz listed three major explanations of how individuals perform in combat roles: "The first asserts that their performance is motivated by identification with some formal symbols of a particular organization or its traditions."[46] The second is that soldiers behave as they do in combat in order to adhere to some code of behavior such as "being a man." The third has its origins in a soldier's relationship to larger society, patriotism, family, or the flag.[47]

A commitment to preserving and defining the warrior ethic in a peacetime military organization bombarded by pressures of social democracy is a challenging task. In an era of limited resources, it is far easier to give in to social pressures, adopt the business-management language of those who cut the budgetary pie, and gradually whittle away at the warrior culture. In defining this combat ethic, however, one must not rely too heavily upon traditionalism but keep an eye on the changing nature of warfare. In its combat roles, the military must seek an environment that fosters the team—individuals with technical and tactical expertise; heroic leaders and improvisers; and aggressive members who strive to win and accept suffering, physical and emotional hardships, and the insensitivity of being professional killers. Because it is entrusted with managing violence, an effective military organization must discriminate when it comes to combat arms. This warrior ethic must remain an absolute standard for qualified individuals and must show no preference in terms of social standing, gender, or race. These combat values must play a significant role in the training of soldiers, on par with mandated courses on sensitivity, inclusion, and equal opportunity.

Dedication to the warrior spirit requires that service members and senior leaders educate civilian society and communicate these combat values. Senior leaders who traverse the bureaucratic bridge between military and civilian societies must continue to fight against policies and practices that would adversely affect tomorrow's heroic leaders and followers.

Preserving the warrior spirit goes beyond notions of professionalism. As Huntington concludes, "Today, America can learn more from the military, than the military from America. The greatest service they can render is to remain true to themselves and serve in the military way. If they abjure the military spirit, they destroy themselves first and their nation ultimately. If the civilians permit the soldiers to adhere to the military standard, the nations themselves may eventually find redemption and security in making that standard their own."[48]

A final weapon in the battleground of traditional and business cultures is the services' need to reward and encourage the human art of leadership. Leaders are the key to preserving institutionalism and the warrior spirit in the services of tomorrow. The American military remains more than determined to build, train, and encourage its leaders. Volumes of literature address military leadership, and it is taught in classes and seminars at all levels of military education. Much leadership training, however, is more devoted to issues of scientific management, marginal analysis, and other business-oriented theories. We need greater focus on the more-difficult-to-define art and human component of military leadership. Advances in technology and information and the tendency to isolate individuals into virtual commands demand that the future military leader be proficient in human interaction. "E-mail commanders" must step away from their keyboards and discover the human elements that are essential to successful leadership.

In *Leaders and Battles,* W. J. Wood describes leadership as "an exceptional skill in conducting a human activity."[49] In his study of successful combat leaders, he finds that "battles can be won by the minds of leaders, the art of leadership is embodied in the individual, and this art must be based on certain attributes."[50] Wood further proposes that forces in warfare exist—specifically, danger, chance, exertion, uncertainty, apprehension, and frustration—which test the unique qualities of military leaders. Personal attributes of successful military leaders, such as courage, will, intellect, presence, and energy allow them to overcome what Clausewitz labels the fog of war.[51]

In the twenty-first century, the American military must balance its imported business-management paradigms with the

pursuit of artful leaders who have courage and human presence. Future leaders must be evaluated and promoted not so much on the basis of success in statistical management but on human variables. Although the peacetime, occupationally minded nature of the modern services makes such an endeavor difficult, the military must stress its unique qualities—those that separate it from successful civilian companies.

The molding of tomorrow's cyber warriors has already begun. As the traditional and modern business cultures continue to collide, a unified sense of purpose must emerge and look forward. As Anthony Eden wrote in 1951, "We must be bold and vigilant lest daily cares cloud our longer vision of the task that lies ahead and of the fair fortunes at our command. . . . But this unity, this understanding, this sense of interdependence is the heart of the business. Without it we shall make no headway. With it there is no fair ambition we cannot realize."[52]

Notes

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3. Lt Comdr Jeffrey A. Harley, "Information, Technology, and the Center of Gravity," *Naval War College Review* 50, no.1 (Winter 1997): 66.
4. Gumahad, 18.
5. Cited in Harley, 70.
6. Ibid.
7. Cited in ibid.
8. Ibid.
9. Cited in ibid.
10. Gen Richard I. Neal, "Planning for Tomorrow's Conflicts: A Recipe for Success," *Naval War College Review* 50, no. 4 (Autumn 1997): 12.
11. Ibid., 14.
12. Ibid., 13.
13. Ibid.
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15. Ibid., 16.
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17. Gumahad, 17.
18. Ibid.
19. Bruce W. Watson et al., *Military Lessons of the Gulf War* (London: Greenhill Books, 1991), 247.
20. Ibid., 213.
21. Ibid., 216.
22. Ibid.

23. Ibid., 118.
24. Tom Clancy with Fred Franks Jr., *Into the Storm: A Study in Command* (New York: G. P. Putnam's Sons, 1997), 497.
25. Ibid.
26. Ibid., 498.
27. Ibid.
28. Ibid., 499.
29. Ibid., 506.
30. Ibid.
31. Ibid., 507.
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33. Joel M. Savell, Trueman R. Tremble Jr., and Ross C. Teague, *Some Lessons Learned about Leadership in Operation Desert Shield/Storm,* Army Research Institute Study Report no. 93-05 (Alexandria, Va.: US Army Research Institute for the Behavioral and Social Sciences, July 1993), vii.
34. Ibid., 11.
35. Cited in ibid., 12.
36. John Luddy, "Sensitive Killers: A New Age Dawns at the Pentagon," *World & I* 9 (November 1994): 380.
37. James Stavridis, "The Second Revolution," *Joint Force Quarterly* 15 (Spring 1997): 13.
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39. Ibid.
40. Charles C. Moskos and Frank R. Wood, eds., *The Military: More Than Just a Job?* (Washington, D.C.: Pergamon-Brassey's International Defense Publishers, 1988), 287.
41. Ibid.
42. Ibid.
43. Ibid., 288.
44. Ibid., 289.
45. Ibid., 291.
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48. Samuel P. Huntington, *The Soldier and the State: The Theory and Politics of Civil-Military Relations* (Cambridge, Mass.: Belknap Press of Harvard University Press, 1957), 466.
49. W. J. Wood, *Leaders and Battles: The Art of Military Leadership* (Novato, Calif.: Presidio Press, 1984), 2.
50. Ibid.
51. Clausewitz, 120.
52. Quoted in *The President and National Security Policy* (New York: Center for the Study of the Presidency, 1984), 4.

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