CHAPTER 1

Military Learning and Competing Theories of Change

To Carl von Clausewitz, the father of modern military thought, military learning and military change were a simple matter: "If, in warfare, a certain means turns out to be highly effective, it will be used again; it will be copied by others and become fashionable; and so, backed by experience, it passes into general use and is included in theory."[1] In other words, if something works, militaries will change their doctrine and their practice accordingly. Although Clausewitz provides little explanation as to how this learning on the battlefield becomes organizational practice or why some armies learn while others do not, he claims that armies have at least three opportunities to learn—historical examples (of self and others), personal battlefield experience, and the experience of other armies.

In the case of the challenges facing the military today, the U.S. military has had the opportunity to learn in all three of the ways suggested by Clausewitz. Starting with frontier duty in the early 19th century and continuing to Iraq and Afghanistan today, the U.S. military has built schools, run local governments, monitored elections, and provided general law and order for war-torn societies both at home and abroad throughout its history. As chapter 2 describes, long before the peace operations of the 1990s or the "Phase IV" and counterinsurgency operations in Iraq and Afghanistan today, U.S. soldiers and marines performed myriad S & R tasks in the American South, the Philippines, the Caribbean, Europe, Japan, and Vietnam.

In addition to this historical and recent experience, the U.S. military

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1. Carl von Clausewitz, *On War,* ed. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1984).

also has a tradition of studying other militaries around the globe, demonstrating that the U.S. military is adept at learning from the experience of others. For example, the *Small Wars Manual* written by the Marine Corps in the 1930s reflects the lessons of the British from their 19th-century colonial wars as well as the Marine Corps' own experience in the Caribbean in the first decades of the 20th century.[2] Today, both the Army and the Marine Corps consult the British and other allies in preparing for urban operations, counterinsurgency, and peacekeeping.[3] Given this tradition, combined with their own long history of performing military operations other than war (MOOTW), Clausewitz would predict that the U.S. Army and the U.S. Marine Corps would be quite adept at performing them by now. Moreover, their techniques would differ little from each other or from those of their allies whose doctrine they had studied.

In contrast to Clausewitz, modern theories of military change suggest that militaries will have a difficult time innovating at all. A primary debate among scholars of military change is over the catalyst for innovation. Do militaries change on their own or in response to perceived threats, new technologies, or changes in the global system; or is some external stimuli required to force the organization and its leaders to "see the light" and adapt? If militaries are resistant to change, what does it take to influence their behavior from the outside? Under what conditions might efforts to force the military to innovate succeed or fail? If, on the other hand, militaries do change on their own, what (or who) influences the choices they make? Finally, whether the catalyst is internal or external, what explains the failure of militaries to change when needed?

In this literature, many posit that for various reasons, militaries need external actors to force innovation or change. The critical point of agreement among these scholars is that if left alone, the military would be unlikely to change or would otherwise tend toward inappropriate doctrine.[4] Scholars of military innovation draw on three overlapping cat-

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2. Keith B. Bickel, *Mars Learning: The Marine Corps Development of Small Wars Doctrine, 1915–1940* (Boulder: Westview Press, 2001); Colonel C. E. Callwell, *Small Wars: Their Principles and Practice,* 3rd ed. (London: E. P. Publishing, 1976) (the first edition of *Small Wars* was published in 1896).

3. Multiple interviews with 101st soldiers, 1st Marines, 2nd Marines, Marine Corps Warfighting Lab, Army Peacekeeping and Stability Operations Institute, and the Army Center for Lessons Learned personnel.

4. Barry R. Posen, *The Sources of Military Doctrine: France, Britain, and Germany between the World Wars* (Ithaca: Cornell University Press, 1984); Jack L. Snyder, *Ideology of the Offensive: Military Decision-Making and the Disasters of 1914* (Ithaca: Cornell University Press, 1984).

egories of theory to explain why militaries often fail to adapt: organizational theory, bureaucratic politics, and organizational culture.[5] In each of these schools, there exist factors that make them either averse to change in general or inclined toward offensively oriented doctrine in particular.[6] Accordingly, each leads to different conclusions about how barriers to innovation might be overcome.

Organization Theory

Organization theory sees military organizations as highly resistant to change.[7] For organizational theorists, militaries resist innovation as a result of structural systems, norms, and standard operating procedures that together focus behavior toward particular outcomes. Graham Allison describes organizational behavior in this school "less as deliberate choices and more as outputs of large organizations functioning according to standard patterns of behavior." Moreover, organizational culture emerges from these routines that reinforce norms, and "the result becomes a distinctive entity with its own identity and momentum."[8] In this model, even when various actors within a military organization desire a change in strategy or doctrine, such structural mechanisms would likely mitigate against it. Thus, in order for such change to occur, the actual structures and processes that produce strategy and doctrine must be changed.

For today's military, many would point to the Pentagon's "planning, programming, budgeting, and execution" (PPBE) cycle as a key example of this phenomenon. In this complex process, the four services ideally submit budgets based on the leadership's strategic priorities as outlined

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5. Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis,* 2nd ed. (New York: Longman, 1999); Morton Halperin, *Bureaucratic Politics and Foreign Policy* (Washington, DC: Brookings Institution, 1974).

6. Carl H. Builder, *The Masks of War: American Military Styles in Strategy and Analysis,* Rand Corporation Research Study (London: Johns Hopkins University Press, 1989); Elizabeth Kier, *Imagining War: French and British Military Doctrine between the Wars* (Princeton: Princeton University Press, 1997); Stephen Peter Rosen, *Winning the Next War: Innovation and the Modern Military* (Ithaca: Cornell University Press, 1991); Steven Van Evera, "The Cult of the Offensive and the Origins of the First World War," *International Security* 9, no. 1 (1984).

7. Allison, *Essence of Decision;* Deborah D. Avant, "The Institutional Sources of Military Doctrine: Hegemons in Peripheral Wars," *International Studies Quarterly* 37 (1993); James March and Johan Olsen, "The New Institutionalism: Organizational Factors in Political Life," *American Journal of Political Science* 78, no. 3 (1984); Halperin, *Bureaucratic Politics and Foreign Policy;* Snyder, *Ideology of the Offensive.*

8. Allison, *Essence of Decision.*

in the National Defense Strategy or the Quadrennial Defense Review, which should in turn reflect the immediate and projected needs of the warfighters, as articulated somehow by the combatant commanders around the world. In reality, budgets often seem out of touch with both top-down priorities and bottom-up requests, reflecting a mysterious disconnect between bottom-up learning, strategic direction, and budgeting.

Pushing change from above requires the strategic manipulation of the system at key "nodes" in this PPBE process. For example, the choice of defense planning scenarios (DPSs) or war games and analytical scenarios used for capability analysis inside the Pentagon during the budget cycle or during the development of the Quadrennial Defense Review can have cascading effects on what the services think they are required to program and budget for. A war game that presumes major conventional warfare against a fictitious peer competitor, for instance, would lead the Army to buy big tanks and the Air Force to buy high-tech fighter planes capable of air-to-air combat. If, on the other hand, the directed scenarios emphasize military operations such as counterinsurgency or humanitarian intervention, the justification for these major weapons systems gives way to other capabilities: for example, special operations; language skills; intelligence, surveillance, and reconnaissance (ISR) equipment; and humanitarian relief capabilities.

For analysts trying to measure change, however, the budget can often be misleading. The same size budget for military education, training, or doctrine development, for instance, may look the same on the outside, but the character and content of these programs may have adapted dramatically. The way in which experience affects how the military thinks, trains, and learns, as evidenced in its doctrine, training, and education (more so than its budgeting and weapons procurement), is the primary focus of this book.

Despite such barriers to innovation, organization theory makes room for military change in response to three catalysts: (1) external pressure, (2) the opportunity or need to grow and/or survive, and (3) failure.[9] In the first instance, external civilian leadership—Congress, the president, or even the secretary of defense—would be the source of change. In the

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9. Ibid.; Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown, 1967); Posen, *The Sources of Military Doctrine;* Chris Argyris and Donald Schon, *Organizational Learning II: Theory, Method, and Practice* (Reading, MA: Addison-Wesley, 1996); Richard M. Cyert and James G. March, *A Behavioral Theory of the Firm,* 2nd ed. (Malden, MA: Blackwell, 1992); Douglass C. North, *Institutions, Institutional Change, and Economic Performance* (New York: Cambridge University Press, 1990).

second case, a military might change in order to acquire more resources or influence.[10] The last of the organizational theory categories, failure, is more intuitive with respect to the military. In this case, as militaries face new technologies or tactics in use by an enemy on the battlefield, they are forced to adapt. In a very Clausewitzian sense, militaries that do not adapt do not survive. What is less clear in these cases is *how* the change takes place. What are the mechanisms and institutional processes that enable this change?

Bureaucratic Politics

Like organization theory, bureaucratic politics theory might predict similar outcomes when the military is viewed as the amalgam of myriad subgroups and branches as well as one agency among others within the U.S. government.[11] In this model, most commonly summarized by the adage "Where you stand depends on where you sit," military leaders, like leaders of other large organizations, seek to promote the importance of their organization and to preserve the organization's distinct organizational "essence." Morton Halperin defines this essence as "the view held by the dominant group in the organization of what the missions and capabilities should be."[12] In this model, roles and missions that challenge this essence will be rejected, unless such roles are seen to enhance the importance and influence of the organization. Thus, in the bureaucratic politics model, we would expect the military to resist stability operations missions unless they can be viewed as somehow supporting the organization's essence or somehow increasing its stature or relevance.

Because, as we will see, the predominant view of the U.S. military as a whole is that its role is to "fight and win the nation's wars," it would seem unlikely that the military would embrace counterinsurgency (COIN) or stability operations as its role. In the post–Cold War environment, however, when it seemed that the implosion of the Soviet enemy meant massive downsizing and a diminished role for the U.S. military, the bureau-

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10. Indeed, the perception that the United States might no longer need large numbers of forces in Europe to counter the Soviets did shrink military budgets in the early 1990s. Many in the military at that time perceived such calls for military downsizing as an existential threat.

11. Allison, *Essence of Decision;* Michael Altfeld and Gary Miller, "Sources of Bureaucratic Influence: Expertise and Agenda Control," *Journal of Conflict Resolution* 28, no. 4 (1984); Halperin, *Bureaucratic Politics and Foreign Policy.*

12. Halperin, *Bureaucratic Politics and Foreign Policy;* Jerel Rosati, "Developing a Systematic Decision-Making Framework: Bureaucratic Politics in Perspective," *World Politics* 33 (January 1981).

cratic politics model, like organization theory described above, would lead to the competing hypothesis that the military would embrace what it then called "MOOTW" as its new raison d'être, as a means to maintain its organizational influence. Likewise, inside the military establishment, the bureaucratic politics model would lead to an additional hypothesis that subgroups such as the Special Forces or the Light Infantry, whose capabilities are uniquely suited to the challenges of MOOTW missions, might also advocate for increased emphasis on this role. Indeed, this is the behavior that began to emerge in the 1990s and especially once operations in Afghanistan and Iraq began.

Organizational Culture and Military Change

Scholars who focus on organizational culture often use different terms with slightly different emphases to describe a similar phenomenon. For example, Elizabeth Kier defines organizational culture as follows: "the set of basic assumptions and values that shape shared understandings, and the forms or practices whereby these meanings are expressed, affirmed, and communicated to the members of an organization."[13] Closely related to organizational culture is Morton Halperin's concept of organizational essence, described above. Other scholars focus on institutional memory, "the conventional wisdom of an organization about how to perform its tasks and missions."[14] Richard Downie clarifies this concept further by stating, "In a sense, institutional memory is what older members of an organization know and what new members learn through a process of socialization."[15] Finally, Carl Builder presents the theory of organizational personality: "a 'face' that can be remembered, recalled, and applied in evaluating future behavior [of a military service]."[16] These terms, which are often used interchangeably, are for some scholars the key to understanding most differences in military behavior.

The centrality of culture and the relationship of these concepts for military organizations are articulated clearly by Lieutenant General

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13. Elizabeth Kier, "Culture and Military Doctrine: France between the Wars," *International Security* 19, no. 4 (1993). See also James Q. Wilson, *Bureaucracy* (New York: Basic Books, 1989): "Every organization has a culture, that is, a persistent, patterned way of thinking about the central tasks of and human relationships within an organization."

14. John A. Nagl, *Counterinsurgency Lessons from Malaya and Vietnam: Learning to Eat Soup with a Knife* (Westport, CT: Praeger, 2002).

15. Richard Duncan Downie, *Learning from Conflict: The U.S. Military in Vietnam, El Salvador, and the Drug War* (Westport, CT: Praeger, 1998).

16. Builder, *The Masks of War.*

Theodore Stroup: "The Army's culture is its personality. It reflects the Army's values, philosophy, norms, and unwritten rules. Our culture has a powerful effect because our common underlying assumptions guide behavior and the way the Army processes information as an organization."[17] General Stroup goes on to claim, "Our Army culture, however, can also be a liability when it is inappropriate and does not contribute to the Army's overall goals."[18] But where does culture come from, and what, if anything, can be done to overcome its powerful and potentially negative, reactionary influence?

To understand the origins of organizational culture, most scholars look to an organization's history. As Carl Builder explains, recent and historical experience is key to understanding the origins of organizational personality.

> Like all individuals and durable groups, the military services have acquired personalities of their own that are shaped by their experiences and that, in turn shape their behavior. And like individuals, the service personalities are likely to be significantly marked by the circumstances attending their early formation and their most recent traumas.[19]

That early experiences have a disproportionately formative influence on the personality and behavior of an institution (or a person) resonates in learning theory as well.[20] Moreover, as John Nagl observes, "organizational culture also plays a critical role in determining how effectively organizations can learn from their own experiences."[21] Thus, an organization's history affects the development of the organization's personality, which in turn affects the ability of the organization to learn from new experience. This iterative relationship between experience, culture, and learning suggests that culture can be an incredibly determinate factor in the behavior of an organization. Accordingly, for a number of students of military performance in MOOTW, organizational culture is the key to understanding success or failure in new operating environments.

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17. Theodore G. Stroup, Jr., "Leadership and Organizational Culture: Actions Speak Louder than Words," *Military Review* 171, no. 1 (1996).

18. Ibid.

19. Builder, *The Masks of War.*

20. Robert Jervis, *Perception and Misperception in International Politics* (Princeton: Princeton University Press, 1976); Daniel H. Kim, "The Link between Individual and Organizational Learning," *Sloan Management Review* 35, no. 1 (1993); D. A. Kolb, *Experiential Learning* (Englewood Cliffs, NJ: Prentice-Hall, 1984).

21. Nagl, *Counterinsurgency Lessons from Malaya and Vietnam,* 11.

Integrated Theories of Military Change

Most scholars take an integrated approach to explaining military change. Modern literature on military innovation focuses on either external or internal sources of military innovation and borrows from the theories and perspectives outlined above. In combining many of these approaches, scholars also frequently highlight the importance of organizational culture and civil-military relations in promoting or preventing innovation. A common theme in this literature is how uncommon or difficult it is for militaries to change. Defining the conditions under which barriers to change may or may not be overcome is the goal of such research.

The first category of military change literature consists of scholars who posit that militaries need external actors to force innovation.[22] Explanations for this failure to adapt include organizational or bureaucratic barriers,[23] cultural factors,[24] a predilection for offensively oriented doctrine,[25] or some combination of these elements. In this literature, the civil-military dynamic is critical, as civilian leaders must interact with their military counterparts to drive the organization to innovate.[26]

The scholar most commonly attributed to this "civilian-intervention" approach is Barry Posen. In *The Sources of Military Doctrine,* Posen demonstrates that militaries resist change or otherwise cling to offensive doctrines in accordance with organization theory. Although military leaders may consider adjusting their doctrines "when threats become sufficiently grave," it is mostly civilians who, in accordance to balance of power theory, identify the need for new military doctrine and intervene to force change on the military. Their success in pushing change from outside the military depends on the delicate nature of civil-military relations.[27] In the United States, efforts by civilians to reorient or transform the military (i.e., President Kennedy's push for counterinsurgency doctrine during the Vietnam conflict or President Clinton's push for interagency coordination for peace operations) have often been uphill battles. Theories developed by scholars such as Deborah Avant and Stephen Rosen

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22. Snyder, *Ideology of the Offensive.*
23. Allison, *Essence of Decision;* Halperin, *Bureaucratic Politics and Foreign Policy.*
24. Builder, *The Masks of War;* Kier, *Imagining War;* Rosen, *Winning the Next War.*
25. Rosen, *Winning the Next War;* Snyder, *Ideology of the Offensive;* Van Evera, "The Cult of the Offensive and the Origins of the First World War."
26. Posen, *The Sources of Military Doctrine;* Paul R. Viotti, "Introduction: Military Doctrine," in *Comparative Defense Policy,* ed. Frank B. Horton III, Anthony C. Rogerson, and Edward L. Warner III (Baltimore: Johns Hopkins University Press, 1974).
27. Posen, *The Sources of Military Doctrine.*

provide different explanations for why militaries are not always responsive to such civilian efforts.[28]

Stephen Rosen suggests that career structures within military organizations reward officers who follow traditional paths. Armor officers, for example, get promoted for mastering armor doctrine and being good tank drivers, not for promoting new warfighting tactics that emphasize the benefits of light forces and smaller vehicles in urban terrain. A recent illustrative case is that of the officers who wrote the Army's manuals for peace operations in the 1990s. They claimed they spent time on the project even though they knew that it would "kill" their chances of getting promoted.[29] This supports Rosen's assertion that "maverick" officers who advocate change from within a conservative military organization often suffer professionally for their efforts.

Rosen focuses on military culture as the source of this resistance and claims that military leadership can drive change by changing the career incentives to reward young officers who operate outside the traditional systems.[30] Such an organizational climate would reward initiative and creativity but would also need to be more tolerant of mistakes.[31] In this case, change flows with the new generation and therefore occurs slowly. Deborah Avant agrees that career incentives are an important element, but she adds another layer to the analysis: the political system.

Avant, who examines both the internal elements of military organizations and the political systems in which they reside, challenges the concept that militaries are inherently resistant to change.[32] She notes that the British military adapted to the exigencies of the Boer War without civilian intervention, while the American Army failed to adapt during the Vietnam War—despite significant urging by civilian leadership to change course. She claims that the American system of split civilian control over the military (congressional and executive) enabled the U.S. Army to resist intervention, while its culture reinforced a distaste for

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28. Rosen, *Winning the Next War.*

29. Colonel George Oliver, U.S. Army, former Director, Army Peacekeeping Institute, numerous personal interviews by author, October 2003 to June 2005, Washington, DC.

30. Civilians can also intervene in the career structure to drive change. A modern illustration of this is the 1986 Goldwater-Nichols legislation. By tying career progression to having served in a "joint" assignment (i.e., an Army officer spending a few years with the Navy) the U.S. Congress was able to promote more integration, interoperability, and cultural understanding among the three services.

31. A common criticism in military circles (and other organizations) is that a "zero-defect" mentality creates a risk averse culture where creativity is stymied.

32. Deborah Avant, *Political Institutions and Military Change: Lessons from Peripheral Wars* (Ithaca: Cornell University Press, 1994); Avant, "The Institutional Sources of Military Doctrine."

counterinsurgency. In contrast, the British system provided more uni-form military oversight, which had enabled the military to develop in a culture that was more flexible and less reactive. Thus, Avant proposes that different government structures create different patterns of civilian oversight that, in turn and over time, influence military culture and give militaries varying degrees of flexibility or bias toward change.

Others join Rosen and Avant in focusing on internal organizational, cultural, or structural elements as the sources of or impediments to change. Kimberly Zisk suggests that militaries are concerned with sur-vival and will respond on their own to "threats"—both on the battlefield and on the domestic political front. She credits militaries for reacting on their own to changes in the environment of threat to national security (as defined by changes in the enemy military's doctrine), but she also claims that militaries are even more concerned with domestic political challenges at home. Reflecting theories of bureaucratic politics, she claims that militaries will respond more vigorously to threats to their budgets or resources than to external cues to change their warfighting doctrines.[33]

With respect to culture, Elizabeth Kier takes a slightly different ap-proach. Whereas Rosen focuses on the culturally driven obedience to a conservative career structure as the primary impediment to military change, Kier notes that militaries are also bound by constraints set by civilian leaders—constraints that are internalized into the military cul-ture itself. Like Avant, her approach attempts to bridge the gap between structural theories for military doctrine and cultural ones. Civilian lead-ers create the structures in which militaries operate, and military leaders learn to operate within those structural constraints. Her emphasis on or-ganizational survival and military culture means that her study chal-lenges those who locate the source of military resistance on an inherent military preference for offensive doctrines: "It may not be the offensive aspect of their doctrine that the military seeks to safeguard, but instead some part of its traditional way of doing things whose preservation is, for these officers, integral to the successful execution of their mission."[34]

In sum, the literature on military change outlined above sheds light

33. Kimberly Marten Zisk, *Engaging the Enemy: Organization Theory and Soviet Military In-novation 1955–1991* (Princeton: Princeton University Press, 1993).

34. Kier's work responds to a popular debate among scholars over the source of of-fensive versus defensive doctrines (strategies). Although such work was focused on ex-plaining the character of and derivation of doctrine, the literature contributed to theories of military change and civil-military relations in general. Van Evera, "The Cult of the Of-fensive and the Origins of the First World War"; Posen, *The Sources of Military Doctrine;* Sny-der, *Ideology of the Offensive.*

on the difficult process of military innovation. Most agree that change does not occur easily or automatically. Militaries often tie their cultural identities to specific roles or have career structures that fail to reward (or even punish) new ways of thinking. Militaries that do change from within are described as having more "flexible" cultures that somehow promote innovative thinking and then manage to translate these new ideas into doctrine. Although this literature provides a useful framework for initial inquiry, questions remain unanswered. How exactly do new ideas take hold? How are they transferred to the organization as a whole? In short, what are the processes by which militaries learn and change? What, if anything, can be done to enhance the ability of a military organization to learn from its experience and change its doctrine and practices? For this, we turn to theories of organizational learning.

Military Change as Organizational Learning

The growing body of organizational learning theory provides a framework for understanding how militaries learn and adapt.[35] For this research, Richard Downie's definition provides a reference point for understanding organizational learning: it is "a process by which an organization (such as the U.S. Army) uses new knowledge or understanding gained from its experience or study to adjust institutional norms, doctrine, and procedures in ways designed to minimize previous gaps in performance and maximize future successes."[36] A normal process for organizational learning requires that learning begin on the individual level. Individuals within the organization first recognize, either through experience or personal study, the need for change. They then act within the norms and procedures of that organization to stimulate organizational change. This process changes the "institutional memory" of the organization. The new institutional memory is vulnerable to the same process given new learning by new individuals. Institutional learning theorists have different models to describe this loop, varying in complexity, critical factors, and numbers of steps.

According to organizational learning theory, some organizations may

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35. Jervis, *Perception and Misperception in International Politics;* Kim, "The Link between Individual and Organizational Learning"; James H. Lebovic, "How Organizations Learn: U.S. Government Estimates of Foreign Military Spending," *American Journal of Political Science* 39, no. 4 (1995); James G. March and Johan P. Olsen, "Organizational Learning and the Ambiguity of the Past," in *Ambiguity and Choice in Organizations,* ed. James G. March and Johan P. Olsen (Bergen: Universitets forlaget, 1979); Peter M. Senge, *The Fifth Discipline: The Art and Practice of the Learning Organization* (New York: Currency Doubleday, 1990).

36. Downie, *Learning from Conflict.*

be more culturally predisposed to collect information and learn from experience than others. While some organizations actively promote the collection and dissemination of new information, others rigidly adhere to standard operating procedures and ignore new information—especially if that information challenges existing paradigms and norms. For example, John Nagl claims that in contrast to the rigid system of the U.S. Army in Vietnam, the "British Army was in fact a 'learning institution' during the [Malayan campaign] as a result of its organizational culture."[37] His study places a premium on the influence of organizational culture as the key element in an organization's capacity to learn.

Although organizational learning theorists also focus on the role of culture, much of the work in this field is focused on creating institutions, initiating processes, and making structural changes to an organization in order to actively promote learning. In fact, some organizational learning theorists, such as Peter Senge, author of the best-selling book *The Fifth Discipline,* advise organizations on how they can become "learning institutions."[38] This would suggest that there are concrete actions that can be taken by an organization's leadership to overcome cultural resistance to organizational learning. It suggests that structures and processes matter as much as, if not more than, culture.

This research tests this assumption by paying particular attention to how organizational changes in structure and processes over time, such as the creation of formal military schools and the introduction of war-planning processes, influenced the learning systems of the U.S. military. For example, how did the fledgling structure of the U.S. Army on the frontier compare to that of the U.S. Marine Corps in the Banana Wars and the U.S. Army in the interwar years in its formal ability to gather, create, and disseminate information? Likewise, how much does the sheer size of an institution affect its ability to disseminate information, learn, and adapt?

In the case of the U.S. Marine Corps, General James Mattis, former commander of the First Marine Division in Iraq, claimed, "I learned more about life in this profession at happy hours and reading the Gazette than I did in all my training and PME [professional military education]."[39] This statement reflects the cultural disposition (and the widely accepted reputation) of his organization to informally share knowledge. Indeed, this is a common theme in the Marine Corps, which

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37. Nagl, *Counterinsurgency Lessons from Malaya and Vietnam,* 6.
38. Senge, *The Fifth Discipline.*
39. Lieutenant General James Mattis, USMC, personal interview by author, June 15, 2005.

has traditionally been more reluctant to record and rely on formal doctrine compared to the Army. It is possible that the Marine Corps, being significantly smaller than the Army, has historically had a simpler time transferring institutional memory by such informal means and has thus not had to develop formal systems to promote organizational learning. The question is, are the systems and traditions that the Corps developed over time still reliable now that the institution has grown? The U.S. Marine Corps is the smallest U.S. military service, yet today, at 175,000 members (and scheduled to grow more in the 2010 budget), it is still significantly larger than the British Army of 105,000.

For the U.S. Army, as we will see, a number of formal procedures for war planning that were adopted in the interwar years greatly affected the organization's learning capacity. By mandating historical review in order to generate war plans, these procedures actively promoted a reflective learning process resulting in increased attention being paid to the problems of stability and reconstruction (what was then referred to as "military governance"). Even more profound were the organizational changes enacted following the Vietnam War. Leaders in the post-Vietnam generation actively set out to change the learning culture of the Army in order to overcome the pathologies of the Vietnam War.[40] These structural and procedural changes, such as the new high-tech combat training centers, the process of after-action review, and the formal Center for Army Lessons Learned, consciously applied concepts from organizational learning theory in a deliberate attempt to gather information "from the field."[41] According to former Army chief of staff General Gordon Sullivan, the Army leadership consciously sought to create a "learning organization," even seeking the advice of learning theorists such as Peter Senge.[42]

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40. The failures of the U.S. military to adapt and the ongoing debates over the Vietnam War are outlined in numerous studies. Avant, *Political Institutions and Military Change;* Robert M. Cassidy, "Why Great Powers Fight Small Wars Badly," *Military Review* (2000); Eliot Cohen, "Constraints on America's Conduct of Small Wars," in *Conventional Forces and American Defense Policy,* ed. Steven E. Miller (Princeton: Princeton University Press, 1986); Conrad Crane, "Avoiding Vietnam: The U.S. Army's Response to Defeat in Southeast Asia," *Strategic Studies Institute* (2002); Downie, *Learning from Conflict;* Andrew F. Krepinevich, Jr., *The Army in Vietnam* (Baltimore: Johns Hopkins University Press, 1986); Nagl, *Counterinsurgency Lessons from Malaya and Vietnam.*

41. James Kitfield, *Prodigal Soldiers: How the Generation of Officers Born of Vietnam Revolutionized the American Style of War* (New York: Brassey's, 1997); Gordon Sullivan and Michael V. Harper, *Hope Is Not a Method: What Business Leaders Can Learn from America's Army* (New York: Random House, 1996).

42. General Gordon Sullivan, USA, personal interview by author, February 25, 2005, Arlington, VA.

The question is, how did these structural changes interact with the other very real cultural, organizational, and bureaucratic political forces highlighted by military innovation theorists? How did they operate with respect to MOOTW? The remainder of this chapter provides a foundation for examining these questions by outlining the basic concepts and terms used in organizational learning theory.

Organizational Learning Theory Defined

Organizational learning theory builds on learning theory applied at the individual level but seeks to describe the processes by which learning occurs within and throughout an organization. What distinguishes organizational learning from learning by individuals—or even groups of individuals within an organization—is that learning acquired through this process remains even when personnel change. Thus, to determine if organizational learning has occurred, we must analyze not only the processes in place during an event for contemporaneous learning or adaptation but the evidence of learning remaining after the event. For the latter, we look for evidence that tactics, techniques, and procedures learned in action at one point in time are applied at the start of action at a later date. Organizational learning concepts—such as the learning cycle; informal, experiential, and generational learning; informal networks; and communities of practice—provide a framework for examining the learning systems of military organizations.

The Learning Cycle

In the organizational learning cycle, organizational learning takes place when knowledge is acquired by individuals—at any level—and then disseminated to the organization as a whole. There are many different ways theorists have to describe this loop. As figure 2 shows, in its most basic form, the cycle contains three major points: scan—interpret—act.[43] A "learning organization" will have formal processes to promote each of these steps. *Scanning* involves the focused effort to capture lessons from action. Ideally, an organization would have "collection" processes in place that target opportunities to collect data and a method for sorting

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43. Lloyd Baird, John C. Henderson, and Stephanie Watts, "Learning from Action: An Analysis of the Center for Army Lessons Learned (CALL)," *Human Resource Management* 36, no. 4 (Winter 1997); R. L. Daft and K. E. Weick, "Toward a Model of Organizations as Interpretation Systems," *Academy of Management Review* 9, no. 2 (1984).
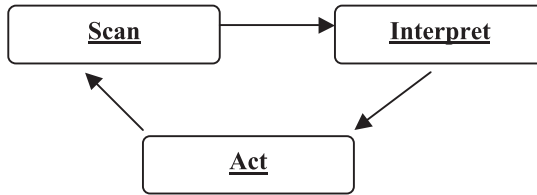
Fig. 2. Simple learning cycle. (Data from Lloyd Baird, John C. Henderson, and Stephanie Watts, "Learning from Action: An Analysis of the Center for Army Lessons Learned (CALL)," *Human Resource Management* 36, no. 4 [Winter 1997]: 385–95.)

and managing the information. To *interpret* is to make sense of the information, to track themes and trends over time, to identify cause and effect, and to synthesize and codify the information in a format that can be disseminated. Finally, in the *act* phase, the new knowledge is actively disseminated, and the lessons are applied in action at the new opportunity. In a learning organization, "all three phases happen in an ever-repeating cycle . . . Action leads to further scanning, interpreting, and acting."[44]

A critical element of the learning process is the elimination of ambiguity in order for the cycle to continue.[45] There must be clarity and consensus regarding the events that occurred (what happened or what is happening), what those events mean (why this matters to our organization), and what the proper course of action should be (what should be done about it).[46] Because individuals, for a variety of reasons, interpret events in different ways, the potential for ambiguity and disagreement throughout this cycle is acute.

Although organizational learning cycles have no true beginning or end, the organizational learning process depends on learning that occurs at the individual level. According to Peter Senge, "organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs."[47] Thus, in order to understand how individuals are able to reach consensus within groups and how individual and group learning influences organizational learning, it is important to review the cognitive learning processes at the individual level and group levels.

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44. Baird, Henderson, and Watts, "Learning from Action."
45. March, "Organizational Learning and the Ambiguity of the Past."
46. Downie, *Learning from Conflict;* March, "Organizational Learning and the Ambiguity of the Past"; Sullivan and Harper, *Hope Is Not a Method.*
47. Senge, *The Fifth Discipline,* 139.

Experiential Learning

Individuals can learn either formally (through institutionally provided education and training) or informally (through self-study). In each of these cases, learning can occur experientially (through "hands-on" activities) as well as through intellectual reflection (reading, listening, thinking). Informal learning that occurs through experience is especially important for military change—particularly unplanned events and surprises. As Clausewitz suggested, when troops encounter phenomena in the field for which they have not been trained, they have an opportunity to learn through personal experience. How well individuals learn at that point is contingent on a number of factors, such as their previous knowledge, training, and education—all of which may help or hinder their ability to make sense of an unfamiliar situation and adapt. Additionally, we can expect different people to interpret events differently— and often incorrectly—depending on their previously held beliefs, assumptions, and worldviews.[48]

Generational Learning

The role of experience and worldviews resonates in theories of "generational change." In this model, experiential learning at a younger age is considered more critical to the formulation of individual worldviews. This learning is facilitated by the sharing of knowledge among the members of one's generation and has a delayed impact on the behavior of the organization. As Jack Levy explains, "the models' key hypothesis is that the shared experiences (and interpretations of them) of people at certain critical stages of their personal, intellectual, or political development have a powerful and enduring impact on their beliefs about the world, so that different generations learn different lessons."[49] Once a new generation whose early professional experience differed greatly from the one before it gains decision-making authority in an organization, we might expect new policies to be applied and organizational change to occur. For example, the many organizational and doctrinal

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48. Graham Allison, *Essence of Decision: Explaining the Cuban Missile Crisis* (Boston: Little, Brown, 1971); Jervis, *Perception and Misperception in International Politics;* Kolb, *Experiential Learning;* Barbara Leavitt and James G. March, "Organizational Learning," *Annual Review of Sociology* 14 (1988). Likewise, political psychology research into foreign policy decision making suggests that worldview "lenses" or closely held beliefs influence leaders' decisions more than empirical observation of events.

49. Jack S. Levy, "Learning and Foreign Policy: Sweeping a Conceptual Minefield," *International Organization* 48, no. 2 (1994): 290.

changes that occurred following the Vietnam War were, for many analysts and military leaders, a direct result of a new generation, with shared experiences, taking control.[50]

In generational learning, the critical link is how individuals at similar points in their personal development *collectively* make sense of their experience and whether or not they are subsequently able to apply their lessons on an organizational level. As discussed below, "informal networks" and "communities of practice" (CoPs) can facilitate collective learning and help mitigate the ambiguity discussed above, but without the correct structure and processes in place, such learning will not be sufficient to ensure organizational change.

Informal Networks and Communities of Practice

Both "informal networks" and "communities of practice" are comprised of individuals who voluntarily participate in order to share information. In an informal network, individuals learn from each other's experiences by sharing problems, ideas, and solutions. For example, a group of runners might share diet and training tips to improve their workouts and individual race results. Communities of practice differ from informal networks in that CoP members are linked by a greater sense of culture, identity, and purpose. They are more than a group of individuals hoping to learn from each other to improve their individual performance. They are a community of experts committed to improving the practice within their profession.

Members of CoPs share new ideas and identify "best practices" for their professions. They communicate in similar ways as informal networks but might also meet at formal conferences and publish papers focused on improving the profession. Both informal networks and CoPs facilitate the spread of information within an organization, but CoPs can have a more targeted role in the organizational learning cycle. Organizational learning can be enhanced by informal networks and CoPs by helping individuals make shared sense of their experience.

In the organizational learning cycle, the transfer of individual learning to collective learning requires that a consensus be reached among members of the organization regarding the best course of action. The collective sharing of information through informal networks and CoPs facilitates this process but does not ensure that a consensus will be reached. If members of the group do not agree, organizational learning

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50. Kitfield, *Prodigal Soldiers;* Sullivan and Harper, *Hope Is Not a Method.*

can be blocked. Such disagreement is even more likely to occur when changes are proposed that challenge the "governing variables" of the institution.

The Role of Leadership

The fact that organizational learning theory has become popular among corporate leaders reflects the critical role that leaders play in preventing, promoting, or permitting learning to occur in their organization. As we will see, with a good understanding of learning theory (or even simple intuition about what might work), savvy leaders can create structures and processes within their organizations that are expressly designed to facilitate organizational learning. Such leaders create systems that actively capture lessons from experience, allow the cross-fertilization of new ideas, and promote the dissemination of new knowledge. Changes made by Army leadership in the decades following the Vietnam War to the U.S. Army's structures and processes for collecting and disseminating new knowledge through experience are presented in this study as an example of such a leader-directed transformation.

On the other hand, leaders can also stymie organizational learning by intervening in existing learning processes or by creating processes that hinder bottom-up communication or fail to capture and disseminate new knowledge. Thus, leaders can fundamentally alter the learning culture of an organization through the good or bad design of processes and systems; and they can also stymie existing processes through targeted actions at critical points in the system that block learning processes.

In sum, organizational learning is a complex cycle involving a number of interconnected processes. Organizations that fail to learn are often stymied by factors such as cognitive beliefs by powerful leaders, organizational incentive structures that discourage creativity, or structural processes that block the transmission of knowledge. These factors reflect similar themes in organization theory and bureaucratic politics, on which much of the military innovation literature is based. While individual learning is necessary, it is not sufficient for organizational learning to occur. As one author claimed, organizations must possess "the right culture, the knowledge itself, and access to the knowledge" in order to learn.[51] The ways in which organizational culture, formal structures, and organizational processes influence military learning—and are iteratively influenced by that learning—are examined in the chapters that follow.

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51. Sullivan and Harper, *Hope Is Not a Method,* 36.