



Adaptation and innovation are particularly relevant to today's Army given the challenges faced in recent wars and the uncertainty of future armed conflict. Our ability to meet the operational demands posed by a variety of enemies and their capabilities and countermeasures will be part of our nation's tactical, operational, and strategic landscape.

As we look forward to an uncertain future, we must adapt, innovate, and institutionalize both past experiences and future opportunities to better prepare us for the *next* war in whatever context that conflict will emerge. As Sir Michael Howard observed:

“Steer between the danger of repeating the errors of the past because he is ignorant that they have been made, and the danger of remaining bound by theories deduced from past history although changes in conditions have rendered these theories obsolete.”

In other words, war audits how well military institutions and states prepare during periods of relative peace, and how their force planning processes succeed in capturing emerging technologies and innovative new methods. Armed conflict also audits how responsive commanders and institutional leaders are to recognize opportunities or challenges that emerge from the violent interactions against a thinking opponent who demonstrates the capacity to generate surprise by employing unanticipated tactics or technology. As we look

to recent conflicts and potential asymmetric adversaries, the need to create a force capable of both innovation and adaptation is imperative.

What's the Difference Between Adaptation and Innovation?

In his book, [*Military Adaptation in War*](#), Williamson Murray notes that the difference between adaptation and innovation is the environment in which they occur. Adaptation occurs during conflict when “there is little time, but there is feedback of combat results, which can suggest necessary adaptations.” Adaptation is the act of adjusting one’s actions, assumptions, or predictions about the operational environment in a way that alters interaction with that environment either in the immediate timeframe or in preparation for future interaction.

Innovation, on the other hand, occurs during periods of peace and is characterized by having “time available to think through problems.” Innovation is the act of taking adaptations and institutionalizing them within an organization so that the next leader or unit will be able to succeed in a similar fashion. Based on Murray’s distinction, if your company improves its performance next week because of experiences it had this week, it has adapted. But, if the company that replaces you in an area of operation next year is able to incorporate the adaptations your company has learned because of its home-station training programs, that is innovation.

An Approach to the Study of this Topic:

When approaching the study of this topic, review portions of Army history during which the Army adapted in combat and innovated during the interwar periods. Examine how these adaptations and innovations came about: At what level did they occur? How long did it take for the unit to adapt? In what context did the adaptation occur? What leadership roadblocks did they have to overcome? Also, examine adaptations and innovations that failed and review the causes. Finally, look at yourself and your unit and use the discussion and reflection questions to determine if you are creating an environment that fosters adaptation, flexibility of thought, and innovation.

The Military Reading List:

[Military Adaptation in War: With Fear of Change by Williamson Murray](#)

Military Adaptation in War addresses one of the most persistent, yet rarely examined, problems that military organizations confront: namely, the problem of how to adapt under

the trying, terrifying conditions of war. This work builds on the volume that Professor Williamson Murray edited with Allan Millett on military innovation (a quite different problem, though similar in some respects). In Clausewitzian terms, war is a contest, an interactive duel, which is of indeterminate length and presents a series of intractable problems at every level, from policy and strategy down to the tactical. Moreover, the fact that the enemy is adapting at the same time presents military organizations with an ever-changing set of conundrums that offer up no easy solutions.

[Military Innovation in the Interwar Period by Williamson Murray and Allan R. Millett](#)

This study of major military innovations in the 1920s and 1930s explores differences in innovating exploitation by the seven major military powers. This volume of comparative essays investigates how and why innovation occurred or did not occur, and explains much of the strategic and operative performance of the Axis and Allies in World War II.

[The Dynamics of Doctrine by Timothy Lupher](#)

The “Dynamics of Doctrine” describes how the German Army of the First World War changed from a force of battalions, whose doctrine was based on a profound mistrust of the common soldier, to an army of “fire” teams where tactical judgment was expected of the most junior rifleman. Unfortunately for Germany, the army did not change fast enough. The damage wrought by the shoulder-to-shoulder assaults of 1914 and the inflexible defensive tactics of 1914 through 1916 could not be undone by the stormtroop tactics and mobile defense of 1917 and 1918. The result was catastrophic defeat. The lessons are clear: encourage innovation; learn from the battlefield; don’t wait for a new manual to change the way you fight.

[Learning under Fire: The 112th Cavalry Regiment in World War II by Colonel James Powell](#)

James S. Powell thoroughly mines primary documents and buttresses his story with pertinent secondary accounts as he explores in detail the ways in which this military unit adapted to the changing demands of its tactical and strategic environment. He demonstrates that this learning was not simply a matter of steadily building on experience and honing relevant skills. It also required discovering shortcomings and promptly taking action to improve—often while in direct contact with the enemy.

[Strange Defeat by Marc Bloch](#)

Bloch takes a close look at the military failures he witnessed, examining why France was

unable to respond to attack quickly and effectively. He gives a personal account of the battle of France, followed by a biting analysis of the generation between the wars. His harsh conclusion is that the immediate cause of the disaster was the utter incompetence of the High Command, but his analysis ranges broadly, appraising all the factors, social as well as military, which since 1870 had undermined French national solidarity

[Pyrrhic Victory: French Strategy and Operations in the Great War by Robert A. Doughty](#)

French leaders, favoring a multi-front strategy, believed the Allies could maintain pressure on several fronts around the periphery of the German, Austrian, and Ottoman empires and eventually break the enemy's defenses. But France did not have sufficient resources to push the Germans back from the Western Front and attack elsewhere. The offensives they launched proved costly, and their tactical and operational methods ranged from remarkably effective to disastrously ineffective. Using extensive archival research, Doughty explains why France pursued a multi-front strategy and why it launched numerous operations as part of that strategy. He also casts new light on France's efforts to develop successful weapons and methods and the attempts to use them in operations.

[Fast Tanks and Heavy Bombers: Innovation in the U.S. Army, 1917-1945 by David Johnson](#)

Johnson examines the U.S. Army's innovations for both armor and aviation between the world wars, arguing that the tank became a captive of the conservative infantry and cavalry branches, while the airplane's development was channeled by air power insurgents bent on creating an independent air force. He maintains that as a consequence, the tank's potential was hindered by the traditional arms, while air power advocates focused mainly on proving the decisiveness of strategic bombing, neglecting the mission of tactical support for ground troops. Minimal interaction between ground and air officers resulted in insufficient cooperation between armored forces and air forces

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