Joint Operating Environment 2040

by Mr. Jeffrey Becker

I'd rather have decent answers to the right question than great answers to irrelevant questions.

—Andrew W. Marshall
American foreign policy strategist

Introduction

What is it about strategic and military change that the U.S. military should pay attention to? What is important, and what is merely interesting? The joint operating environment development effort addresses these difficult questions. Its objective is to collect, organize, and evaluate the world's best deep futures thinking and make it accessible and usable to concept developers and force designers across the joint force, as well as allied and partner militaries. This effort consists of both a process and a document—currently, the *Joint Operating Environment 2040,* also known as *JOE 2040.*

Background

This effort to build a common, joint-level view of the future operating environment has been ongoing for more than 15 years and has led to seven versions of the study. The U.S. Joint Forces Command, while under the command of Gen. James N. Mattis, originally wrote the joint operating environment document. Later, the Joint Staff J-7 (Directorate for Joint Force Development) took the lead to revise and publish it. The effort has always been highly collaborative. It has included the contributions of Service futures organizations, combatant commands, other government agencies, and international partners, as well as world-class experts, scientists, and other thinkers, working together to build an understanding of military change and its implications for joint warfare.

> The Joint Operating Environment is intended to inform Future Joint Force Development throughout the Department of Defense. It provides a perspective on future trends, shocks, contexts, and implications for future joint force commanders and other leaders and professionals in the national security field.[1]

Joint Operating Environment 2040 was published in January 2020. It is the U.S. joint forces' most recent perspective on the future operating environment and the implications that environment has for joint warfighting over the next two decades. This current edition differs from earlier versions in that its development resulted from a close and sustained partnership led by the Joint Staff J-7, Defense Intelligence Agency (DIA), and Joint Staff J-2. Service futures organizations strongly supported it, including the U.S. Army Training and Doctrine Command's Mad Scientist Program and Army Futures Command. It is also the first classified edition of the document.

The basis of the new joint operating environment is an "intelligence-driven, threat informed" view of the deep future. This approach reflects a new urgency to understand and address the growing threat of adapting great and regional power adversaries as described in the most recent National Defense Strategy and to arrest—as then-Chairman of the Joint Chiefs of Staff Gen. Joseph F. Dunford Jr. described it—the erosion of our qualitative and quantitative military advantages.[2] The first step in correcting our trajectory was to fully understand the problem from a joint force perspective. *Joint Operating Environment 2040* dives deeply into the changing character of warfare, our adversaries' approach to addressing this change through novel ways of war, and the implications of both areas for the joint force.

Changing Character of Warfare

Joint Operating Environment 2040 looks just beyond the horizon of the current National Defense Strategy and is anchored in the *Joint Strategic Assessment,* DIA's biennial baseline assessment of the mid- to long-term strategic environment. The joint operating environment takes the strategic conditions set out in the *Joint Strategic Assessment* and describes how these large-scale geopolitical changes might change the character of war. Several important trends are clear, from new and powerful great powers to newly empowered global non-state actors, each increasing their reach and ambition. Both will stress the international system. Instead of one clear military rival with competitive military capabilities or a decentralized collection of smaller-scale security challenges, the joint force will be confronted by a combination of peer-level military rivals, a wide variety of strategically significant non-state actors, narrowing technological advantages, and an increasingly crowded yet expansive and ill-defined battlespace.

The implications of these changes are that the joint force will see faster, compounding technological changes that will accelerate change in military capabilities. In some cases, the joint force will see a separation between military forces as the newest and most advanced units outclass 20th century military forces. Acceleration and separation will encourage increasing variation among military forces as they begin to experiment with new capabilities and combinations of capabilities to develop war-winning military advantages.

Evolving Adversary Ways of War

Potential competitors and adversaries are evolving and adapting their own armed forces to keep pace with this changing character of warfare. *Joint Operating Environment 2040* describes how several countries and violent non-state actors are reshaping their armed forces and developing a novel operational concept to address their goals and objectives. Not surprisingly, the United States is focusing on long-term strategic competition with great power competitors. The most recent unclassified National Defense Strategy summary makes several things clear:

✦ China is modernizing its forces to coerce and reorder the Indo-Pacific region.

✦ Russia is expanding and modernizing its military forces.

✦ Rogue regimes such as Iran and North Korea are presenting new military and strategic challenges.

✦ Violent extremist organizations remain an enduring threat to the global order.[3]

The National Defense Strategy focuses the Department of Defense on the goals and objectives that China, Russia, and others are pursuing. *Joint Operating Environment 2040* focuses on how these competitors and adversaries might shape and operate the military instrument to pursue those goals. These evolving ways of war result in a number of pressing challenges for how the joint force envisions fighting, designing, and experimenting with new operational approaches that are intended to offset, or in some cases outpace, the capabilities of the joint force. In most cases, we see adversaries striving to improve their defenses in depth. We see a growing emphasis on operations that emphasize competition below the threshold at which the United States typically employs force. Finally, adversary operations often

Graphic by the Joint Futures and Concepts Directorate

We require a new approach to adaptation and innovation based on joint and coalition campaign outcomes.

emphasize the lethality and decisiveness of the opening stages of a conflict, increasing the risk of unexpected and unpredictable opening blows.

Implications for the Joint Force

The changing character of warfare, along with new and potentially disruptive adversary approaches to conflict, will increase the national security risk if the joint force fails to address these conditions and evolve. In light of these changes, the joint force will likely face challenges in the following ways:

✦ **Contested globally.** The joint force will face efforts to slow or halt its movement around the world, eroding its ability to project power in support of worldwide commitments.

✦ **Fractured and disintegrated.** Joint force linkages and connections will be attacked, resulting in incoherent, disjointed, and ultimately ineffective operations.

✦ **Outflanked in an expanded competitive space.** The joint force could be irrelevant to adversary operations focused on the coercion and disruption of opposing societies through information confrontation and other forms of pressure and influence.

Using *Joint Operating Environment 2040*

Joint Operating Environment 2040 represents the U.S. joint forces' commonly developed understanding of the future operating environment over the next two decades. This is an intelligence-driven view of the future operating environment and the implications of change. Close collaboration between the Joint Staff and DIA ensures that intelligence analysis drives our understanding of the military implications of strategic and technological change. Moreover, it is a source for problem sets that future joint and Service concepts are called upon to solve for the Nation.

Joint Operating Environment 2040 was written in the spirit of Andrew Marshall, dean of defense futurists, who noted, "accurate diagnosis is the best route to strategic prescription."[4] *Joint Operating Environment 2040* strives to do this by illustrating new future global realities and adversary ways of war in order to assist force development and design across the Department of Defense. The challenges

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Andrew Marshall, Founder of the Department of Defense's "Internal Think-Tank"

After studying economics at the University of Chicago, Andrew W. Marshall joined RAND [Corporation] in 1949 when the nonprofit research organization based in Santa Monica, California, was barely a year old. During his 23-year affiliation with RAND, he researched Soviet military programs, nuclear targeting, organizational behavior theory and strategic-planning, among other concepts.

"Andrew Marshall was one of the nation's most respected and far-sighted defense experts," said Michael D. Rich, president and CEO of RAND. "He was a gifted futurist and strategist who had mentored generations of researchers, both at RAND and beyond. His influence will be felt for years to come."

Marshall was the founding director of the Office of Net Assessment, which is referred to as the Department of Defense's "internal think-tank." It provides the secretary of defense with assessments of the military balance in major geographic theaters, with an emphasis on long-term trends, asymmetries, and opportunities to improve the future U.S. position in the continuing military-economic-political competition.[5]

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found here are a foundational reference for concept-driven, threat-informed capability development across the joint force, Services, and combatant commands. ✸

Epigraph

Andrew Krepinevich and Barry Watts, *The Last Warrior: Andrew Marshall and the Shaping of Modern American Defense Strategy* (New York: Basic Books, 2015), 1.

Endnotes

1. "Joint Operating Environment," Joint Chiefs of Staff website, accessed 14 October 2020, https://www.jcs.mil/Doctrine/Joint-Concepts/JOE/.

2. Ryan Browne and Barbara Starr, "Dunford: Military risks losing its competitive edge," CNN.com, June 13, 2017, https://www.cnn.com/2017/06/13/politics/dunford-trump-military-budget-senate/index.html.

3. Office of the Secretary of Defense, *Summary of the 2018 National Defense Strategy of The United States of America,* n.d., https://dod.defense.gov/Portals/1/Documents/pubs/2018-National-Defense-Strategy-Summary.pdf.

4. Krepinevich and Watts, *Last Warrior,* 91.

5. "Andrew Marshall, RAND Researcher Who Founded Department of Defense's 'Internal Think-Tank,' Dies at 97," RAND Corporation website, March 26, 2019, https://www.rand.org/news/press/2019/03/26.html.

Mr. Jeffrey Becker is a defense contractor for the Joint Futures and Concepts Directorate, which develops comprehensive views of the future operating environment and future concepts that address emerging and future joint operational challenges and capabilities.