

Croatian soldier assigned to Battle Group Poland presses remote trigger to Vulcan M-92 rocket launcher, firing barrage of missiles in support of Operation *Raider Thunder*, at Bemowo Piskie Training Area, Poland, February 6, 2019 (U.S. Army/Sarah Kirby)



The Importance of Joint Concepts for the Planner

By James L. Cook

The 2018 National Defense Strategy explains the importance of developing new operational concepts to “sharpen our competitive advantages and enhance our lethality” across the entire spectrum of conflict.¹ The strategy forces us to think beyond military modernization and order of battle to consider how the joint force

could be used in new and more effective ways in a future security environment that is “always in flux” and fraught with relentless change.² According to the Joint Staff, the purpose of joint concepts is to offer “alternative operational methods and related capabilities to maintain military advantage against current and emerging threats.”³ These concepts also propose necessary changes for the joint force to improve its ability to fight and win across all warfighting domains in these future conflicts.

David Fastabend argued that concepts provide innovative ideas intended, in part, to facilitate a debate that is the analytical “crucible” to identify flaws and generate consensus while adding a sense of clarity about the way ahead.⁴ Simply put, he saw value in the joint concept development process that offers a collaborative framework to balance creative thinking with reality. Conversely, Antulio Echevarria contends that operational concepts are no panacea and have downsides. His criticisms include a “paradox,” where the joint concept development

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Air Force fighter jet flies overhead as two Soldiers raise signal tower for Patriot missile system during training exercise at Kadena Air Base, Japan, November 22, 2017 (U.S. Army/Adan Cazarez)

process itself is often impeded by Service biases and the absence of sustained commitment from the relevant stakeholders, which, in turn, means opportunity costs in the form of exploring other ideas.⁵

These differing views raise questions about the continued relevancy of joint concepts—and whether this approach is the most effective way to integrate advanced technology and other emergent capabilities into the joint force. This article argues that joint concept development is a critical, if underappreciated, component of military strategic and operational planning that is not currently being maximized to address emerging challenges and opportunities. To substantiate this premise, the article discusses the evolution of joint concepts and their influence on military planning today; describes the Joint Staff process in which concepts drive the development of required capabilities; and recommends some specific areas where joint concept development should be targeted going forward.

A Brief History

The Armed Forces have a proven track record of using strategy to inform the development of joint concepts that “address gaps, shortfalls, or inadequacies in existing approaches and capabilities,” while presenting new ways to accomplish a joint operation, function, or activity.⁶ An often cited example is the 1982 AirLand Battle concept that was conceived in the post-Vietnam War era to fill what Douglas Skinner called a “doctrinal vacuum.”⁷ It offered a new way to think about implementing the Cold War strategy of “containment” and defeating the Soviet Union. The Army’s Training and Doctrine Command (TRADOC) Commander General Donn Starry was the driving force behind AirLand Battle, which applied some of the valuable lessons learned from the 1973 Arab-Israeli War and emphasized the importance of early offensive action and combined arms operations to winning the fight.

Army Field Manual (FM) 100-5, *Operations*, published in 1976, introduced the concept of active defense, which was designed to allow U.S. forces to fight outnumbered in Central Europe. Active defense emphasized the importance of winning the “first battle”⁸ to provide time for reconsolidation before the next echelon of Soviet forces came within range.⁹ David Johnson describes the dissatisfaction within the Army over the FM’s emphasis on the defense at the expense of the offense. Moreover, he explains how Starry found the doctrine inadequate to solve the problems he faced as a corps commander against the Warsaw Pact, especially at the operational level of war.¹⁰ The intra-Service doctrinal debates over the controversial active defense concept allowed for introspection and shaped the thinking of TRADOC and its schools.

The outcome of these intellectual efforts was the development of the AirLand Battle concept. FM 100-5 (1982) states

that AirLand Battle is based on “securing the initiative as early as possible and exercising it aggressively” by using synchronized air and ground operations, bold maneuver, and tempo to defeat a numerically superior Soviet military threat.¹¹ The concept also encouraged the employment of combined arms task forces (for example, armor and mechanized infantry units within the same formation) intended to create synergy and “pose a dilemma for the enemy.”¹² Moreover, AirLand Battle was designed to bridge the gap between military strategy and tactics by focusing on the operational level of war using an extended deep, close, and rear battlefield framework; its requirement of a level of “jointness” in its implementation would later be expanded and codified in the 1986 Goldwater-Nichols Department of Defense Reorganization Act.

AirLand Battle also provided an intellectual foundation for Army modernization efforts during the so-called Reagan defense buildup in the early 1980s that procured mobile, lethal weapons systems including the M1 Abrams main battle tank, the Bradley infantry fighting vehicle, the Multiple Launch Rocket System, the PATRIOT air and missile defense system, and the Apache attack helicopter.¹³ The capabilities provided by these advanced systems were critical for successful execution of the concept and validated by the U.S. military’s performance during Operation *Desert Storm* in 1991. It is noteworthy that all of these “legacy” weapons systems remain in service today.

Joint Vision (JV) 2010 offered a capstone “conceptual template” that explained how the Armed Forces would “channel the vitality and innovation of our people and leverage technological opportunities” to improve joint warfighting effectiveness in the post–Cold War era.¹⁴ JV 2010 was written to support President Bill Clinton’s 1996 National Security Strategy that required the military to field forces “sufficient, in concert with regional allies, to defeat aggression in two nearly simultaneous major regional conflicts.”¹⁵ To advance the National Security Strategy and promote U.S. national interests, the 1997 National

Military Strategy required the joint force to shape the international environment, respond to the full spectrum of crises, and prepare now for an uncertain future.¹⁶ To implement this strategic guidance, JV 2010 introduced four operational concepts—dominant maneuver, precision engagement, full-dimension protection, and focused logistics—enabled by information superiority to mass effects and achieve “full spectrum dominance” across the entire range of military operations.¹⁷

With the benefit of hindsight, JV 2010 was far from prescient in its assessment of the future security environment, and its shortcomings include an overreliance on technology and insufficient attention paid to operations other than war, such as counterterrorism and counterinsurgency operations. That said, the document was an effective medium to emphasize the importance of becoming “fully joint: institutionally, intellectually, and technically.”¹⁸ Moreover, JV 2010 influenced institutional changes for the Services and guided efforts to improve joint warfighting and the procurement of advanced capabilities including intelligence, command and control, precision-guided munitions, and air and missile defense, which are all critical to the joint force today. On balance, JV 2010 did a creditable job preparing military strategists and operational planners to confront the challenges of a new millennium, while deeply influencing and shaping today’s joint force.

Finally, in 2003, the Department of Defense (DOD) published the Joint Operations Concept (JOPSC) as a “unifying framework” to guide Secretary of Defense Donald Rumsfeld’s transformation efforts for the Armed Forces in a post-9/11 world where “adapting to surprise—adapting quickly and decisively—must . . . be a condition of planning.”¹⁹ He also articulated the requirement to “transform not only our Armed Forces but also the Defense Department that serves them—by encouraging a culture of creativity and intelligent risk-taking.”²⁰ The JOPSC echoed JV 2010’s emphasis on the importance of achieving full-spectrum dominance, but it advocated a

capabilities-based approach “that focuses more on how the United States can defeat a broad array of capabilities that an adversary may employ rather than who the adversaries are and where they may engage U.S. interests.”²¹ In both cases, the need for new concepts occurred in response to abrupt changes in the security environment following the collapse of the Soviet Union in 1991 and the terrorist attacks against the United States in 2001.

How Are Concepts Used Today?

JV 2010 and JOPSC were replaced by the 2012 Capstone Concept for Joint Operations (CCJO), which was intended to guide joint force development—after a decade of combat operations in Afghanistan, Iraq, and Syria—toward a more potentially dangerous world that includes the reemergence of “long-term strategic competition” with China and Russia and the proliferation of advanced technologies.²² The CCJO describes the Chairman of the Joint Chiefs of Staff’s vision for how the joint force of 2020 will “defend the Nation against a wide range of security challenges” consistent with defense strategic guidance provided in the 2012 *Sustaining U.S. Global Leadership: Priorities for 21st Century Defense*. The guidance required a “rebalance” from the post-9/11 “war on terror” waged against al Qaeda and other terror groups primarily on land toward the Asia-Pacific with its different set of challenges, including a largely maritime environment.²³

In practice, the capstone concept serves as a “bridge between strategic guidance and joint operating concepts in support of joint force development.”²⁴ For example, the 2012 CCJO introduced an approach called Globally Integrated Operations (GIO), which calls for elements of the joint force that are globally postured to “combine quickly with each other and mission partners to integrate capabilities fluidly across domains, echelons, geographic boundaries, and organizational affiliations.”²⁵ This approach aligns with the 2018 National Defense Strategy’s emphasis on “strategic flexibility” and “freedom of action” in its description of dynamic force

Table. DOD Capability Framework

Doctrine	While not authoritative, joint concepts should consider existing doctrine and propose clear alternatives to these “fundamental principles” that guide the employment of U.S. military forces where appropriate.
Organization	Joint concepts may require changes in the way the joint force organizes to accomplish assigned missions. This may include creating new—or modifying extant—organizations and force structure.
Training	While joint doctrine is the basis for joint training, some joint concepts may require adopting new and innovative approaches to training exercises and other events across the full range of joint functions or missions.
Materiel	As described earlier, joint concepts propose capabilities to improve the ability of the joint force to address future security challenges. Once approved, the recommended materiel capabilities (for example, weapons systems) may result in validated military requirements through the Joint Capabilities Integration and Development System.
Leadership and Education	Joint concepts may provide the basis for new courses of study across the professional military education enterprise. These classroom discussions encourage critical thinking about the joint concept and support the further development of new ideas.
Personnel	The successful implementation of a joint concept may require members of the Armed Forces to acquire new individual and collective skills. These changes may affect recruitment, retention, and the professional development of the joint force.
Facilities	Joint concepts may affect the size, type, and number of facilities required in and outside of the continental United States, for deployment, reception, staging, movement, integration, and sustainment.
Policy	Joint concepts and policy are closely related. Because policy can direct or assign tasks, prescribe desired capabilities, and provide guidance, concept developers should consider and account for current policy when proposing new or alternative ways in which the joint force could operate.

Source: Chairman of the Joint Chiefs of Staff Instruction 3010.02E, *Guidance for Developing and Implementing Joint Concepts* (Washington, DC: The Joint Staff, August 17, 2016), A-3–A-5.

employment, which is intended to provide more options for priority missions while introducing “unpredictability to adversary decisionmakers.”²⁶ Finally, the CCJO establishes priorities that implement the Chairman’s high-order vision and guide the development of a family of more specific and detailed subordinate joint operating and supporting concepts.

Joint operating concepts (JOCs) are broadly defined as describing “how the joint force may execute military operations within a specific military mission area in accordance with defense strategic guidance and the CCJO.”²⁷ As an example, the Joint Operations Access Concept (JOAC) is a “warfighting concept” that explains—in conceptual terms—how the joint force would achieve and maintain operational access “in the face of armed opposition by a variety of enemies and under a variety of conditions, as part of a broader national approach.”²⁸ It allows Service planners to determine the contributions and limitations of their respective forces under specific scenarios. For instance, the concept recognizes that air superiority and sea control—advantages that U.S. forces have enjoyed for decades—are no longer assured.

The JOAC addresses operational access consistent with the guidance and context provided by the CCJO,²⁹ while directly addressing the *Sustaining U.S.*

Global Leadership requirement to “project power despite antiaccess/area-denial (A2/AD) challenges.”³⁰ One can envision the JOAC’s application in response to a crisis in the South China Sea or other global maritime hotspots. The concept’s central idea is to leverage cross-domain synergy “to establish superiority in some combination of domains that will provide the freedom of action required by the mission.”³¹ Additionally, the JOAC identifies 30 required capabilities and 11 operational access precepts (that is, general principles) intended as a “guide to judgment” based on an understanding of the unique factors of any situation.³²

While critics argue that the JOAC lacks necessary detail for such a complex military problem, it is important to understand that this document provides an “overarching concept” under which can “nest” multiple supporting concepts, such as the Joint Concept for Entry Operations (JCEO), that address specific aspects of A2/AD challenges. Supporting concepts add depth and detail to JOCs by describing how the joint force may conduct a particular subset of the mission.³³ In this case, the JCEO focuses on integrating force capabilities across domains “in order to secure freedom of maneuver on foreign territory *within* an operational area” that is consistent with the GIO approach.³⁴ Specifically, JCEO seeks to employ

maneuver in and across multiple domains to establish local superiority at multiple entry points to gain access and achieve military objectives.³⁵ The document lists 21 required capabilities and affirms the need for the joint force to maintain its ability to enter foreign territory and accomplish all assigned missions ashore, both in the littoral regions and farther inland.³⁶

In sum, the Joint Staff provides a logical, hierarchical process that translates strategic direction into proposed solutions for the joint force in the future security environment. Developing joint operating and supporting concepts—with GIO as a guide—gives intellectual focus and creativity to address specific mission areas and challenges. Moreover, the aforementioned collaborative nature of concept development facilitates engaging relevant stakeholders in the discussion—with a goal of enhancing the effectiveness and lethality of the joint force.

The Services formulate concepts that align with the broader joint concepts, while focusing on their unique contributions and Title 10 responsibilities to “organize, train, and equip” forces for joint and combined operations. For example, in 2014, the Army released *The Army Operating Concept: Win in a Complex World*, which describes its support for GIO by providing

“foundational capabilities required by the joint force.” The Army also plans for and executes expeditionary operations consistent with the JOAC and JCEO by “integrating with other Services and mission partners to conduct joint combined arms maneuver [and] the synchronized application of capabilities critical to accomplish the mission.”³⁷ In response to the CCJO requirement for the joint force to “integrate capabilities fluidly across domains,” then-Army Chief of Staff General Mark A. Milley testified before Congress that the Army’s Multi-Domain Operations concept is designed to “guide our modernization efforts . . . inform future force development through numerous iterations of experimentation and analysis . . . [and] describe how we will synchronize our capabilities across all domains in support of the joint force.”³⁸

Despite the importance of operational concepts to the planning process, Echevarria correctly argues that they are “usually poorly defined in military doctrine or shrouded in jargon, which in turn leads to confusion.”³⁹ For example, what is the difference (if any) between a joint concept, an operating concept, and an operational concept? The ambiguity is more than a mere semantics issue and should be clarified by the Joint Staff for military strategists and operational planners. In the interim, how does one select the right concepts? To be clear, these choices can at times seem more art than science given the wide array of possible threats across the spectrum of conflict. Nevertheless, prudent concept development starts with an assessment of the future security environment to identify challenges and opportunities, followed by a thorough review of strategic direction to understand the context and consider potential capability deficiencies or other obstacles.

Once written, concepts are an important element of scenario-based planning to measure the joint force’s ability to succeed in realistic situations, as they also identify capability gaps and other shortcomings. Evan Braden Montgomery argues that scenarios are “not intended to be predictions of the future” but are instead “stories about the

way the world might turn out tomorrow . . . that can help us recognize and adapt to the changing aspects of our present environment.”⁴⁰ As an example, he offers a scenario that describes a potential Sino-U.S. conflict in the Taiwan Strait to facilitate the assessment of operating concepts such as the JOAC and JCEO against a specific A2/AD challenge while mitigating risk. This scenario could also be used to address important joint and Service capability issues such as the employment of aircraft carriers and manned versus unmanned systems in such a challenging environment.

From Concepts to Capabilities

The 2030 Capstone Concept for Joint Operations describes a shift to a “joint concept-driven, threat informed capability development process” intended to drive the Pentagon’s resource allocation decisions.⁴¹ Although some view the term *capabilities* through the relatively narrow lens of weapons systems, DOD and the Joint Staff take a more holistic view. Joint Publication 1, *Doctrine for the Armed Forces of the United States*, states that joint concepts lead to military capabilities, both nonmateriel and materiel, that “significantly improve the ability of the joint force to overcome future challenges” and achieve strategic and operational objectives.⁴² This robust array of potential capability options to fill identified gaps is captured by the DOD acronym DOTMLPF-P, which serves as an intellectual framework for institutional change (see table).

Conclusion and Recommendations

Mark Guzinger argues that “legacy” operational concepts based on favorable Operation *Desert Storm*-like scenarios have hindered necessary changes in the past.⁴³ Fortunately, the 2018 National Defense Strategy emphasizes the need for fresh thinking and innovative approaches to increase the lethality and overall effectiveness of the joint force. This is both encouraging and necessary because an inclusive, transparent exchange of ideas is critical to look beyond the status quo and truly

examine novel ways to address 21st-century security challenges that are increasingly transregional, multidomain, and multifunctional (TMM).

For example, the 2030 CCJO states that the joint force “will globally posture forces and prioritize readiness for major combat against peer competitors while providing options for proactive and scalable employment of the joint force anywhere in the world.”⁴⁴ Given this guidance, what are future overseas basing requirements in a TMM environment, where response times to crises are shortened and managing escalation and joint force resiliency would be tested in myriad ways?⁴⁵ And how are combatant commands and the Services impacted? Formulating answers to these difficult questions should begin with operationalizing dynamic force employment through the development of joint concepts.

The 2018 National Military Strategy directs the joint force to successfully “compete below the level of armed conflict (with a military dimension).”⁴⁶ With the exception of cyberspace, this is a rather ambiguous mission area that requires some out-of-the-box thinking to address so-called gray zone or hybrid warfare challenges that exist in the space between peace and war.⁴⁷ How might the joint force respond to future attempts to employ “little green men,” armed militias, disinformation campaigns, and other efforts to disrupt national sovereignty and stability? Given the complexity and the political implications of such operations, how can the military’s efforts be integrated as part of a broader interagency effort?

Finally, how might the joint force integrate cutting-edge technology such as hypersonic weapons, quantum computing, and artificial intelligence to support GIO? The development of new joint concepts must embrace these emerging capabilities and harness their potential advantages to present “insurmountable dilemmas” for future adversaries.⁴⁸

Perhaps some or all of these questions will be addressed in the forthcoming Joint Warfighting Concept (JWC), which intends to provide “a threat-informed capability development roadmap for

all-domain joint maneuver warfare.”⁴⁹ Vice Chairman of the Joint Chiefs of Staff General John Hyten describes JWC as an “overarching concept” that will help guide the development of “capabilities and attributes that we need to be able to fight effectively in the 2030s and 2040s and beyond.”⁵⁰

Former Chairman of the Joint Chiefs of Staff General Joseph Dunford believes that “the strategic landscape is changing and our investment in future capabilities, capacity, and readiness must keep pace to ensure our men and women in uniform never face a fair fight.”⁵¹ Joint concepts are critical to this effort because they provide a narrative framework that incorporates a comprehensive assessment of the security environment and strategic direction to identify and prioritize existing shortfalls; at the same time, joint concepts propose innovative approaches and required capabilities to maximize the joint force’s qualitative and quantitative advantages to solve complex problems. JFQ

Notes

¹ *Summary of the 2018 National Defense Strategy of the United States of America: Sharpening the American Military’s Competitive Edge* (Washington, DC: Department of Defense [DOD], 2018), 7.

² *Joint Operating Environment 2035* (Washington, DC: The Joint Staff, July 14, 2016), 1.

³ Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3030.01, *Implementing Joint Force Development and Design* (Washington, DC: The Joint Staff, December 3, 2019), C-2-C-3.

⁴ David A. Fastabend, “That Elusive Operational Concept,” *Army Magazine* 51, no. 6 (June 2001), 42.

⁵ Antulio J. Echevarria II, “Operational Concepts and Military Strength,” The Heritage Foundation, October 7, 2016, available at <www.heritage.org/military-strength-topical-essays/2017-essays/operational-concepts-and-military-strength>.

⁶ CJCSI 3010.02E, *Guidance for Developing and Implementing Joint Concepts* (Washington, DC: The Joint Staff, August 17, 2016), A-1, A-3.

⁷ Douglas W. Skinner, *Airland Battle Doctrine* (Alexandria, VA: Center for Naval Analyses, September 1988), 3.

⁸ Field Manual (FM) 100-5, *Operations* (Washington, DC: Headquarters Department of the Army, 1976), 1-1.

⁹ Martin J. D’Amato, “Vigilant Warrior: General Donn A. Starry’s AirLand Battle and How It Changed the Army,” *Armor* 109, no. 3 (May–June 2000), 19.

¹⁰ David Johnson, “An Army Trying to Shake Itself from Intellectual Slumber, Part 1: Learning from the 1970s,” *War on the Rocks*, February 2, 2018, available at <<https://warontherocks.com/2018/02/army-trying-shake-intellectual-slumber-part-learning-1970s/>>.

¹¹ FM 100-5, *Operations* (Washington, DC: Headquarters Department of the Army, August 20, 1982), 7-2.

¹² *Ibid.*, 7-4.

¹³ Kari Hawkins, “AMC-Developed Weapons Remain Vital to Army,” *Army.mil*, September 6, 2012, available at <www.army.mil/article/86839/amc_developed_weapons_remain_vital_to_army>.

¹⁴ *Joint Vision 2010* (Washington, DC: The Joint Staff, July 1996), 1.

¹⁵ *A National Security Strategy of Engagement and Enlargement* (Washington, DC: The White House, February 1996), 14.

¹⁶ *National Military Strategy: Shape, Respond, Prepare Now—A Military Strategy for a New Era* (Washington, DC: The Joint Staff, 1997), 1.

¹⁷ *Joint Vision 2010*, 1.

¹⁸ *Ibid.*, 9.

¹⁹ *Quadrennial Defense Review Report* (Washington, DC: DOD, September 30, 2001), iii.

²⁰ Donald H. Rumsfeld, “Transforming the Military,” *Foreign Affairs*, May/June 2002, available at <www.foreignaffairs.com/articles/2002-05-01/transforming-military>.

²¹ *Joint Operations Concept* (Washington, DC: DOD, November 2003), 9.

²² *Summary of the 2018 National Defense Strategy*, 1.

²³ *Capstone Concept for Joint Operations: Joint Force 2020* (Washington, DC: The Joint Staff, September 10, 2012), 1.

²⁴ CJCSI 3010.02E, A-10.

²⁵ *Capstone Concept for Joint Operations: Joint Force 2020*, iii.

²⁶ *Summary of the 2018 National Defense Strategy*, 5, 7.

²⁷ CJCSI 3010.02E, A-10.

²⁸ *Joint Operations Access Concept (JOAC)*, Version 1.0 (Washington, DC: DOD, January 17, 2012), i.

²⁹ *Ibid.*, 3.

³⁰ *Sustaining U.S. Global Leadership: Priorities for 21st-Century Defense* (Washington, DC: DOD, January 2012), 4.

³¹ *JOAC*, ii.

³² *Ibid.*, 17.

³³ CJCSI 3010.02E, A-10.

³⁴ *Joint Concept for Entry Operations* (Washington, DC: The Joint Staff, April 7, 2014), v. Emphasis in original.

³⁵ *Ibid.*, 10.

³⁶ *Ibid.*, iii.

³⁷ U.S. Army Training and Doctrine Com-

mand (TRADOC) Pamphlet 525-3-1, *The U.S. Army Operating Concept: Win in a Complex World* (Washington, DC: TRADOC, October 7, 2014), 5.

³⁸ Senate Armed Services Committee, *Posture Statement by General Mark A. Milley, U.S. Army Chief of Staff*, 116th Cong., 1st sess., March 26, 2019, 5–6.

³⁹ Echevarria, “Operational Concepts and Military Strength.”

⁴⁰ Evan Braden Montgomery, *Defense Planning for the Long Haul: Scenarios, Operational Concepts, and the Future Security Environment* (Washington, DC: Center for Strategic and Budgetary Assessments, 2009), 14–15.

⁴¹ *Capstone Concept for Joint Operations: Joint Force 2030* (Washington, DC: The Joint Staff, June 18, 2019), v.

⁴² Joint Publication 1, *Doctrine for the Armed Forces of the United States* (Washington, DC: The Joint Staff, March 23, 2013, Incorporating Change 1, July 12, 2017), xxvi.

⁴³ Mark Guzinger, *Shaping America’s Future Military Toward a New Force Planning Construct* (Washington, DC: Center for Strategic and Budgetary Assessments, 2013), 23.

⁴⁴ *Capstone Concept for Joint Operations: Joint Force 2030*, 4.

⁴⁵ Kathleen H. Hicks, “The Overseas Basing Debate, Part 1,” Defense 2020 Podcast, transcript, Center for Strategic and International Studies, February 10, 2020, available at <www.csis.org/analysis/overseas-basing-debate-part-1>.

⁴⁶ *Description of the National Military Strategy 2018* (Washington, DC: The Joint Staff, 2018), 3.

⁴⁷ Frank G. Hoffman, “Examining Complex Forms of Conflict: Gray Zone and Hybrid Challenges,” *PRISM* 7, no. 4 (2018), available at <www.jstor.org/stable/26542705?seq=1#metadata_info_tab_contents>.

⁴⁸ *Capstone Concept for Joint Operations: Joint Force 2030*, 7.

⁴⁹ Senate Arms Services Committee, Department of Defense Budget Hearing, *Statement of General Mark A. Milley, USA, 20th Chairman of the Joint Chiefs of Staff*, 112th Cong., 2nd sess., March 4, 2020, 12.

⁵⁰ Theresa Hitchens, “New Joint Warfighting Plan Will Help Define ‘Top Priority’ JADC2: Hyten,” *Breaking Defense*, January 29, 2020, available at <<https://breakingdefense.com/2020/01/new-joint-warfighting-plan-will-help-define-top-priority-jadc2-hyten/>>.

⁵¹ Senate Appropriations Committee on Defense, *Posture Statement of General Joseph Dunford, Jr., USMC, 19th Chairman of the Joint Chiefs of Staff*, 115th Cong., 1st sess., March 22, 2017.