

JOURNAL OF ADVANCED MILITARY STUDIES

# JAMS

Vol. 15, No. 1, 2024



JOURNAL OF ADVANCED MILITARY STUDIES

# JAMS

**MCUP**

Published by Marine Corps University Press  
2044 Broadway Street | Quantico, VA 22134

MARINE CORPS UNIVERSITY  
BGen Maura M. Hennigan, USMC  
President

Col Mark R. Reid, USMC  
Chief of Staff

SgtMaj Stephen J. Lutz, USMC  
Sergeant Major of MCU

#### EDITORIAL STAFF

Ms. Angela J. Anderson  
Director, MCU Press

Mr. Jason Gosnell  
Managing Editor/Deputy Director

Ms. Stephani L. Miller  
Manuscript Editor

Mr. Christopher N. Blaker  
Manuscript Editor

#### ADVISORY BOARD

Dr. Rebecca J. Johnson  
Provost  
Marine Corps University

Col Christopher Woodbridge, USMC  
(Ret)  
Editor, *Marine Corps Gazette*

Col Jon Sachrison, USMC (Ret)  
COO, MCU Foundation

#### SCHOOLHOUSE DIRECTORS

Colonel Greg Poland, USMC  
School of Advanced Warfare

Colonel James W. Lively, USMC  
Expeditionary Warfare School

Colonel Brian Sharp, USMC  
Marine Corps War College

Colonel Andrew R. Winthrop, USMC  
Command and Staff College

*Journal of Advanced Military Studies*

(Print) ISSN 2770-2596

(Online) ISSN 2770-260X

#### DISCLAIMER

The views expressed in the articles and reviews in this journal are solely those of the authors. They do not necessarily reflect the opinions of the organizations for which they work, Marine Corps University, the U.S. Marine Corps, the Department of the Navy, or the U.S. government. When necessary, errata will be published immediately following the book reviews. MCUP products are published under a Creative Commons NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0) license.

Established in 2008, MCU Press is an open access publisher that recognizes the importance of an open dialogue between scholars, policy makers, analysts, and military leaders and of crossing civilian-military boundaries to advance knowledge and solve problems. To that end, MCUP launched the *Journal of Advanced Military Studies* (JAMS) to provide a forum for interdisciplinary discussion of national security and international relations issues and how they have an impact on the Department of Defense, the Department of the Navy, and the U.S. Marine Corps directly and indirectly. JAMS is published biannually, with occasional special issues that highlight key topics of interest.

#### ARTICLE SUBMISSIONS

The editors are looking for academic articles in the areas of international relations, geopolitical issues, national security and policy, and cybersecurity. To submit an article or to learn more about our submission guidelines, please email [MCU\\_Press@usmcu.edu](mailto:MCU_Press@usmcu.edu).

#### BOOK REVIEWS

Send an email with a brief description of your interests to [MCU\\_Press@usmcu.edu](mailto:MCU_Press@usmcu.edu).

#### SUBSCRIPTIONS

Subscriptions to JAMS are free. To join our subscription list or to obtain back issues of the journal, send your mailing address to [MCU\\_Press@usmcu.edu](mailto:MCU_Press@usmcu.edu).

#### ADDRESS CHANGE

Send address updates to [MCU\\_Press@usmcu.edu](mailto:MCU_Press@usmcu.edu) to maintain uninterrupted delivery.

#### INDEXING

The journal is indexed by ProjectMUSE, Scopus, ScienceOpen, EBSCO, ProQuest, Elsevier, OCLC ArticleFirst, Defense Technical Information Center, Journal Seek, IBZ Online, British Library System, Lancaster Index to Defense and International Security Literature, and AU Library Index to Military Periodicals.

**FREELY AVAILABLE AT  
[WWW.USMCU.EDU/MCUPRESS](http://WWW.USMCU.EDU/MCUPRESS)**

# Contents

Vol. 15, No. 1

---

From the Editor	7
<b>THE MILITARIZATION OF SPACE</b>	
Introduction <i>Eliahu H. Niewood, ScD; and Matthew Jones, PhD</i>	11
Military Spacesteading: Space-based Logistics Mediums for Future Beachheads <i>Major Robert Billard Jr., USMC</i>	18
The Void Above: The Future of Space Warfare and a Call to Update the Rule of International Space Law <i>Alan Cunningham</i>	30
The Soviet <i>Sputniks</i> and American Fears about the Militarization of Outer Space <i>Tom Wilkinson</i>	41
Marine Corps and Space Force Integration for a More Lethal Joint Task Force to Counter China <i>Colonel Josh Bringham, USMC</i>	60
A Call for Space-Domain Intelligence Training <i>Lieutenant Colonel Genelle M. Martinez, USSF</i>	88
Kim Jong United: How a Future North Korean ASAT Threat Makes Strange International Bedfellows and Novel Opportunity <i>Second Lieutenant Max A. Schreiber, USSF</i>	101

Characterizing Future Authoritarian Governance in the Space Domain <i>Julian G. Waller, PhD</i>	115
Space Technology and Its Military Application: Options for Pakistan <i>Shamaila Amir, PhD; and Nazia Abdul Rehman, PhD</i>	136
Breaking the Newtonian Fetish: Conceptualizing War Differently for a Changing World <i>Ben Zweibelson, PhD</i>	153
<b>REVIEW ESSAY</b>	
The Sky Is Not the Limit: The Unknowable Future of Space <i>José de Arimatéia da Cruz, PhD/MPH</i>	203
<b>BOOK REVIEWS</b>	
<i>Bitskrieg: The New Challenge of Cyberwarfare</i> By John Arquilla Reviewed by Anabela P. Brízido	217
<i>The Culture of Military Organizations</i> Edited by Peter R. Mansoor and Williamson Murray Reviewed by Philip C. Shackelford	218
<i>Capturing Aguinaldo: The Daring Raid to Seize the Philippine President at the Dawn of the American Century</i> By Dwight Sullivan Reviewed by Lieutenant Colonel Daniel Schoeni	220
<i>Women, Peace, &amp; Security in Professional Military Education</i> Edited by Lauren Mackenzie, PhD; and Lieutenant Colonel Dana Perkins, PhD Reviewed by Colonel Cornelia Weiss (Ret)	223
<i>Special Reconnaissance and Advanced Small Unit Patrolling: Tactics, Techniques and Procedures for Special Operations Forces</i> By Lieutenant Colonel Ed Wolcuff (Ret) Reviewed by Benjamin B. Wilson	226

<i>Right and Wronged in International Relations: Evolutionary Ethics, Moral Revolutions, and the Nature of Power Politics</i>	227
By Brian C. Rathbun Reviewed by Phil W. Reynolds	
<i>Intelligence and the State: Analysts and Decision Makers</i>	229
By Jonathan M. House Reviewed by David Myrtle	
<i>Maoism: A Global History</i>	232
By Julia Lovell Reviewed by Second Lieutenant David T. Tung	



## From the Editor

The application of space technology to military purposes is nothing new. However, the intensified reliance by military forces on space capabilities coupled with a return to active contestation of space as a military domain increases the need for discussion of space applications and their implications for the joint fight. This issue of the *Journal of Advanced Military Studies* focuses on space-related topics, and that is a timely decision. However, thinking on these issues remains very much nascent, as is apparent in some of the articles in this issue.

The diverse and wide-ranging articles in the Spring 2024 issue are both directly and symbolically representative of the ongoing effort by military leaders and thinkers around the world to consider the ramifications of multiple fundamental changes currently underway in the space domain. These changes have major implications for how war is fought in all domains and geographic theaters. U.S. Marines, Space Force guardians, and other military and civilian scholars have an opportunity to add to the intellectual ferment around space topics and international security, but there is a long way to go to build theory on a strong foundation of technical insight.

One way to consider what humanity can accomplish in space is by envisioning a Venn diagram with overlapping circles depicting that which is technically feasible, that which is economically viable, and that which is acceptable under the policy set by the licensing or operating state. All three of the components of this Venn diagram are undergoing rapid change today.

The economics of space were transformed during the last decade as a few major investors, and many smaller ones, provided sufficient capital to overcome major technical and scale challenges and have now radically reduced the cost of launching satellites into space. The technology of space is advancing rapidly, enabled in part by the progress of the civilian electronics and information technology industries here on Earth, but also by the emergence of vertically integrated developers who are fielding satellites at a scale previously unimagined. On the policy side, national space laws are being revised in multiple ways to reduce barriers to entrepreneurship and new space applications, but they are also placing greater importance on the sustainability of the space environment. The Outer Space Treaty of 1967 places responsibility on the authorizing nation for all activity in space, whether governmental or nongovernmental.<sup>1</sup> The Jo-



seph R. Biden administration has released a framework for space priorities and a series of Department of Defense strategy documents that place heavy emphasis on harnessing commercial space capabilities for national security applications. But despite all these important changes, the fundamental laws of physics are unlikely to be repealed, and multiple order of magnitude leaps in key materials science properties are also unlikely in timelines measured in mere decades. We are in an era where big dreams can become a reality, but that does not mean that all big dreams are feasible.

The stakes are high. Humanity's reliance on space technology has never been greater. In an increasingly data-based world, satellites generate and move immense quantities of data to enable Earth-based businesses, infrastructure, and national security systems. Space technologies allow utility companies to balance energy flows across the electrical grid, provide the precise timing needed to record financial market transactions, increase the carrying capacity of a crowded air traffic system, and have supported critical increases in crop yields globally.

Dr. Eliahu Niewood and Dr. Matthew Jones's introduction to the changing nature of the space domain provides a solid foundation on the rise of the commercial space sector, the dramatic shifts in the economics of space launch, and the return of clear conventional military threats to space capabilities not seen since the Cold War era. They concisely explain the rise of proliferated low Earth orbit constellations of satellites, much of which required a willingness to step away from the natural tendency of military and intelligence space users to seek ever higher levels of technical performance. While Niewood and Jones correctly note that some applications inherently require large apertures in space, and hence larger and more expensive satellites, during the last decade we have seen that fielding many satellites that are "good enough" can offer advantages in terms of resiliency in the face of adversary attack, in access and revisit of locations of interest on the ground, and in reduced latency for communications. Niewood and Jones's description of what has changed in recent years is a good jumping off point for some of the more speculative articles that follow.

For example, Tom Wilkinson offers an overview of American public opinion on the militarization of space in the 1950s and 1960s, with particular reference to how early space launches gave public visibility to the emerging intercontinental missile threat and how Soviet technological advances called into question the competitive capability of U.S. society. The author's focus on sampling letters to the editor and similar sources provides useful insight into the so-called Sputnik crisis.<sup>2</sup> Adding to recent publications like Bleddyn Bowen's *Original Sin: Power, Technology, and War in Outer Space* and Robin Dickey's "The Rise and Fall of Space Sanctuary in U.S. Policy," Wilkinson provides another useful counterweight to our natural tendency to view as completely novel the last decade's increasing superpower tension in space.<sup>3</sup>

Two practitioners' articles in this issue grapple with specific organizational and institutional challenges that must be addressed to fully realize value

of expanded space capabilities in military operations. Marine Corps colonel Josh Bringham identifies the very real organizational obstacles facing Joint task forces bringing together space and terrestrial capabilities inside a theater that could be highly contested like the United States Indo-Pacific Command (USINDOPACOM) area of responsibility. The article explores the topic of how stand-in forces can help the Joint force complete kill webs. It also addresses the complex challenges of maintaining the effectiveness of these stand-in forces in the face of a People's Republic of China People's Liberation Army that has built a set of highly integrated systems and organizations to harness space capabilities that target long range missiles and other military forces.

On the organize, train, and equip side of the problem, Space Force lieutenant colonel Genelle Martinez identifies how building a strong U.S. Space Force intelligence capability could depend on creating training programs focused on the technical content needed for well-informed space operations and contribute to a strong Space Force intelligence career field culture. In Lieutenant Colonel Martinez's telling, the current approach that relies heavily on combined U.S. Air Force-U.S. Space Force initial skills training for intelligence professionals is efficient but not necessarily effective. The intelligence professional development case is just one of many where the very small scale of the U.S. Space Force is creating difficult trade-offs. The human and financial resources required to stand up service-unique training are scarce and cannot be applied to other missions.

Getting beyond military applications, Dr. Julian Waller's consideration of potential nondemocratic models of governance for small human settlements across the solar system raises interesting questions about how separated societies can evolve and how people organize themselves in an environment where both removing oneself from the community (exit) and speaking out to change the community (voice) are difficult, expensive propositions.<sup>4</sup> However, this process of evolution from command-oriented exploration missions likely will require significant time, since for the foreseeable future the early human inhabitants of these colonies are likely to be deeply dependent on and in essence directed by "mission control" elements back on Earth.

While there are enormous advances being made in the advantages that humanity is gaining from space technology for both civilian and military purposes, that advancement could be seriously slowed or reversed by an increasingly dangerous orbital debris environment. Most debris-creating events are either unintentional or the result of difficult mission trade-offs, but some of the largest events in history have been intentional acts involving antisatellite weapons (ASATs). In this context, Space Force lieutenant Max Schreiber offers a radical proposal that the United States undertake civilian space cooperation with the North Korean regime to create disincentives for North Korea to pursue a direct ascent antisatellite weapon. Currently, a North Korean ASAT appears to be a hypothetical threat. The Secure World Foundation's comprehensive *Global Counterspace Capabilities* report notes, "North Korea has no demonstrated ca-

pability to mount kinetic attacks on space assets: neither a DA-ASAT nor a co-orbital system. In its official statements, North Korea has not mentioned ASAT operations or intent, suggesting that there is no clear doctrine in Pyongyang's thinking at this point."<sup>5</sup> Moreover, this argument likely overstates the universality of the costs imposed by debris from an ASAT test or attack, thereby assuming that a North Korean DA-ASAT attack or test would equally affect Russia and China, two key supporters that North Korea often seeks to play against one another. The current U.S.-led effort to develop a norm against destructive ASAT testing also aims to raise the political costs for potential ASAT developers and has generated significant support in the United Nations and among like-minded nations. It has also served to further isolate Russia and China as nonsignatories and poses no substantial technical disadvantage to advanced spacefaring nations for whom the task of intercepting a satellite is not terribly challenging.<sup>6</sup>

While some of the articles contributed to this volume are built on highly speculative technical foundations, that reflects the immaturity of human thinking about the immense potential of space technology to change our lives. We must crawl before we run, and an overly narrow focus on what can be technically achieved with a modest extension of today's technology can miss the opportunity for leap ahead applications or the complete transformation of a mission or market area. The Marine Corps University Press is to be commended for its vision in dedicating this issue to such a critical topic.

Jamie Morin, PhD

Executive Director, Center for Space Policy and Strategy, the Aerospace Corporation

---

## Endnotes

1. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, United Nations Office for Outer Space Affairs, 1967.
2. Roger Launius, "Sphere of Influence: The Sputnik Crisis and the Master Narrative," *Quest* 14, no. 4 (2007).
3. Bleddyn Bowen, *Original Sin: Power, Technology, and War in Outer Space* (London: Hurst, 2022); and Robin Dickey, *The Rise and Fall of Space Sanctuary in U.S. Policy* (Arlington, VA: Center for Space Policy and Strategy, 2020).
4. Albert O. Hirschman, *Exit, Voice, and Loyalty: Responses to Decline in Firms, Organizations, and States* (Cambridge, MA: Harvard University Press, 1970).
5. Brian Weeden and Victoria Samson, *Global Counterspace Capabilities: An Open Source Assessment* (Washington, DC: Secure World Foundation, 2024).
6. Ching Wei Sooi, *Direct-Ascent Anti-Satellite Missile Tests: State Positions on the Moratorium, UNGA Resolution, and Lessons for the Future* (Washington, DC: Secure World Foundation, 2023).