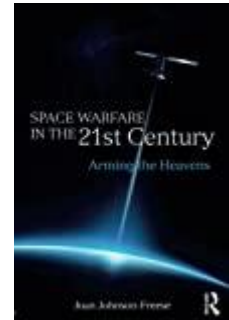




Joan Johnson-Freese. *Space Warfare in the 21st Century: Arming the Heavens.*
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In *Space Warfare in the 21st Century: Arming the Heavens*, US Naval War College professor Joan Johnson-Freese argues for a comprehensive space strategy that downplays the role of “deterrence by punishment,” which Johnson-Freese claims tends to inflame, rather than deter, an arms race in space. Published in the first year of the Trump administration, *Space Warfare in the 21st Century* calls on US national leaders to eschew bellicose rhetoric, while acting and communicating in ways that the author contends will enhance stability and security in outer space. For example, Johnson-Freese disdains alliterative catchphrases that describe space as “congested, contested, and competitive” (pp. 26-27) or summarize our military’s purpose there as to “deter, defend against, and defeat aggression” (p. 81). However, in deprecating these allegedly simplistic formulations, Johnson-Freese sometimes fails to recognize the truth that they express. In fact, deterrence is the first and primary goal of the US space security strategy, but it is extremely hard to achieve and preserve without credible capability to defend friendly assets and

defeat enemy aggression. Although Johnson-Freese worries that acknowledging the contested nature of the space domain may be a self-fulfilling prophecy, it would be an even more grave strategic error to ignore the counterspace threats emanating from countries such as China and Russia (pp. 48-49).

Much has changed in the five short years since Professor Johnson-Freese wrote this book. The Trump administration has departed, leaving a transformed national security space enterprise in its wake. Key components include the re-established United States Space Command (USSPACECOM), the new United States Space Force (USSF), and a national space policy that calls for the National Aeronautics and Space Administration (NASA) to once again send Americans—including the first woman—to the Moon.[1] The Biden administration has continued to emphasize the importance of space security, with Secretary of the Air Force Frank Kendall declaring his first operational imperative for the Department to be “defin-

ing resilient and effective space order of battle and architecture.”[2]

The last half-decade has also seen numerous advances in commercial human spaceflight, on-orbit servicing and debris removal technologies, and anti-satellite weapons development and testing. In some of these areas, Johnson-Freese’s predictions have proven prescient.[3] In others, she may seem like a Cassandra whose warnings have been ignored. Specifically, the formation of USSPACECOM and the USSF, accompanied by an increase in senior leaders’ rhetoric recognizing space as a warfighting domain, could be viewed as the United States doubling down on the strategic approach that Johnson-Freese deplores. However, they may also be understood as forming an indispensable part of the more comprehensive strategy that she advocates—the “big stick” of Theodore Roosevelt’s famous aphorism, if not always the “speak softly” part.[4]

One area where Johnson-Freese’s recommendations may have borne fruit is in Vice President Kamala Harris’s announcement in April 2022 that the United States would not conduct direct-ascent anti-satellite (ASAT) missile tests that would create large amounts of space debris.[5] While not going as far as Johnson-Freese’s proposed “no first use” pledge, the direct-ascent ASAT testing moratorium signals a US commitment to pursue security in the space domain through restraint rather than retaliation. How the world will respond remains an open question. While four US allies have since announced test bans of their own,[6] Russia simply prohibited Harris from traveling to Russia.[7]

In the end, *Space Warfare in the 21st Century* is an interesting and provocative contribution to the literature on space security. It provides a useful overview of many developments in international space competition in recent years. Through ample citations to sources that span the ideological spectrum, the book attempts to provide an evenhanded approach. Although I often disagreed

with Johnson-Freese’s arguments, they do merit analysis and consideration.

The views expressed are those of the author and do not reflect the official guidance or position of the United States Government, the Department of Defense, the United States Air Force, or the United States Space Force.

Notes

[1]. National Space Policy of the United States of America (2020), 23.

[2]. Charles Pope, “Kendall Details ‘Seven Operational Imperatives’ & How They Forge the Future Force,” Secretary of the Air Force Public Affairs, US Air Force website, March 3, 2022, <https://www.af.mil/News/Article-Display/Article/2953552/kendall-details-seven-operational-imperatives-how-they-forge-the-future-force/> (title case omitted).

[3]. For example, despite earlier Indian representations that they did not need to conduct a destructive anti-satellite missile test, Johnson-Freese correctly predicted that India would conduct one, which occurred in March 2019 (p. 12). See Sandeep Unnithan, “India Attains the Capability to Target, Destroy Space Satellites in Orbit,” *India Today*, April 28, 2012; Doris Elin Urrutia, “India’s Anti-Satellite Missile Test Is a Big Deal. Here’s Why,” Space.com, March 30, 2019, <https://www.space.com/india-anti-satellite-test-significance.html>.

[4]. Johnson-Freese quotes Roosevelt, whom she incorrectly identifies as a Democrat, as saying “Speak softly and carry a big stick” (184).

[5]. On p. 182, Johnson-Freese states, “While a ‘no testing’ pledge would be a welcome incremental step toward banning a specific action, it still carries with it a considerable amount of ambiguity”; see also “Vice President Harris Advances National Security Norms in Space,” White House fact sheet, April 18, 2022, <https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/18/fact->

[sheet-vice-president-harris-advances-national-security-norms-in-space/](#).

[6]. Park Si-soo, “Japan, Germany Declare Moratorium on Anti-Satellite Missile Tests,” *Space-News*, September 14, 2022, <https://spacenews.com/japan-germany-declare-moratorium-on-anti-satellite-missile-tests/> (noting how Japan and Germany have joined Canada and New Zealand in joining the US commitment).

[7]. Rebecca Shabad, “Russia Slaps Travel Ban on Kamala Harris, 28 Other U.S. Officials, Businesspeople,” NBC News, April 21, 2022, <https://www.nbcnews.com/politics/white-house/russia-slaps-travel-ban-kamala-harris-28-us-officials-businesspeople-rcna25402>. While coming three days after Harris’s speech, the primary reason for the travel ban was to retaliate against Harris and other individuals for US sanctions on Russia related to Russia’s war of aggression in Ukraine.

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