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## **Book Review: Original Sin: Power, Technology and War in Outer Space**

Jeffrey Caton

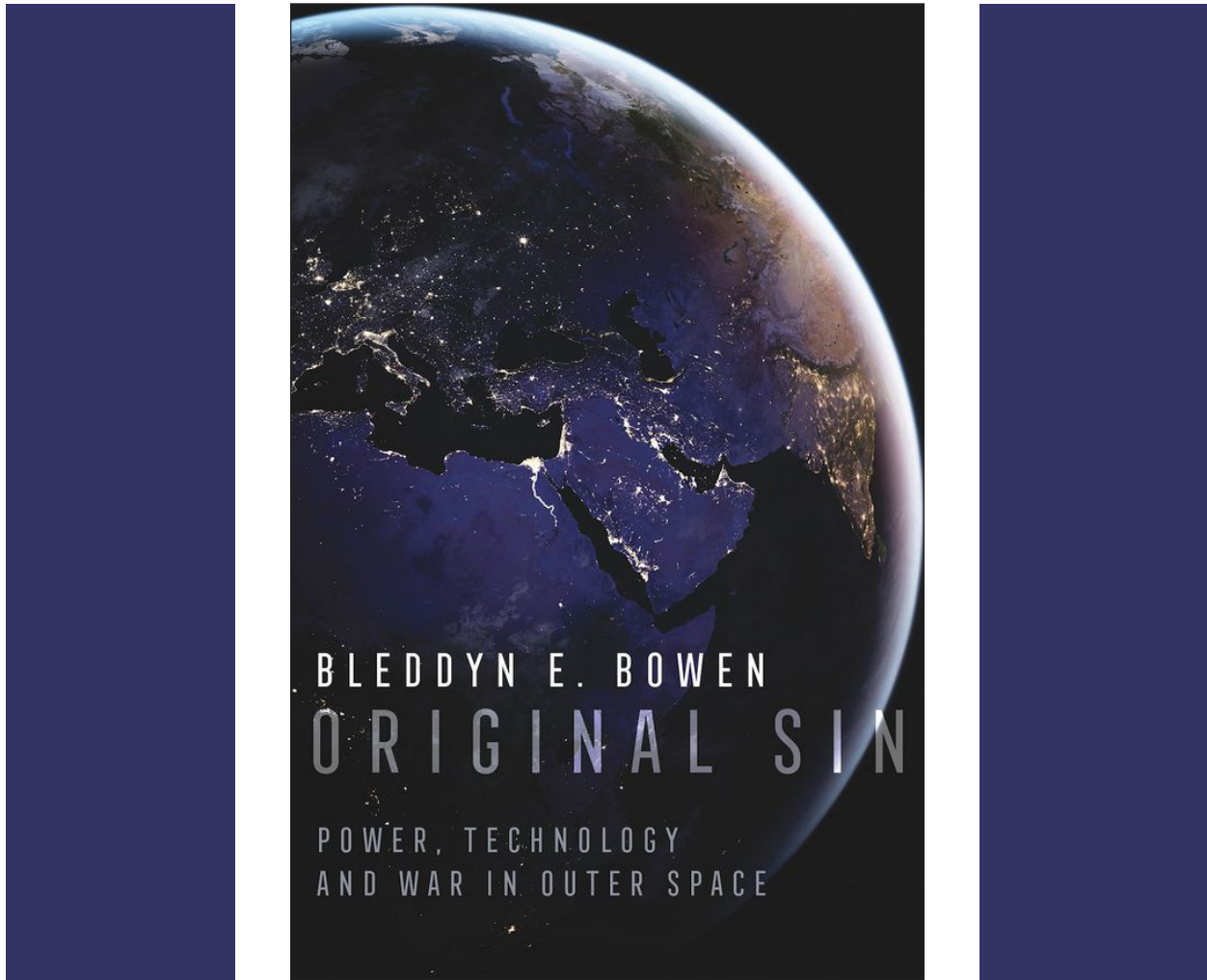
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## — PARAMETERS BOOKSHELF —



Reviewed by Jeffrey Caton, colonel, US Air Force (retired), and president, Kepler Strategies LLC

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**T**he book *Original Sin: Power, Technology and War in Outer Space* is a tour de force in international space security analysis, albeit with tendentious philosophical overtones. Dr. Bleddyn E. Bowen, associate professor of international relations at the University of Leicester, has written an impressive array of spacepower-related publications. Bowen focuses on three arguments: first, “space technologies have not been developed for the benefit of all humankind” (7); second, “the Space Age we live in is a global one” (9); and third, the “potential [of space] as a zone for warfare resembles that of a cosmic coastline rather than the ‘ultimate high ground’” (13). Following a brief introduction about the space environment, the author divides the book into three parts aligned with his arguments.

Part I, “The Original Sin of Space Technology,” addresses the initial development of spacepower during the Cold War in two chapters. The first chapter depicts the Cold War interplay between the United States and the USSR in nuclear warfare and spacepower as the “original sin” of the book title. Revealing his international relations bias, Bowen extends his concept to characterize such efforts to be part of an “imperial and post-colonial legacy” that trumps espoused benevolent aspects of space exploration (55). The second chapter includes space infrastructure development by other countries, focusing on China, France, India, Japan, and the United Kingdom.

Throughout these chapters, Bowen provides outstanding historical and technical context. The “original sin” notion, however, soon wears thin and becomes a banal distractor from otherwise excellent dialogue.

The two chapters of Part II, “The Maturation of Spacepower,” tackle the evolutionary progress of space technology. The first chapter focuses on the collection of imagery and signals intelligence from space. Bowen has a refreshing challenge to technology hucksters, stating, “an obsession with fantastical, nonexistent, or supposedly novel capabilities should be left behind” (115). In a similar fashion, the next chapter explores the advancement of satellite communications, space situational awareness, and satellite navigation systems. It addresses how such technologies establish the “tethers of modernity” that enable spacepower, albeit in a manner that often blurs the distinction between civil and military applications (151). Despite such space-based technical wizardry, Bowen sides with Carl von Clausewitz in recognizing that “no matter the information gathered, the final intention of the other side will never be certain” (146).

Part III, “Strategy in the Global Space Age,” offers three chapters that consider the weapons, planning, and doctrine surrounding space warfare. Bowen starts by tracing the paths from Operation Desert Storm through contemporary concepts, such as anti-access/area denial tactics, that require spacepower support. He correctly entwines classic military theory by Clausewitz, John Boyd, John Warden, and Colin S. Gray, and reiterates that “[space] systems are now mature and essential, not emergent and exotic” (211). Bowen examines many types of counterspace and anti-satellite weapons. He adheres to technically feasible apparatus and avers that “strategic and political analysis needs to be grounded in material reality . . . and not science fiction” (241). While he dwells on his contention with the term “ultimate high ground,” Bowen spends a scant 10 pages on the most novel concept of the book—the framework of military space as a cosmic coastline. Despite this imbalance, he again nods to Clausewitz by concluding that “space warfare is merely the continuation of terrestrial politics by other means” (280).

The concluding chapter, “Anarchy in the Global Space Age,” posits that “competition and self-serving behavior in space . . . reflect the anarchical nature of the international system” (327). Bowen muses about a loose multipolar structure of global spacepower dominated by six major powers—China, Europe, India, Japan, Russia, and the United States. With no clear findings or recommendations, Bowen ends the book quietly by restating his initial arguments.

What sets *Original Sin* apart from similar books is the outstanding context it provides and its willingness to challenge trite slogans attached to spacepower. Bowen weaves diverse technical and historic fibers into a concise, coherent, and readable narrative. His book is an excellent source for the history of spacepower across the military, political, and diplomatic elements of national power. I recommend it as a primer for senior members of the defense community and a sensible textbook for graduate studies.

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**Keywords: spacepower, technology, global space age, strategy, anti-satellite weapons**

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