



Bleddyn E. Bowen. *War in Space: Strategy, Spacepower, Geopolitics*. Edinburgh: Edinburgh University Press, 2020. 288 pp. \$125.00, cloth, ISBN 978-1-4744-5048-5.

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Published on H-War (March, 2021)

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As space warfare comes into increasing prominence with the US Space Force's establishment, *War in Space: Strategy, Spacepower, Geopolitics* arrives on the scene in a timely fashion to provide a spacepower theory while pushing back at some dominant voices in the field, particularly academics who Bleddyn E. Bowen suggests also tend to be vocal spacepower advocates.

Bowen, a lecturer in international relations at the University of Leicester, has three goals in writing his first book. First, he wants to normalize the integration of spacepower thinking into the field of international relations. This goal receives attention in the introduction and conclusion, largely and understandably falling to the side during the bulk of the work given its second purpose: to develop a timeless spacepower theory grounded in Clausewitzian thinking. This contribution alone would be invaluable, as Bowen challenges many simplistic assumptions commonly made about the future of space warfare. For example, there is a tendency to assume that a peer opponent would launch a kind of "space" Pearl Harbor against the United States (p. 228). Bowen admits this is a possibility, but he also walks the reader through the advantages and disadvantages of such an approach while repeatedly reminding the reader, in Clausewitzian fashion, that all war is a gamble. For Bowen, the value of theory is how it allows

strategists to contemplate "what strategic principles are at work when considering whether and when to launch a large counterspace offensive." It cannot, however, provide definitive answers that might, for example, "settle the debate as to whether China and America would be best served by striking first" (p. 39). Finally, Bowen pushes back against spacepower thinking that seeks a more independent role for spacepower in the space domain itself. Rather, he sees the domain as functioning as a coastal area, which explains why he draws on continental theorists' discussion of seapower, rejecting some spacepower advocates in academia who stress blue-water Mahanian theory as most relevant.

Bowen fleshes out his theory with seven propositions. First, he argues that one wages space warfare to command space to ensure the ability to use one's own most essential celestial lines of communication without major disruption or to deny an opponent the same ability. Notably, both small and large powers can seek to obtain this command because acquiring unchallenged mastery of space is almost impossible. Rather, command is more localized. And small nations with "modest" capabilities still can play an important wartime role in "keeping with the non-linear and disproportionate nature of war" (p. 86). This emphasis on smaller nations reflects Bowen's sensitivity to

imperialism and agency; as a result, he does not seek to write an American theory of spacepower, increasing his ability to offer a wide-ranging and sound theoretical work.

Bowen's second proposition stresses that spacepower consists primarily of infrastructure and remains connected to Earth because it serves to enhance "activities on Earth" (p. 66). This proposition helps shape his argument that more warfare will occur between Earth and space than it will between opposing forces in space, especially in the short to mid-term.

The third proposition states that command of space does not equate to command of Earth. This proposition pushes back at the tendency of spacepower advocates to insist that space is the ultimate high ground. Bowen similarly does not anticipate decisive space battles happening very frequently. In this vein, it is also problematic to assert that the space domain is the United States' center of gravity because that constitutes a "gross simplification of an increasingly diverse and dispersed suite of capabilities and assets" (p. 82). Even if a decisive battle did occur in space, it would not necessarily result in strategic success on Earth. Similarly, the domains of space, sea, and air "ultimately can have strategic meaning only for the course of events on land" (p. 84).

Bowen's fourth proposition centers on a kind of geography of space and Earth. He argues that command of space enables the manipulation of celestial lines of communication using "Newtonian-Keplerian and electromagnetic" chokepoints (p. 89). Bowen also notes the terrestrial impact of Earth's geography on space warfare, including how different locations on the globe have varying advantages and disadvantages to access space. He reiterates the idea that the advantages of Earth-based weapons often get "overlooked" while space-based weapons receive excessive attention (p. 91). Making arguments for doomsday weapons being launched from space is naïve, for example, because the cost and vulnerability of such

weapons make them impractical. Using his analogy of Earth being like a coast further enables him to suggest that space capabilities can be attacked relatively easily from Earth, and the same holds true for space infrastructure based on Earth.

The fifth proposition explains the implications of Earth's orbit being akin to a cosmic coastline in terms of strategic maneuvers. This is no Basil Liddell-Hart-esque brilliant use of the indirect approach to achieve a quick, decisive victory. Rather, Bowen stresses the importance of more "mundane" space activities. In astroeconomic warfare, for example, one might divert resources away from a "primary theater" to function as a "larger strategic maneuver" (p. 126). But there are some challenges given the fact that so many space assets are neutral or commercially owned. As a result, "space-centric strategic thought must embrace its dependence and subservience towards objectives and vulnerabilities on Earth, not least on the logistics side." In other words, do not expect "space-to-space combat" to dominate as opposed to Earth-to-space combat (p. 142). Rather, the space domain helps to support Earth-based warfare by providing strategic depth, such as how it buys Israel "time" by making its Earth-based capabilities "more efficient" (p. 149). Other nations similarly benefit, such as through early warning and information capabilities.

The sixth proposition states that spacepower functions inside "a geocentric mindset" (p. 185). As this has been stressed adequately by this point, Bowen does not reiterate this idea excessively. Rather, he discusses the ramifications of this proposition for institutions in terms of culture and budget battles, among other issues. He highlights the value of theory, for example, by using his propositions to illuminate different lines of argument for and against an independent space force.

His last proposition—spacepower is "dispersed and imposes dispersion on Earth"—intriguingly shows how spacepower has affected warfare on Earth (p. 193). This section helps to an-

swer the “so what’ question of spacepower’s influence for terrestrial warfare” (p. 194). Using a case study of Taiwan, Bowen cements the value of his book not only for space professionals but also for all strategists contemplating future warfare. The author also pulls through the Clausewitzian thread by insisting that it is impossible to predict which nation(s) would achieve victory in this case study.

Bowen’s theoretical approach could be strengthened in a few areas with additional information. He does not make the case for how long the relationships between Earth and space will dominate future warfare as opposed to possible developments that might take place on the moon and elsewhere in space, such as asteroid mining. A proposition discussing the relative ad-

vantages and disadvantages of offensive and defensive warfare also would be a useful addition.

Bowen is to be commended for such a thoughtful work of military theory that illuminates key aspects of recent and future warfare. This book would be a challenge for all but the most advanced undergraduate students, but any school in the professional military education system—regardless of service—could benefit from this book’s timeless approach as well as the interconnections Bowen draws between the space domain and other domains. Similarly, all military historians wanting to stay up to date on current national security issues and those with a broader interest in strategy will be rewarded by reading this interesting and provocative book.

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Citation: Heather P. Venable. Review of Bowen, Bledyn E, *War in Space: Strategy, Spacepower, Geopolitics*. H-War, H-Net Reviews. March, 2021.

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