This PDF is auto-generated for reference only. As such, it may contain some conversion errors and/or missing information. For all formal use please refer to the official version on the website, as linked below.

Review – War in Space: Strategy, Spacepower, Geopolitics

https://www.e-ir.info/2020/09/05/review-war-in-space/

AUGUSTO DALL'AGNOL, SEP 5 2020

War in Space: Strategy, Spacepower, Geopolitics
By Bleddyn E. Bowen
Edinburgh University Press, 2020

Bowen's newest book, *War in Space: Strategy, Spacepower, Geopolitics*, is the result of his revised and expanded PhD dissertation and provides an original and compelling theory of spacepower that focuses on the conduct and exercise of military force and space technology. It offers a holistic view of the vast possibilities granted by spacepower. Through seven propositions, Bowen gives solid answers on how to think about what warfare in space looks like and what it means for military planners and strategic thinking. Simply put, his spacepower theory provides useful starting points for space strategy-making as it creates conceptual anchors to investigate the challenges of conducting, understanding and scrutinizing strategy and warfare, an activity that defies excessive prescription and linear war planning.

His spacepower theory embraces the instrumentalisation of violence with space technology, as it positively focuses more on war than on the entirety of relations between actors in space. It covers classic strategic concepts such as commanding a medium, lines of communication, friction, concentration and dispersal into orbit and how those concepts may shift in practice on Earth in light of the diffusion of spacepower. In brief, the book helps to think critically about the use of space systems in warfare – satellites, their infrastructure, methods of attacking them, as well as their influence on modern warfare and strategy.

A Clausewitzian spacepower theory

One of the most significant contributions of Bowen's book is its Clausewitzian way of thinking about the conduct of war. Besides stating that "space warfare is the continuation of Terran politics by other means" (p.3), his theory is well rooted in a Clausewitzian approach to theorizing war as a political activity. In Bowen's words, spacepower refers to the use of outer space's military and economic advantages for strategic ends, whereas a space power would be a country that uses outer space for its political objectives. Bowen also argues that any tactical action "must contribute to something on the strategic level to meet political goals on Earth, otherwise it is a mindless act of wanton violence and destruction" (p.6) and that acts of space warfare "do not suspend political intercourse or change the conduct of politics into something entirely different" (p.6). Such a view aligns with Sheehan's idea developed on *The International Politics of Space* in which space and politics have always been inseparably interlinked.

Bowen also advocates against the general idea that controlling space leads to a domination of Earth, mentioning that naval powers did not always dominate the destiny of continents. He warns against an over focus on seeking the destruction of space systems as an axiom for strategists and war planners who often seek the center of gravity of the opponent. The author keeps his Clausewitzian approach throughout the book as he moves away from the Jominian notion of decisive battles and quick victories that often overrun to astrodeterminist approaches available in International Relations and Strategic Studies. Although Bowen recognizes that spacepower influences the conduct of tactics and operations, he mainly focuses on strategy. His theory highlights that spacepower and operations in Earth

orbit must be seen as "primarily a supporting force or capability, not a direct war-winning capability or a scene dominated by spectacular battles" (p.7).

Therefore, Bowen defies the hegemonic perception of outer space, or a domination-based thinking, that presumes the ability of an actor to act with practical impunity in a medium at a time of its choosing. For him, the command of a medium is normally in dispute. As an analogy, Bowen mentions that even a hegemon at sea could not unilaterally determine the ultimate fate of land-based states. Hence, "continental powers, being weaker naval powers, took steps to ensure the Royal Navy did not have free reign in their coastal waters in a time of war" (p.33). In sum, the author correctly rejects the idea that the control of Earth orbit by one dominant state will confer dominance over Earth.

Bowen also devotes great attention to the logistical aspects of spacepower. He argues that logistics imply "understanding the effects of celestial lines of communication upon Earth as well as how spacepower depends on terrestrial lines of communication and objectives" (p.142). In short, spacepower logistics must be understood along with terrestrial logistics. By advancing Castex's argument about coastal defenses, Bowen maintains that the logistical support from celestial lines of communication matters for wars on Earth in a conceptually similar way to how logistical support from sea lines of communication matters for continental wars.

The most innovative contribution of his new vision of spacepower to the field is the idea that Earth orbit resembles a coastal zone and a secondary theatre of operations, rather than a vast ocean. Drawing on authors of the "continental school", such as Menon's *Maritime Strategy and Continental Wars*, Gorshkov's *The Sea Power of the State* and Castex's *Strategic Theories*, Bowen posits that spacepower would remain inherently geocentric. Bowen's spacepower theory provides new insights based on the experiences of seapower in continental rather than maritime wars. Hence, the author argues that what flies in orbit is within reach of Earth-based countermeasures, similarly to coastal defenses against naval forces and intrusions. Unlike interplanetary space, Earth orbit would compare to a proximate, crowded and contestable coastline and a littoral environment, rather than a vast, remote, distant and expansive ocean. Such an analogy makes a constructive review of existing spacepower theories, especially bluewater seapower approaches, based on the experiences of island powers who must engage with the seas to project their own power and deflect that of others, as Dolman's *Astropolitik* and Klein's *Space Warfare*. In short, for Earth-based polities outer space resembles what coastal waters and oceans have been for former continental powers such as Sparta, Carthage, Rome, Russia and India.

Bowen's effort to develop an explicitly pedagogical approach also has great merit. The author promptly acknowledges to the readers that those "seeking a war winning strategy or prophecy of future war from this book will be disappointed" (p.2). Fortunately, the author does not cover space regulatory frameworks or issues related to space governance. Moreover, he avoids a technocentric understanding of spacepower that takes technology away from political contexts. Bowen emphasizes that strategic problems will not be settled with simple space technologies solutions, cautioning the reader against common understandings that view space-based weapons as silver bullets.

Throughout his seven propositions, Bowen assists the reader's self-education about space, warfare and strategy. His *War in Space* does not provide policy prescriptions or a winning strategy. Neither does it address only scholars, policy-makers and officers from the United States and its allies. The author reserves a few pages to advance his understanding of a pedagogical theory and how analogical thought about space works. Bowen's theory clearly stems from the essential elements of Clausewitz's pedagogical thinking and his seven propositions are organizing principles for critical application and self-education. He describes strategic analogies as "the transposition of a strategic theory or concept derived from any particular case of warfare or strategic dilemma to another" (p.45). The author has consciously avoided an uncritical exercise in analogical reasoning successfully. In sum, Bowen's strategic analogies are valuable pedagogical tools and he is very cautious in terms of transparency while constructing and using them.

Strategic Studies and spacepower diffusion

Bowen's *War in Space* unquestionably settles his spacepower theory within the larger context of International Relations and Strategic Studies. As an example, his theory reinforces Biddle's contribution on *Military Power* by

assessing the influence of spacepower on modern warfare as a dispersing influence. Bowen makes two compelling arguments that greatly contribute to the field. First, spacepower in Earth orbit resembles the use of seapower by continental states, rather than maritime powers. Second, spacepower is a more subtle, secondary and supporting form of power. While deeply engaging with existing spacepower debates, Bowen also provides a pleasant bonus to the reader by slightly discussing issues such as the diffusion of military power and balance of power in his conclusions.

While Horowitz's *The Diffusion of Military Power* masterfully discusses the spread of military innovations, Bowen paves the road to further discussions on the diffusion of spacepower. Since the deployment and use of machines in Earth orbit greatly influences the conduct of modern warfare, it is of the uttermost importance to understand the implications of the diffusion of satellites and anti-satellite capabilities for politics and strategy. As space technologies and space systems diffuse away from the United States and its allies, Earth orbit may become a hostile littoral zone even for the most capable space powers. Moreover, Bowen rightly calls the development and improvement of other states' ability to undermine or mitigate United States' command of the commons through the development of counterspace weapons and long-range strike weapons by its name: hard balancing.

Despite control measures and efforts by the United States to constrain the spread of sensitive rocket and satellite technologies, Bowen posits that affordable space related technologies will continue to diffuse and that "developing counterspace measures are easier and cheaper than developing space systems" (p.112). This has a direct impact on the international balance of power. Since Bowen's spacepower theory acknowledges that the command of space refers to those who can control or deny space infrastructure in a time of war to varying degrees, a country only able to deny celestial lines of communication and elaborate space infrastructures "still possesses a degree of the command of space" (p.59). Other authors should not overlook such a statement. Another of Bowen's analogies is that continental sea powers could achieve several degrees of the command of the sea in coastal regions without using large ocean-going fleets. Therefore, it is worth challenging long-lived balance of power notions in which third countries must possess a carbon copy of all top-platforms and advanced weapons systems of the leading state in order to catch up with it successfully.

Finally, *War in Space* is unquestionably a must-read book to all those interested in spacepower beyond Netflix's *Space Force* series. Through its fluid writing and pedagogical character, the book is certainly accessible to non-experts readers. Nevertheless, the field of Strategic Studies is the one to be benefited the most from Bowen's masterpiece, although International Relations scholars would also greatly benefit from joining such strategic debate. At first glance, the book's repeated mentions of Jomini's, Mahan's and Dolman's works may cause some strangeness to a reader waiting for a much-promised Clausewitzian spacepower theory. However, by combining a robust critical view on former spacepower theories with his deep understanding of the "continental school", Bowen now offers the public a vigorous and brand-new Clausewitzian spacepower theory that definitely establishes itself side by side with previous well-known contributions on the field, such as those of Dolman, Sheehan and Klein.

About the author:

Augusto C. Dall'Agnol is a Brazilian Ph.D. student in International Strategic Studies at the Federal University of Rio Grande do Sul and Vice President of the South American Institute for Politics and Strategy.