

The Space Power of the Nations: A Maritime-based Approach

By Captain Manuel Moreno Minuto, Italian Navy | December 10, 2020

The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in the race for space.

John Fitzgerald Kennedy (1962)

“The universe is an ocean, the Moon is the Diaoyu Islands, Mars is Huangyan Island. If we don’t go there now even though we’re capable of doing so, then we will be blamed by our descendants. If others go there, then they will take over, and you won’t be able to go even if you want to. This is reason enough.” On July 2018 with this simple, but effective statement, the Head of the Chinese Lunar Exploration Program, Ye Peijian explained to the world the strategic approach behind Beijing’s efforts in outer space. Just few months before but on the other side of the Pacific, U.S. President Donald J. Trump indicated in his *America First National Space Strategy* that “Our travels beyond the Earth propel scientific discoveries that improve our lives in countless ways here, right here, at home: powering vast new industry, spurring incredible new technology, and providing the space security we need to protect the American people.” Both views portray a growing competition in space where advanced nations (not only the superpowers) will attempt to protect their strategic interests.

The “Space Race” began in 1957, with the tiny and inoffensive soviet Sputnik, but it is now a multi-layered confrontation between different concerns (military, civilian, corporate) and a variety of technologies. Leaders need to address the complexity of space with an inclusive strategic approach, as this is the only way to take sound and comprehensive decisions. This paper examines some of the maritime-based space power theories proposed by scholars during past 20 years, but whose principles arise from the major naval thinkers of the past two centuries.

The Lexicon of the Space Arena

Control, command, dominance, and exploitation have been the ultimate purpose of strategy since the time of Sun Tzu. The aim of the strategic approach is to reduce the bias of temporary occurrences in favor of long-term success. In space, this requires an accurate definition of space-based lexicon, which scholars still dispute. The term grand strategy was introduced in 1967 by Colonel H. B. Liddel Hart with the following definition: The role of grand strategy—higher strategy—is to co-ordinate and direct all the resources of a nation, or band of nations, towards the attainment of the political object of the war—the goal defined by fundamental policy.[1] Liddel Hart’s thoughts were anticipated in 1911 by English naval strategist Sir Julian Corbett in *Some Principles of Maritime Strategy* where he distinguishes between minor and major strategies. Twenty years later, French Admiral Raoul Castex in his *Théories Stratégiques* argued that *stratégie générale* was a combination of land and naval power. At that time, the relevance of air power was still debated. Colin S. Gray also depicts grand strategy’s holistic nature in his *Strategy and History*:

The four geophysical environments for conflict—land, sea, air, and space—are distinctive as to technologies, tactics (and hence doctrines, that is how to fight), and operational art but not with respect to strategy or policy. The military instruments of the grand strategies of particular countries are skewed broadly for reasons of the geographical considerations already cited in favour of one or more of the environments.[2]

Broadly speaking, it is possible to conceive grand strategy as the sum of the effects of many overlapping fractional strategies. Grand strategy is a big game where the only actors are nations. Despite the growing role of private companies, space strategy remains a government business. In Bowen's seminal work on space power he defines space strategy as, "A plan, defined in space and time, to use force and the threat of it with regard to outer space and the use of space power on Earth." [3] Everett C. Dolman in his *Astropolitik* gives space strategy a greater role: "Astropolitik is grand strategy. Indeed, it is the grandest strategy of them all ... In its narrowest construct, Astropolitik is the extension of primarily nineteenth- and twentieth-century theories of global geopolitics into the vast context of the human conquest of outer space." [4] Space strategy, however, has to be considered just a portion of grand strategy, and his usage shares the same dynamics and constraints of other fractional strategies. Space power, as the basic element of the space strategy remains a debated concept. [5] Robert L. Pfaltzgraff Jr. expresses a charming point of view: "Space power consists of capabilities whose most basic purpose is to control and regulate the use of space. This includes the ability ... to maintain freedom of action in space as vital to national interests." [6] Looking the to Far East, Dean Cheng highlights also a comprehensive awareness, or "a strategic way to enhance its economic, scientific, technological, and national defense strength, as well as a cohesive force for the unity of the Chinese people." [7]

The last term yet to be defined is "space power theory," and views from Bodwell are once again beneficial: Strategic theory is a summation of ideas, concepts, and propositions that should assist an individual's development and practice of strategy, but not a ready-to-use strategy Space power theory, then, should embrace, explain, and connect the many different uses of space power in the service of space strategies, and should view strategic theory as geared toward helping practice. Strategic theory, of which space power theory is a type and specification, can help students and analysts of war make sense of space power with existing concepts from terrestrial experience whilst encouraging creative strategic thought and sound judgment.

Theory is consequently defined as the tool to connect the use of space power, for example Moon-exploration, to the higher level of the space strategy of the nations.

Toward a Maritime Approach to Space Power

In October 1996, Colin S. Gray published his well-known essay "The influence of space power upon history," which stated:

The future of air power was clearly discernible in 1918; the future of space power is similarly discernible today, following the experience of Desert Storm. Space power, in common with sensible approaches to sea power and air power, can and should aspire to make the critical strategic difference in war. Despite its growing importance, no comprehensive theory of space power has been formulated. [8]

Gray also questioned the strategic community: "Where is the theory of space power? Where is the Mahan for the final frontier?" His call for action was not unanswered by scholars during the following years, and George and Meredith Friedman highlighted a strict correlation between sea and space environment according to five parameters of military operations. [9] In 2000, the magazine *Space Policy* published the article "Back to the future: Space power theory and A. T. Mahan" in which [Lieutenant Colonel Martin E. B. France, U.S. Air Force](#), criticized the lack of space superiority by the United States and summoned the strategic community to "[take] a lesson from the author who defined sea power, Alfred Thayer Mahan." A crucial contribution to the debate came from U.S. Navy Commander John Klein, who in 2006 issued "Space Warfare" where he exposes a comprehensive attempt to apply a strategic analogy among Sir Julian Corbett's thoughts and space power. Gray's opinion on Klein's work is that of a mixed success:

The application, in broad terms, of Corbettian concepts of limited liability in war and the temporary nature of control to Space power is useful, but when Klein seeks to apply the same framework to concepts such as offense, defense, concentration, and dispersal, the real limitations of the Corbettian strategic analogy are revealed.[10]

Despite Gray's hesitations, [the book made clear](#) the holistic nature of space strategy. Following Klein, more scholars focused their attention to the maritime-based approach, and in December 2016 the Center for Security Studies published "[From Blue to Black: Applying the Concepts of Sea Power to the Ocean of Space](#)" by Jerry Hendrix and Michelle Shevin-Coetzee. The authors, after revisiting U.S. and China ambitions, concluded:

Adapting [the writings of Mahan and Corbett](#) as a starting point for future conversations regarding a strategic approach offers firm ground upon which to build. Although the future remains uncertain and the vastness of space offers ambiguity, the lessons of the past can chart a good course forward.

The command of space as the fundamental concept of space power theory. The theory is advanced by tempering versions of the "command of space," stressing its educational intent, and explaining the nuanced sub-concepts of space control and denial through understanding some precedents set by seapower theory. In the process, aspects of Mahanian and Corbettian seapower theory are unified.[11]

He also suggested to military leaders an effective operational approach:

Any discussion on the grand strategic contributions of space power in war must begin with the command of space—how to achieve it, what its influence may be, and how different activities contribute towards or exploit it ... Destroying a satellite, for example, must meaningfully contribute to a command of space in either material or psychological ways or it is a waste of resources. Commanding space must then translate into effects on Earth to have an effect on grand strategy ... The command of space is only relevant in how it allows space power to influence a wider war on Earth, and its strategic significance is not set in stone.[12]

Thus the command of space is appointed as the only and all-inclusive space strategy theory.

Conclusion

The panorama of a major competition in the outer space is already a major strategic reality. The Chinese landing on the Moon of 3 January 2019 is the last event of the continuity of the space race initiated almost 50 years ago. Space as a unique environment requires a specific, but not totally new, strategic approach that embraces the deep understanding of space power, including its natural boundaries and perspectives. Scholars and policy makers have debated for more than four decades about the real meanings of space power and space strategy, but the Cold War focused the discussions on the two superpowers and envisioned a strong military posture.

Today the situation has dramatically changed, with small to medium powers, a new major power and corporations having a presence in space. The strategic thinking must now embody a plurality of military and civilian actors to avoid leaving essential information out of the analytical process. Past military strategists, from East to West, speculate about space, but effective analogies come also from maritime thinkers. This doesn't imply that space strategy is only a navy matter. On the contrary, space can influence any organization or resource of a state, but the strategic approach to speculate on space power theory can more easily be drawn from the maritime history. Space and sea (including the underwater portion) are both a frontier for exploration, resources, and growth. These three motivating factors were in the mind of ship's captains during

the Age of Discovery and are still in the mind of frontrunners of the space era. The same strategic approach used by Mahan, Corbett, and in more recent times by Gray, Klein, or Bowen, can be a useful instrument for the leaders of the space era. Scholars at the end of 19th century and the beginning of 20th analyzed 100 years of maritime confrontation to help leaders make sound decisions before, or in preparation for, future confrontations. Their goal was to teach a strategic approach, not merely give suggestion about the use of the fleets. Some of their principles, such as the control of the sea line of communications or Mahan's factors to become a maritime power flawlessly fit with the space environment.

In 1962 U.S. President John F. Kennedy outlined his vision of manned exploration of the Moon stating, "We set sail on this new sea," thus summarizing the maritime spirit of space strategic thinking in just seven words.

Endnotes

- [1] Liddell Hart and Basil Henry, *Strategy: The Indirect Approach* (London: Faber and Faber, 1967).
- [2] Colin S. Gray, *Strategy and History – Essays on Theory and Practice* (Oxfordshire, UK: Routledge, 2006).
- [3] Bleddyn E. Bowen, *From the Sea . . . To Outer Space: The Command of Space as the Foundation of Space Power Theory*, Department of Defence Studies, King's College London (2017).
- [4] Everett C. Dolman, *Astropolitik – Classical Geopolitics in the Space Age*, School of Advanced Airpower Studies, Maxwell Air Force Base (2002).
- [5] *Towards Theory of Space Power: Selected Essays*, Institute for National Strategic Studies National Defense University (March 2011).
- [6] *Towards Theory of Space Power: Selected Essays*, "International Relations Theory and Space Power."
- [7] *Towards Theory of Space Power: Selected Essays*, "Space power in China."
- [8] Colin S. Gray, "The Influence of Space Power upon History," *Comparative Strategy* 15, no.4 (1996): 293-308.
- [9] George Friedman and Meredith Friedman, *The Future Of War: Power, Technology, and American World Dominance In The 21st Century* (NY: Crown Publishers, Inc., 1996), 370–71.
- [10] *Towards Theory of Space Power: Selected Essays*, "Theory Ascendant? Space Power and the Challenge."
- [11] Bowen, *From the Sea . . . To Outer Space*.
- [12] Bowen.

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