

The Next Space Race: A Blueprint to American Primacy

Richard M. Harrison and Peter A. Garretson
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Reviewed by: Areeba Azhar¹

America's Apollo Program of the 1960s and early 1970s, called the human space flight program, served as the foundation for accessing and exploring the Moon. In "The Next Space Race: A Blueprint to American Primacy", is co-authored by Richard Harrison and Peter Garretson, with contributions from Anthony Imperato, Dr Larry M. Wortzel, Cody Retherford and Dr Lamont Colucci, sketch a comprehensive exploration of the evolving dynamics in the US pursuit of space supremacy. The book dissects who, why and what of space, providing actionable recommendations for maintaining leadership and reaping economic benefits in space. The authors paint a holistic picture of the high stakes involved in the US-China space competition, emphasizing the growing complexity between security and economics in space due to the development of advanced technologies.

The book consists of eight chapters: (i) Space Is an Untapped Resource; (ii) Competing with the Chinese Space Vision; (iii) Challenges to US Space Security; (iv) American Space Primacy in Question; (v) The Future of the US Space Force; (vi) Shaping the Global Rules-Based Order of Space; (vii) Charting the Dimensions of Space Competition; and (viii) Defining an American Space Agenda. All chapters highlight the space strategy of the US and China while stressing the urgency for the US to structure a comprehensive approach to meet or surpass China's timelines.

In Chapter One, the authors together with Anthony Imperato delve into the imperative shift from a focus on traditional space exploration to the burgeoning realms of space commerce, citizen spaceflight, space mining and space development. They also highlight the transformation in space accessibility due to reusable rockets, artificial intelligence, 3-D printing and robotics. The authors emphasize the indispensable role of solar energy both for further development in space and for providing power to Earth. The emergence of commercial space companies like SpaceX, Blue Origin and Virgin Galactic is recognized for fostering space tourism and advancing technology. The

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authors predict a potential boom in the space economy, projecting it to reach 9% of global GDP by 2070 (p. 3).

In Chapter Two, Larry M. Wortzel provides a detailed evaluation of China's space activities, while he precisely reveals China's strategic roadmap, highlighting key milestones and plans to position the nation as a leading space power by 2045 (p. 21). He explores how China's increasing Comprehensive National Power (CNP) is in part derived from its space activities. Furthermore, China's BeiDou Navigation Satellite System poses a serious threat to the US GPS. In addition, Wortzel examines China's construction of its space station "Tiangong" and also highlights its collaboration with Russia in the development of new space systems. He notes that China envisions its space efforts culminating in an Earth-Moon economic zone generating USD 10 trillion annually by the year 2050 (p. 35).

In Chapters Three and Four, contributors Anthony Imperato and Cody Retherford together with the authors examine the evolving nature of space, shedding light on the historical and contemporary challenges the US faces in the space domain. They emphasize the need to safeguard the US space security amidst increasing militarization by hostile nations and highlight its role in economic growth and military power projection. They have pointed out NASA's delayed response in providing advance warning of solar threats and challenges like the inability to return to the Moon since 1972 and reliance on Russian rockets, underlining a potential awareness gap. The contributors stress that smaller actors with space program should not be ignored, as they cite President Lyndon B. Johnson who stated, "Control of space means control of the world" (p. 59). They also explore space initiatives of China and Russia and their diplomatic maneuvers and advocate a consolidated strategy to position the US as the dominant space power.

Chapter Five authored by Harrison and Garretson examines the role of the United States Space Force (USSF) in safeguarding the US interests in space and preventing it from losing ground in this strategic theater. They criticize the inadequacy of the existing organizational structure and also the Air Force Space Command, to take advantage of strategic opportunities in space. They recommend a proactive USSF stance in addressing China's cislunar space threats through developing counter-space capabilities and demonstrating military prowess. Various counter-space capabilities are also discussed in this chapter, including the disruptive Counter Communications System Block 10.2, Anti-satellite Weapons (ASAT) or satellite-borne threats and GPS Satellites.

Furthermore, the authors advocate strengthening the US Space Development Agency (SDA) and emphasize better preparation for potential conflicts.

In Chapter Six, the contributors Lamont Colucci and Anthony Imperato along with the authors advise the US to build alliances with both traditional and non-traditional partners to shape global norms in the space. They highlight the complexities arising from technological advancements, emphasizing the need for urgent policies and norms for a safe and secure space environment. Territorial and resource rights are identified as crucial issues, requiring international consensus in the future. The contributors also argue that allied partnerships are strategic assets in the era of great power competition, especially in space initiatives, to counter potential alliances among adversaries. In addition, they stress the importance of the US leading in shaping space environmental norms, countering space activities of China and Russia on Earth and the Moon, and also emphasize the growing acknowledgment of the need for planetary defense.

In the last two chapters, Harrison and Garretson analyses the intricate dimensions of the US-China space competition, focusing on six key areas: (i) Space policy and finance tools; (ii) Space information service; (iii) Space transportation and logistics; (iv) Human presence; (v) Power for space systems; and (vi) Space manufacturing and resource extraction. They stress the need for policymakers to carefully prioritize activities within these sectors due to resource constraints. The authors also highlight the economic and strategic benefits the US gains from specific space efforts and compare them with China. Additionally, the authors argue that a lack of policies and plans could result in significant economic and military disadvantages for the US if China excels in these areas. The authors emphasize the necessity of collaboration among various US stakeholders to ensure that the US remains the global guarantor of economic prosperity, security and freedom (p. 137).

According to the authors, this book benefits the leaders in the US military, government, academia and the private sectors, while providing recommendations for policymakers on how to ensure that the US seizes the opportunity of outer space, to maintain superiority and realize significant economic benefits. The authors have highlighted the increasing US-China competition keeping in view that China has made phenomenal progress in the space. However, in many chapters, the authors have criticized the US government officials, highlighting their failure to provide a clear US vision and a sustained set of policies. In essence, the book emphasizes the crucial role of space in America's future, essential for maintaining its global supremacy.

As the narrative unfolds, it becomes evident that the upcoming decades will determine the leader in the race for space dominance.

