

H-Diplo | Robert Jervis International Security Studies Forum

Review Essay 75

Daniel Deudney. *Dark Skies: Space Expansionism, Planetary Geopolitics, & The Ends of Humanity*. Oxford: Oxford University Press, 2020. ISBN: 9780190903343

Reviewed by **R. Lincoln Hines, US Air War College**

27 July 2023 | PDF: <http://issforum.org/to/RE75> | Website: rjissf.org

Editor: Diane Labrosse | Commissioning Editor: Andrew Szarejko | Production Editor: Christopher Ball

With declining launch costs and the rise of private space companies, humanity appears to be embarking on another phase of expansion into the final frontier.¹ Billionaire commercial space leaders such as Elon Musk and Jeff Bezos tout this expansion as an unambiguously positive development, offering tremendous opportunities for prosperity, safeguarding life's continued existence, and fulfilling humanity's innate expeditionary drive. Against this optimism, Daniel Deudney's *Dark Skies* provides a powerful and sobering corrective that should provoke a necessary debate about the possible worrisome consequences of humanity's expansion into the final frontier.

Dark Skies asks whether space expansionism is good for humanity or whether it might have harmful and unintended consequences, even those that may threaten humanity's continued existence. Deudney systematically interrogates the propositions advanced in favor of space expansionism and examines its effects. From this analysis, Deudney argues that the net effect of space expansionism has been far more harmful than space expansionists admit (56). Considering the risks posed by further space expansionism, Deudney argues for an Earth-centric approach to space activities.

Deudney's argument stands in stark contrast to that of the "space expansionists," to use his term. Space expansionists comprise a diverse group of individuals who uncritically embrace space expansionism as positive for humanity, promising to solve several of humanity's problems, ensuring its survival, and increasing human prosperity. According to Deudney, space expansionism is a type of "science-based and technologically-dependent religion" that is a "magnetically attractive and intoxicating ideology" (13-14). Arguments for space expansionism are rooted in teleological grand narratives about human progress coupled with positive visions from science fiction about potential futures (neglecting the more pessimistic accounts offered in science fiction).²

¹ The views expressed in this review represent the personal views of the author and are not necessarily the views of the Department of Defense, the Department of the Air Force or The Air University.

² For discussions of some of these views, see David Lavery, *Late for the Sky: The Mentality of the Space Age* (Carbondale: Southern Illinois University Press, 1992), 108-115; W. Patrick McCray, *The Visioneers: How a Small Group of Elite Scientists Pursued Space Colonies, Nanotechnologies, and a Limitless Future* (Princeton, NJ: Princeton University Press, 2013), 17; For darker imaginations of the space domain in science fiction, see Raffaekka Baccolini and Tom Moyland, eds., *Dark Horizons: Science Fiction and the Dystopian Imagination* (New York: Routledge, 2003).

Deudney's discussion of space expansionist views, while not the book's central focus, is perhaps one of its most important contributions. Although it establishes the foil for his argument, he also identifies a prominent and distinctive narrative that pervades space policy discussions.³ His discussion of space expansionism suggests important avenues for further research, such as investigating the sociological origins of space expansionist beliefs and how they became dominant beliefs in the space policy world, or for an analysis that disaggregates the diversity of views that fall under this broad label.

Deudney then offers a comparative assessment of the propositions made by what he defines as habitat and military expansionists, and the diverse if incohesive arguments against space expansionism. To military space expansionists, space offers the ability to either deter or dominate adversaries in space.⁴ Habitat expansionists, on the other hand, focus on the ways that humanity's expansion into the solar system will provide enormous benefits for humankind and even result in greater individual freedom.⁵ Deudney assesses these claims by drawing on geopolitical theory to develop a set of propositions about how geography and technology interact.⁶ He then compares the propositions from space expansionists to those developed by geopolitical theory, arguing that further space expansionism will likely lead to greater planetary closure and vulnerability.

The latter part of the book is more speculative, exploring how the book's propositions would apply in futuristic scenarios of expansionism where humans settle or colonize planets in the solar system. Should humans overcome the extraordinary technological barriers to realizing such a future, Deudney expects that it will likely be dangerous and detrimental to planetary security—as the tragic and violent politics that play out on Earth would be extended into the solar system (reminiscent of the conflicts articulated in Devon C. Ford's fictional *The Expansion* series).⁷ Deudney concludes the book by developing an alternative to the military and habitat expansionists' goals, advocating for an Earth-oriented or "Space for Earth" (366-381) perspective that emphasizes arms control measures and environmentalism. This program for space is far more restrained than those offered by expansionists, but based on Deudney's analysis, this provides the best path forward for ensuring planetary security.

Overall, *Dark Skies* makes several significant contributions. First, for political scientists, the study of space policy has received far less attention than its real-world importance warrants. Moreover, as Deudney notes, this book is novel for focusing on the *effects* of space expansionism rather than its causes (28). Thus, Deudney's book breaks new ground in the study of space in political science. Most importantly, the book articulates a powerful and logically coherent argument against the space expansionist claims. While it is by no means the first pessimistic view of the Space Age and the future of space expansionism, unlike other works, it provides a particularly systematic rebuttal of space expansionist arguments.⁸ Last, beyond the arguments of

³ For some examples of these narratives, Deudney points to: Robert Zubrin, *The Case for Space: how the Revolution in Spaceflight Opens a Future of Limitless Possibility* (Amherst, NY: Prometheus Books, 2019); Michio Kaku, *The Future of Humanity: Terraforming Mars, Interstellar Travel, Immortality, and Our Destiny Beyond Earth* (New York: Doubleday, 2018); James Vedda, *Choice, Not Fate: Shaping a Sustainable Future in the Space Age* (Bloomington, IN: Xlibris, 2009)

⁴ Everett C. Dolman, *Astropolitik: Classical Geopolitics in the Space Age* (London: Frank Cass, 2002); I.F. Clarke, *Voices Prophesying War, 1783-1984* (New York: Oxford University Press, 1966); H. Bruce Franklin, *War Stars: The Superweapon and the American Imagination* (New York: Free Press, 1990).

⁵ Robert Zubrin, *Entering Space: Creating a Spacefaring Civilization* (New York: Penguin Putnam Inc. 1999); Robert Zubrin and Richard Wagner, *The Case for Mars: The Plan to Settle the Red Planet and Why We Must*, (New York: Free Press, 1996); Gerard K. O'Neill, *The High Frontier: Human Colonies in Space*, (California: Space Studies Institute Press, 2019); J.D. Bernal, *The World, The Flesh, and the Devil: An Inquiry into the Future of the Three enemies of the Rational Soul*, 1929; Ed., Charles S. Cockell, *The Institutions of Extra Terrestrial Liberty*, (New York: Oxford University Press, 2023).

⁶ Deudney argues that geopolitical arguments can be traced back to Aristotle, Montesquieu, Hobbes, Rousseau, and Kant (271). For a fuller discussion on the intellectual foundations of geopolitical theory, see Daniel Deudney, "Geopolitics as Theory: Historical Security Materialism," *European Journal of International Relations* 6:1 (2000): 77-107.

⁷ Devon C. Ford, *Recon: The Expansion Series Book 1*, (self-published; UK: Vulpine Press, 2020).

⁸ For examples of some other criticisms of space expansionism see Amitai Etzioni, *Moondoggle: Domestic and International Implications of the Space Race* (New York: Doubleday, 1964); Gerard J. DeGroot, *The Dark Side of the Moon: The*

this book, several of the chapters provide valuable primers for those who are interested in topics ranging from contemporary debates about planetary security to the physical characteristics of outer space to historical background on the militarized nature of the Space Age.

Although Deudney's book provides a convincing rebuttal to the space expansionists enthusiasm, it may overcorrect. If space expansionists are overly optimistic, this book paints a dark picture that seems similarly deterministic. Yet there may be a third way to understand the Space Age and its likely future: a techno-agnosticism that allows for greater human agency. Such a perspective might instead argue that space expansionism is what states or the humans comprising them make of it, allowing for the many ways in which contingency and human agency continue to shape world politics, unlike the rigid material determinism of geopolitical theory (which Deudney readily recognizes as a limitation of his theory in chapter 8).

Just as taboos have developed against the use of nuclear and chemical weapons, it is possible that humans may exhibit similar constraint should their activities continue to expand beyond Earth. Humans have created security communities on Earth in regions such as Western Europe that used to be home to the world's deadliest wars. And just as space capabilities have made conflict more likely, satellites have also made it easier to enforce arms control treaties and have decreased the likelihood of surprise attacks. The many puzzling ways humans defy material logic on Earth will likely continue to influence these social creatures should they expand beyond Oasis Earth—a future that is either terrifying, hopeful, or something in between—but not preordained.

Nonetheless, *Dark Skies* is a must-read for international relations scholars who focus on space. As humans become increasingly capable of accessing and using outer space, it is time for a serious debate about the risks and tradeoffs associated with further space expansion. The Space Age has brought tremendous and undeniable advantages to humankind—from numerous spinoff technologies to communications, remote sensing, position, navigation, and timing satellites. *Dark Skies* is a powerful reminder of how, despite all these benefits, human expansion has resulted in several harmful consequences which could one day pose existential risks. In this vein, Deudney's book begins a necessary discussion that scholars and policymakers will likely grapple with for years to come.

R. Lincoln Hines is an assistant professor for the West Space Seminar at the US Air War College.

Magnificent Madness of the American Lunar Quest (New York: New Your University Press); Neil M. Maher, *Apollo in the Age of Aquarius* (Cambridge, UK: Cambridge University Press, 2004).