

## Book Review

Rothe, D.L. and Collins, V.E. (2025) *Space Expansionism and Criminology: The Emerging Terrain of Crime, Harm, and Violence*. Oxon: Routledge.

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The world's richest and most powerful people and states are becoming increasingly interested and invested in outer space. In their opening chapter, Rothe and Collins (2025: 3) explain how both public and private investment in activities relating to space expansionism are increasing in the 21<sup>st</sup> century, with space being progressively viewed as a "resource for development". Consequently, their stated goal is to highlight the harms that accompany such expansion. Drawing upon the work of Friedrichs (2010), the authors call for a *prospective* criminological approach to understanding (and preparing for) white-collar and state-corporate harms stemming from global space industries, rather than a *retrospective* one. This mirrors similar thoughts from other space criminologists who have called for "precautionary approaches" to space harms and crimes (Lampkin and White, 2023: 18) in order to ensure we refrain from making "the same mistakes in space as we have on Earth" (Takemura, 2019: 7). Namely, the prevention of actions that create social, political, environmental, economic and cultural harms.

Chapter Two is perhaps the most important, dedicated to the book's central theme of space expansionism. The authors begin by tracing the historical development of space launches, travel and satellite deployment, describing the significance of political tensions during the cold war era (1950's-1980's) which concentrated the majority of expansionist activities in the hands of just a few states, most notably the former Soviet Union and the United States (U.S.). Importantly, key differences are highlighted between the cold war and contemporary space expansionism, such as the move towards tourism activities (like space hotels and colonisation) as well as space weaponization and militarisation, neither of which were particularly prominent in the 20<sup>th</sup> century. Significantly, Rothe and Collins (2025: 35) describe 21<sup>st</sup> century space activities as signs of "strategic muscle-flexing among the major powers" which mirrors the technological rivalry of the cold war era. However, out of this muscle-flexing comes a serious concern. The 1967 Outer Space Treaty declared space as a *global commons*, prohibiting the national appropriation of celestial resources. Rothe and Collins critically highlight the recent U.S. Space Act of 2022 which ominously stated that the U.S. no longer views space as a global commons. This could be regarded as a statement of intent for the years to come. Chapter Two also considers the recent surge in private space investment and the tribulations of SpaceX, Blue Origin and Virgin Galactic, all U.S.-based companies funded by the world's richest men (Musk, Branson and Bezos). This leads the authors to humorously describe private actor growth in outer space as a playground for billionaires with money to burn. A pertinent example of this is private fixation on the asteroid Psyche-16. Made out of pure metal, Psyche-16 has an estimated worth greater than the global economy at "\$10,000 quadrillion U.S. dollars" (Rothe and Collins, 2025: 33).

In Chapter Three, the authors forge new ground in space criminology through their consideration of space nostalgia which they argue has a profound impact on the public acceptance of space expansionism today. Rooted in ideas of nationalism, romanticism, idealism, frontierism and identity which are embedded in connotations of the 1930's American dream, space nostalgia is purported to both manufacture and legitimise space exploration activities (like tourism, mining, colonisation and warfare). This is important because the harmful by-products of space expansionism, such as environment harm and contributions to climate change, are ignored in place of the comfort and familiarity found in the public's fascination with space nostalgia.

Chapter's Four and Five (Planetary Politics and Space Junk), build upon the authors earlier work in the domain of space weaponization published in the esteemed *British Journal of Criminology* (Rothe and Collins, 2023). Here, they discuss the important role outer space, and particularly the low Earth orbit region, plays in space warfare and militarisation. With a continual recognition of outer space as an environment that can be harmed and polluted with human-made satellites and debris, Rothe and Collins stress the command than powerful people (particularly Musk), companies (like X - Twitter) and states (primarily the U.S., Russia and China) have in shaping global politics. Satellites, for instance, are vital to military prowess and strategy, and Elon Musk has commanded a domineering role in dictating military strategy in both the recent Ukraine-Russia war, and Israel-Gaza conflict. This individual (i.e. Musk) dominance and impact on international politics and relations is described as a new phenomenon and, historically, it has been states rather than individuals that have commandeered such power. Ultimately, the importance of SpaceX's Starlink infrastructure cannot be underestimated in the realm of terrestrial and space warfare. In terms of space junk, the situation described by the authors is harrowing. While we, as a species, understand the problems with orbital debris accrual (like having to manoeuvre around debris, or difficulties travelling through it), Rothe and Collins (2025: 109) rightly suggest that "states and corporations continue to engage in behaviours that add to the debris in space", remaining ignorant to the future complications debris may present. Furthermore, the authors are critical of the strategy of debris reentry as a "sustainable" and standardised approach to debris mitigation when we know that reentry adds harmful and toxic gases into Earth's atmosphere. As such, space junk mitigation negatively contributes towards the acceleration of climate change.

Chapter Six (Space Mining) also raises significant environmental concerns including from increased rocket launches needed to access off-Earth resources and the strain this will place on the orbital environment through additional space junk, and atmospheric emissions pollutions. Despite such concerns, Rothe and Collins acknowledge that states and corporations remain ignorant of such harms, instead prioritising the wealth that could be generated from space mining. They use Asteroid Psyche-16 as an example of the strength of profit motive, suggesting the commercial value of the asteroid's gold alone to be \$700 quintillion US dollars. As such, space mining is said to be vulnerable to capitalist motives and could result in the transference of "polluting industries away from Earth and into space" (Rothe and Collins, 2025: 136).

Chapters Seven and Eight focus on space tourism and colonisation. Tourism is divided into off-Earth activities (like future space hotels and suborbital flights) and Earth-based activities, such as space-themed experiences, accommodations, museums and edutainment facilities. Importantly, the authors describe off-Earth space tourism activities as the ultimate form of consumer capitalism and commodity fetishism whereby billionaires can largely escape criticism of the harmful impact such activities have on both the Earth's climate (as they are carbon-intensive activities) and people on Earth (the vast majority of whom cannot afford to participate). As such, Roth and Collins describe space tourism as a form of deviant leisure, an extreme and dark tourism that represents the slow violence of consumer capitalism. In terms of colonisation, justification for inhabiting the moon, mars, or other locales in the solar system are predicated on the assumption that life on Earth will, eventually, collapse due to runaway climate change, disease or war. Described by Rothe and Collins (2025: 180-182) as "apocalyptic mythmaking", such promises to save humankind from itself are used by billionaires like Musk and Bezos to legitimise their ideas. But an irony is found in the damage that pursuing such ideas causes, to social life (billions spent on chasing space expansionism, rather than addressing inequalities on Earth), and the natural world (rocket launching contributes negatively to space junk accrual and burning of the ozone, for instance).

Chapter Nine (The Marketing and Selling of a Utopic Future For All) investigates the variety of space-related products found in the western world, from NASA's range of clothing, to space-themed children's playgrounds and toys, to films, TV shows, board games and breakfast cereals. These physical

reminders of outer space, for Rothe and Collins (2025: 202) illustrates the “ideal and sanitized view of space exploration” that is created by space-faring nations, companies and powerful elite individuals. Space-themed consumption (particularly in the United States, Russia and Europe) harks back to the nostalgia of the Cold War era synonymous with notions of frontierism, patriotism, religiosity and manifest destiny. As a result of clever marketing, conspicuous consumption of space-related products fails to account for the environmental harms of both the space industry as a whole, and consumption *en masse*. Consequently, the authors succeed in demystifying space expansionism from the environmental impact of space exploration and fetishistic space-related consumer capitalism. There is a sense of irony projected here in the notion that space expansionism and colonisation is rationalised by interested parties as a legitimate means for escaping runaway climate change on Earth, without considering that those very activities (particularly the launching of rockets and satellites) is contributing towards the climate change that they are trying to escape.

Overall, *Space Expansionism and Criminology* is an extremely thought-provoking read that exposes the harms of expanding space visions and ventures. This book is inter-disciplinary in nature, and relevant for students, academics and practitioners not just in criminology and the social sciences, but also in the areas of philosophy, environmental ethics, physics, astronomy, and international relations. *Space Expansionism and Criminology* pushes the boundaries of criminology, particularly in the areas of white collar and corporate crime, exposing the harms that are being created, and will continue to be created, by the world’s richest people, companies and states in the near future.

## References

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