

## Review - Space Warfare in the 21st Century: Arming the Heavens

Written by Bleddyn E. Bowen

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BLEDDYN E. BOWEN, APR 12 2017

***Space Warfare in the 21<sup>st</sup> Century: Arming the Heavens***  
**by Joan Johnson-Freese**  
**Abingdon: Routledge, 2017**

'The sky is falling, again' this book dramatically declares on its opening page, and a section heading afterwards despairingly cries 'it's déjà vu all over again,' betraying an apparent frustration at the recurrence of thinking about war in space. Indeed, such phrases are apt as the argument in this book will strike any seasoned scholar or practitioner in space security as reminiscent of the author's previous offerings on the subject. This book by Joan Johnson-Freese of the US Naval War College represents the third variation of the same argument: that the United States is endangering stability in outer space through its pursuit of various space weapons programmes and the deployment of bellicose rhetoric regarding space warfare, whilst it is also prudently—in Johnson-Freese's view—hedging against future uncertainties by developing those allegedly destabilising weapons systems.[1] This argument remains largely unchanged from the previous two books, and this is unfortunate as the sub-arguments on the rise of 'NewSpace' companies and activities at global space governance make for interesting and informed reading on recent American commercial space policy and diplomatic activities. This book is of most use to newcomers to space security and the basic parameters of contemporary American space policy-making and debate, but for those already experienced in space policy the arguments and controversies will be quite familiar.

Chapter 1 argues that US space activities do not meet its goals of a stable space environment. Its quest to bring warfighting to orbit threatens the stability we all need to benefit from space and the threat of nuclear escalation from space warfare should give pause to any anti-satellite warfare plans. The invocation of the fear of escalation to lend weight to the argument does contradict her criticism of the use of fear in justifying a muscular posture in space. Chapter 2 discusses the possible meanings of the US space policy buzzwords of 'congested, contested, competitive,' but the argument is focused upon fleshing out essential and agreeable caveats and perils of conducting research on Chinese intentions.

In Chapter 3, the US military is accused of assuming that war in space is inevitable, and condemns this thinking because it creates a self-fulfilling security dilemma, or Thucydides trap, between the United States and China. When self-contained, this argument is logical, but when coupled with Johnson-Freese's later argument in Chapter 7 – that the United States must develop space weapons as a hedge – such condemnations seem hypocritical and do not present a clear way out of the security dilemma. Chapter 4 mirrors chapter 2 by examining the possible meanings of three more policy buzzwords: deter, defend, and defeat, which come in for scathing criticism for being jingoistic. The terms are used to make the case for more cooperation with China. Here, she also argues that more work needs to be done on the 'impossible' task of discerning Chinese motivations, somewhat contradicting the conclusion in Chapter 3 on the Thucydides trap.

Chapter 5 observes – inarguably – that the military-industrial complex (MIC) influences political discourse and decision-making in national security, and uses the classic example of missile defence to make the point. Whilst this attack on the MIC is useful for any scholar new to security and defence policy, its relevance to the wider argument is

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difficult to discern. A subtle inference may be that the MIC is jeopardising national security, and that salvation lies in the State Department and the NewSpace companies that exist outside of the MIC – for the time being.

Chapter 6 is by far the strongest chapter of the book. Johnson-Freese provides a very interesting, informed, and timely analysis of the *maturation* of the NewSpace companies in the American space economy in their efforts to provide cheaper access to space, and the existence of companies outside the regulations of supplying the Pentagon. Not only do these companies have the *potential* to push the American space economy outside of the grip of the MIC, but it is also pushing against the *ancien régime* of international space governance. The second half of the chapter is a timely update on the failed initiatives at creating hard and soft law for governing activities in outer space. China and the USA come under fire from Johnson-Freese, but her greatest criticisms are reserved for Russia's behaviour after the annexation of Crimea. One weakness of the chapter is that these two halves are disconnected – to what extent will domestic space enterprises challenge the *international* legal architecture of outer space? This question remains unanswered yet it is the most interesting one that arises from the book.

Chapter 7 acts somewhat as a conclusion, but also as a substantive chapter in itself. Here, the reader is introduced to the policy recommendation of a 'grand bargain' in space between the United States and China. After attacking the arguments of Congressman Frank Wolf, Johnson-Freese recommends engaging more with China in manned and robotic space exploration, space science, tracking data exchanges, and building layered deterrence against China by integrating it more into international activities in space. She also encourages the United States to 'retake' the moral high ground by pledging on a no-first-use policy regarding space weaponisation. Whilst the desire to improve relations with China is agreeable, the benefits derived from promoting the United States as a force against the 'weaponisation' of space is highly problematic as all the major powers are either in possession of, or pursuing, anti-satellite weapons technology that are based on Earth, making Earth orbit a theatre of warfare without having to base weapons in space itself. This argument is further weakened by Johnson-Freese's own approval of the hedging strategy of developing rudimentary space weapons capabilities as an insurance policy. This undermines her scathing – and bordering on polemic – criticisms of existing space defence policy and doctrine as jeopardising stability.

Overall, the book reads easily – the language is clear although informal in places. That does have some drawbacks, especially when an international audience may not appreciate the many casual American cultural references. That said, the chapter transitions are not always smooth and many extended passages have no immediate relevance to the overall argument of the book. In particular, Chapter 5's critique of the MIC is not integrated into the argument at all. In terms of methodology, the book is firmly within the American tradition of analytical philosophy in IR, and deploys classical concepts from linear, rationalist, and structuralist theories of deterrence and escalation.

The book is also troubled by problematic historical analogies that try to instil 'the lessons of history' into policy arguments. In addition, space is often portrayed as the alpha and omega of strategic stability. The connections between geopolitics on Earth and space, and back again, are only made in passing and on a selective basis whilst overriding finer arguments on historical causality. Geopolitics on Earth and grand strategic stability is crucial for perceptions of stability in space, yet this is unaddressed. Furthermore, the book does not address the reality that the US military treats 'space control' as a wartime, and not peacetime activity. The caricature of the 'myth of space control' in this book implies that the US military believes that only the US should have access to space *at all times*, yet this defies strategic logic and the entire history of US space policy. This also overrides the reality that the US Air Force dominates space in US military responsibilities, which causes significant tensions *within* the US military on the perceptions of space warfare and what American military spacepower should do next. The argument also traverses onto weaker grounds when it criticises the United States for using bellicose rhetoric when planning to fight and win wars using space weapons and 'counterspace' systems to the detriment of soft power options such as increased efforts at building rules for the road. The book gives short shrift to the United States' track record as a good citizen in space, such as through the routine sharing of space tracking data, and does not use it and other similar examples to demonstrate that in fact, the United States may not be neglecting its soft power and cooperative options in outer space to the extent Johnson-Freese portrays in this book.

Johnson-Freese's overall argument has merit in places. Indeed, American attempts to stifle the spread of space technology has failed spectacularly and so it must constructively engage with others a confidence-building measure –

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mainly with China. It is excluded from cooperation in civil and science missions, whereas most other space-faring states are engaged. However, such a persuasive policy prescription is shrouded by a larger problematic argument that views stability and security in space in isolation from stability and security on Earth. Johnson-Freese is absolutely right to review the 'NewSpace' companies and the spectacular failures in international space governance, as these are areas that are shifting far more quickly than anti-satellite weaponry, and has deeper consequences for the global political-economy. This book is a fair introductory text to the world of American space security policy for newcomers, however, if the individual has already read *Heavenly Ambitions* or *Space as a Strategic Asset* this book mostly acts as an updated version of the same argument.

[1] Previous books on this topic: Joan Johnson-Freese, *Heavenly Ambitions: America's Quest to Dominate Space* (Pennsylvania UP, 2009); Joan Johnson-Freese, *Space as a Strategic Asset* (Columbia UP, 2007)

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### About the author:

Dr Bleddyn E. Bowen is a Lecturer at the Defence Studies Department, King's College London, which is located at the Joint Services Command and Staff College, UK Defence Academy. Bleddyn's research specialises in spacepower theory, classical strategic theory, and modern warfare. Bleddyn has published on spacepower theory and naval analogies, the politics of space debris removal, and EU space strategy.