

NEW HORIZONS OF THE NUCLEAR AGE

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Reviewed by

Aashima Kapoor

“The bomb’s only use is to keep others from using it.”

— Robert S McNamara¹

This quote from the former US Secretary of Defence captures the essence of nuclear deterrence: a strategy where the mere existence of nuclear weapons is intended to prevent their use. *New Horizons of the Nuclear Age*, edited by Ichimasa Sukeyuki, probes into the evolving dynamics of this deterrence in a world that has become markedly more complex since the Cold War. This collection of essays emerges as a timely and essential resource for policymakers, military strategists, and scholars, addressing the realities of a multipolar nuclear landscape, the resurgence of great power competition, and the implications of rapid technological advancements.

The book offers a detailed exploration of what Sukeyuki and the authors term the “*second nuclear age*”—a period marked not only by the traditional US-Russia rivalry but by the emergence of new nuclear actors, such as China, North Korea, India, and Pakistan. The chapters collectively argue that the world is moving away from the relatively stable nuclear order of the Cold War into a fragmented environment where strategic stability is under unprecedented pressure. As international security frameworks face increasing stress from emerging technologies such as lethal autonomous weapon systems, and AI, and as arms control agreements falter, this work asks the critical question: *What does nuclear deterrence mean in the 21st century?*

Strategic Stability in a Fragmented World

The book opens with Sukeyuki’s introduction, setting the stage for a comprehensive discussion on the changing landscape of nuclear strategy. He provides a historical account, detailing the transition from the bipolar nuclear order of the Cold War to the current state of nuclear multipolarity. The narrative reflects on how recent geopolitical developments—most notably Russia’s invasion of Ukraine and China’s increasing nuclear modernisation—have revitalised discussions around nuclear weapons. The suggestion that by the 2030s we may see three nuclear superpowers (the United States, Russia, and China), marks a significant departure from previous

¹ Robert S McNamara, “Blundering into Disaster: Surviving the First Century of the Nuclear Age”, 1986, *Pantheon Books*, <https://pure.iiasa.ac.at/id/eprint/14083/1/Blundering%20into%20disaster.pdf>.

Also see: The quote “The bomb’s only use is to keep others from using it,” is not a direct or widely recorded quotation attributed to Robert McNamara. However, it does summarize a key aspect of McNamara’s views on nuclear deterrence and Mutually Assured Destruction (MAD), a policy he advocated during his tenure as US Secretary of Defence.

strategic thinking, requiring fresh approaches to arms control and strategic stability. In this context, Sukeyuki raises the alarm over (1) emerging technologies as a challenge to traditional deterrence frameworks, and (2) integration of these technologies into military arsenals. These technological advancements also pose increased risks to sea-based deterrence assets such as nuclear submarines equipped with ballistic missiles (NATO Classification: SSBN), which are crucial for maintaining second-strike capability. However, enhanced precision-guidance and remote-sensing capabilities threaten the resilience of these assets, demanding measures to improve sea-based deterrence through strategic denial. The introduction thus provides an apt foundation for the book, though it could have benefited from a deeper discussion on the role of regional powers like India and Pakistan in shaping global nuclear stability. The impacts of regional conflicts on international deterrence should not be underestimated, as the book itself later acknowledges.

Revisiting the Stability-Instability Paradox

The opening chapter, by Kurita Masahiro, offers an in-depth examination of strategic stability, emphasising the stability-instability paradox. The paradox contends that while nuclear stability — due to mutual assured destruction (MAD) — prevents large-scale nuclear wars, it may paradoxically encourage lower-level conventional conflicts. This chapter extends the discussion beyond the Cold War's US-Soviet dynamics to contemporary scenarios such as US-China tensions and the persistent volatility in South Asia. Kurita's analysis is particularly valuable in the way it relates this paradox to modern rivalries. The Kargil conflict between India and Pakistan is cited as a case where nuclear deterrence allowed conventional war to occur without escalation to nuclear use. The author effectively links theoretical frameworks to practical case studies, weighing how the perception of nuclear stability can embolden States to pursue aggressive policies, confident that full-scale war will be avoided. This insight resonates with current US-China dynamics in the South China Sea, where the risk of conventional skirmishes under the nuclear umbrella is ever-present. The chapter also addresses how advancements in technology, particularly missile-defence systems and cyber capabilities, disrupt the concept of strategic stability. The risk of undermining mutual vulnerability through missile interception or disabling nuclear command systems introduces new dimensions of unpredictability. The strategic landscape is, thus, not only shaped by the physical existence of weapons but also by the evolving means to detect, intercept, and manipulate their deployment.

Nuclear Compellence: A Risky Proposition

The second chapter, by Ohnishi Ken on nuclear compellence, digs into the challenges of using nuclear threats to coerce adversaries. The distinction between deterrence, i.e., preventive action, and compellence, i.e., forceful action, is crucial. The author also articulates the conditions required for successful compellence, such as the credibility of threats and the adversary's perception of the stakes involved. Historical examples, such as the Cuban Missile Crisis, illustrate successful compellence through a credible demonstration of willingness to escalate. However, contemporary cases, such as US confrontations with North Korea, reveal the limitations of compellence, especially when the adversary's regime views nuclear capabilities as an existential threat to its survival. Ohnishi's argument is strengthened by a critique of how

conventional military support and nuclear posturing must work in tandem to create a layered coercive strategy. The use of brinkmanship is inherently dangerous, and the chapter acknowledges the ever-present risk of miscalculation, particularly as more actors with varying nuclear doctrines enter the strategic equation.

The Disruptive Potential of New Domains

The third chapter, by Arie Koichi, scrutinises the profound implications of space, cyberspace, and electromagnetic domains for nuclear deterrence and arms control. Koichi's discussion is timely, given the increasing reliance on space-based assets for early-warning systems, communication, and intelligence. The vulnerability of these systems to anti-satellite (ASAT) attacks poses a significant risk to the stability of nuclear deterrence. At the other end of the 'space' spectrum, in cyberspace, the potential for cyberattacks to disrupt nuclear command-and-control systems raises the risk of inadvertent escalation. The author contends that while traditional arms control has focused upon reducing the number of warheads or delivery systems, there is a pressing need to regulate the new domains that affect strategic stability. He acknowledges, however, that recommendations for establishing international norms against targeting nuclear infrastructure in cyberspace or deploying offensive space weapons, though prudent, may be politically unfeasible due to the deep mistrust among the great powers. Koichi's analysis emphasises the unpredictability introduced by emerging technologies and the urgent need to adapt arms control frameworks accordingly. The difficulty lies in the covert nature of cyber operations and the blurred line between civilian and military space assets, which complicate efforts to establish universally accepted rules.

A Pragmatic Approach to Arms Control

The final chapter by Sukeyuki, addresses the future of arms control amidst great power competition. Traditional arms control frameworks, such as the Strategic Arms Reduction Treaty (START), have become increasingly strained as new actors and technologies reshape the nuclear landscape. The author advocates a "*reasonable approach*" to arms control that goes beyond simply limiting the number of weapons and engages with emerging technologies. His call to include regional nuclear actors such as India and Pakistan in arms-control dialogues reflects an understanding that strategic stability cannot be secured solely through US-Russia agreements. Sukeyuki recommends confidence-building measures, such as improved communication channels, to prevent accidental nuclear war and suggests revising arms control agreements to include cyber and space-based threats. The chapter openly acknowledges the immense challenges that these proposals face, particularly given the erosion of trust between the US, Russia, and China. His suggestions, while pragmatic, require unprecedented levels of transparency and cooperation in an era characterised by strategic rivalry. Nevertheless, his vision for arms control as an evolving, flexible process remains a compelling pathway for mitigating nuclear risks.

Evaluation: A Timely and Comprehensive Analysis

New Horizons of the Nuclear Age provides a fairly thorough examination of the evolving nuclear landscape, with its greatest strength lying in its ability to bridge traditional deterrence theory with the emerging realities of multipolarity and technological change. Ichimasa Sukeyuki and the authors deliver a nuanced analysis that is grounded in both historical context and contemporary policy debates, making it highly relevant for today's security environment.

The book's innovative approach also includes distinct “*Column*” and “*Coffee Break*” sections, which add depth and versatility to the main chapters. These interludes offer supplementary insights and are designed to provide a pause from the dense theoretical discussions. The “*Column*” sections serve as concise explorations of specific topics, such as the competing schools of thought in nuclear strategy, enhancing the reader's understanding of complex themes. The “*Coffee Break*” sections, such as “*Nuclear Sharing*”, focus on practical, real-world implications, offering discussions on topics such as NATO's nuclear-sharing arrangements and their legal and strategic considerations. These features not only make the book more accessible but also contribute to a more engaging reading experience by providing a balance between scholarly analysis and digestible, thought-provoking content.

The book's pragmatic recommendations for risk mitigation, rather than idealistic disarmament goals, align with the current international atmosphere, where strategic stability and arms control are under significant strain. While some proposals — such as multilateral arms control agreements — may appear optimistic, they nevertheless represent necessary aspirations in a world where the risks of nuclear miscalculation are ever-present.

However, the impact of the book could have been enhanced had it incorporated more detailed analyses of the political challenges involved in implementing these measures, especially in regions such as South Asia and West Asia, where nuclear dynamics are shaped by localised conflicts. Further, while the focus on new domains such as cyberspace and space is certainly timely, a deeper exploration of real-world incidents (e.g., cyber intrusions targeting nuclear facilities) could have provided concrete evidence of the risks discussed.

As the world navigates an increasingly complex nuclear landscape, *New Horizons of the Nuclear Age* serves as a critical resource for policymakers and military strategists. It underlines the need for adaptive strategies that address the realities of multipolarity, technological disruption, and eroding arms control frameworks. Ichimasa Sukeyuki's work not only challenges conventional thinking on nuclear deterrence but also offers a roadmap for navigating the uncertainties of the second nuclear age. This book is not just a scholarly endeavour; it is a call to action for those tasked with ensuring that the ultimate use of nuclear weapons remains an unthinkable option.

About the Reviewer

Ms Aashima Kapoor is a Junior Research Associate at the National Maritime Foundation. Her research focuses on the maritime geostrategies of Japan and their impact on India. In addition to her research expertise, she is proficient in the Japanese language. She can be reached at ea2.nmf@gmail.com