

Review – The Myth of the Nuclear Revolution

Written by Maren Vieluf

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MAREN VIELUF, SEP 26 2021

The Myth of the Nuclear Revolution: Power Politics in the Atomic Age
By Keir A. Lieber and Daryl G. Press
Cornell University Press, 2020

In *The Myth of the Nuclear Revolution: Power Politics in the Atomic Age* Keir A. Lieber and Daryl G. Press take on the nuclear puzzle: If nuclear weapons are the most effective instruments of deterrence, why does intense international security competition persist in the nuclear age? The theory of the nuclear revolution, advocated by scholars such as Bernard Brodie, Kenneth Waltz and Robert Jervis, stipulates that the invention of nuclear weapons has had a revolutionary, namely pacifying effect on international relations, as they guarantee absolute security from adversaries. No one would attack a state that has nuclear weapons readily available. In a conflict between nuclear armed states, neither side would be able to achieve a meaningful victory: any exchange would mean mutual suicide. A nuclear war simply cannot be won. If this stalemate is inevitable, international competition will be halted and peace is achieved – in theory. Reality begs to differ. While it is true that in the nuclear age, there has been no major war between great powers, the achievement does not lie within the creation of peace but in the spread of a new and substantial fear.

The central argument of the book by Lieber and Press is that nuclear weapons are a great deterrent and the best instrument to create stalemate, but they do not end the intense security competition, nor do they change the nature of it. They merely represent another arrow in the military and political quiver. Today, nuclear armed states are modernizing, securing, advancing, and increasing the numbers of their nuclear (and conventional) arsenals, trying to gain superiority to evade or escape stalemate. The arms race is still on, and today's geopolitical competition is still as intense.

Chapter one examines the expected versus the actual effect nuclear weapons have on international relations. With their enormous destructive power, their small size and easy delivery, nuclear weapons have changed not only wartime but also peacetime planning. But the absence of major wars between nuclear powers is not the same as peace. Competition prevails in the international system and geopolitical strategies from before the nuclear age still apply. The nuclear revolution failed to materialize. The authors argue that this is due to long-held assumptions about nuclear weapons and their effect on power politics having been wrong to begin with. The nature of nuclear stalemate has been misunderstood: Stalemate is neither easy to create, nor permanent or irreversible, and it certainly does not deter everything, i.e., conventional attacks.

Chapters two, three, and four each explore one dimension of the misunderstanding of the nature of stalemate and explain why security competition has persisted contrary to the expectations of the proponents of nuclear revolution theory. To make their point, Lieber and Press look at the history of nuclear deterrence and strategy, analyzing state behavior from US nuclear sovereignty to today's nuclear dilemma – and it's a compelling one.

Chapter two discusses the question of “how much is enough?” to achieve stalemate. Lieber and Press go through several schools of thought to answer this threshold question in a historical perspective. These include existential deterrence, minimum deterrence, mutually assured retaliation, and mutually assured destruction. The authors conclude that a powerful deterrent needs to be not only credible (arsenal size, availability, and the will to use them),

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but resilient and flexible – the more, the safer, the better. The threshold for “how much is enough” depends on the adversary. Thus, achieving stalemate is neither fast nor easy but rather highly expensive.

Chapter three looks at the strategies states apply to ensure the survivability of their nuclear arsenals (hardening, concealment, and redundancy) and how the impact of technological advancements (accuracy, remote sensing, data processing and communication) changes the logic of deterrence. The authors conclude that stalemate is neither permanent nor irreversible but rather instable and also conclude that competition prevails over superiority.

Chapter four examines competitive behavior in the nuclear age and carves out the impossibility to deter conventional attacks with nuclear weapons under stalemate. The authors demonstrate that the more likely conflict is to erupt and the worse the consequences of defeat would be, the more coercive the nuclear doctrines and postures adopted by states.

The last chapter summarizes the findings and puts them into a broader theoretical and practical context. Lieber and Press conclude with a critique of the nuclear abolition stance and stipulate that the world is safer now than it would be with nuclear weapons abolished and nuclear knowledge prevailing. They demand more caution regarding nuclear deterrence to prevent any escalation. Indeed, Lieber and Press make a great case. While I absolutely agree with their analysis of the logic of the international system and state behavior in the nuclear age and wholeheartedly recommend reading the book, I don't agree with their conclusion, that states should keep nuclear weapons and simply be more cautious about operationalizing them. It is only with tremendous luck that the world has avoided another nuclear catastrophe. Deliberate use, accidents, misperception, or irrationality could have easily resulted in nuclear war, and might do so as long as nuclear weapons exist. Nuclear weapons are luckily and logically seen as weapons of the very last resort due to the catastrophic consequences of their use. The stalemate created is at best a theoretical one if it depends on no one daring to really use the bomb. But this could quickly change due to technological advancements creating first-strike incentives or new pathways for accidental or inadvertent use. Technological advancements, particularly in weapons accuracy, could also make nuclear weapons more 'usable', promising similar effects at lower explosive yields. This is not only dangerous as it would weaken the nuclear taboo but also highly detrimental to all efforts aimed at reducing and eliminating nuclear risk, including disarmament efforts.

Having said this, the book is a great read for anyone interested in nuclear weapons policy, not only deterrence, but also arms control and disarmament. Be it student, practitioner, researcher, or really anyone interested in how nuclear weapons have shaped international politics. The book is thought provoking, comprehensive and a great starting point when thinking about the future of nuclear weapons—or a future without nuclear weapons—and how technology will shape the developments in the next years and decades.

About the author:

Maren Vieluf is a Researcher in the Challenges to Deep Cuts project at the Institute for Peace Research and Security Policy at the University of Hamburg (IFSH). She holds Master's degrees in Political Science and Peace and Security Studies. Previously she worked as Research Assistant in the International Security Research Division at the German Institute for International and Security Affairs (SWP). In her research she focuses on nuclear disarmament, arms control, and non-proliferation, particularly on the influence of models of statehood and governance.