

Book Review: Nuclear Weapons in the Information Age

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Far from being obsolete in today's information age, nuclear and other weapons of mass destruction have not only survived, but have become weapons for states that face security threats, including perceived threats of nuclear blackmail, or expectation of conflicts. This study focuses on this unplanned coexistence of two distinct arts of war, including the possibility that states like the U.S. may be held hostage to nuclear blackmail by "outlier" regimes or terrorists, such as North Korea. Ali Diskaya finds Stephen J. Cimbala's account of the dangers which global human society is facing in the second nuclear age to be insightful, systematic and comprehensive.



**Nuclear Weapons in the Information Age. Stephen J. Cimbala.
Continuum. February 2012.**

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The atomic bomb played a starring role in the political, cultural and social history of the twentieth century. The ultimate weapon of the industrial age was used to end World War II and to deter war in history's last great power rivalry, the Cold War of 1945-91. The bomb that Oppenheimer and his colleagues of the Manhattan Project built in remote New Mexico was never used again after Hiroshima and Nagasaki but has since morphed into a thermonuclear weapon capable of killing off civilisation.

In his book, *Nuclear Weapons in the Information Age*, [Stephen J. Cimbala](#), distinguished professor of political science at Penn State Brandywine and former consultant on arms control to various U.S. government agencies, argues that the ultimate weapon of the age of mass destruction and total warfare still has a critical impact on peace and security in the postindustrial age of precision warfare and reduced collateral damage.

In his well-written and insightful study, Cimbala demonstrates that the unplanned coexistence of nuclear weapons with information-based concepts of warfare increases the likelihood of thermonuclear war between the contemporary nuclear-weapon states (NWSs). According to Cimbala, the coexistence of these two distinct arts of war may not play well together because of the nature of information warfare and the sheer endless destructive power of nuclear weapons. The main aim of information or cyber warfare is to attack enemy networks in order to disrupt, deny or destroy information. However, the use of cyber warfare by NWSs in a crisis may be dangerous because successful nuclear crisis management requires transparency of decision making processes and clear and uninterrupted communications. Cimbala warns that a NWS in a serious political crisis "faced with a sudden burst of holes in its vital warning and response systems might, for example, press the preemption button instead of waiting to ride out the attack and then retaliate" (p.206)



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Furthermore, Cimbala contends that nuclear danger in the second nuclear age lies not only in the possible outbreak of all-out thermonuclear war between the existing NWSs, but also in the possible acquisition of nuclear weapons by rogue states (e. g. Iran) and transnational terrorist groups with radical political agendas (e. g. al-Qaeda). Arguably, it remains very difficult for states and non-state actors to acquire the bomb, but the gradually diminishing status of the nonproliferation regime and the spread of nuclear weapons technology increase the opportunities for the most dangerous weapons falling into wrong hands. In short, the coexistence of nuclear weapons with information-based concepts of warfare and the further spread of nuclear weapons technology multiply the nuclear risks in the second nuclear age, including accidental war, acquisition by rogue states and terrorists and the problems of stability between NWSs in a serious political crisis.

The question now is how global human society can survive in an unregulated nuclear world, with a growing number of nuclear weapon states and the constant risk of thermonuclear holocaust. Cimbala contends that the best we can hope for is a global 'minimum deterrence regime' headed by the United States and Russia. The belief that nuclear deterrence has largely eliminated the possibility of nuclear war is common among theorists of international politics. According to this belief, the existence of second-strike nuclear arsenals discourages states from starting any wars that might lead to the use of nuclear weapons. Cimbala argues that a minimum deterrence regime between the United States and Russia "with a maximum number of 1,000 or 500 deployed long range weapons could certainly provide for adequate numbers of surviving and retaliating weapons to ensure deterrence and crisis stability" (p.202). Once such a regime is established, it could draw a firm line against others joining the nuclear club and ensure that rogue states already in possession of nuclear weapons (e. g. North Korea) dismantle their weapons under international control.

This is a rather surprising conclusion since Cimbala argues throughout his book that the coexistence of nuclear weapons with information-based concepts of warfare increases the likelihood of thermonuclear war in times of serious political crisis. Additionally, many recent works on Cold War history reveal that 'The Bomb' cannot rescue leaders from the mistrust, misperceptions and miscalculations that may lead to deliberate or accidental nuclear war. The United States and the Soviet Union were willing to wage nuclear war despite the certainty of nuclear retaliation and despite both nations' stable position as international superpowers. The accidental or deliberate use of nuclear weapons came close to occurring on many occasions during the Cold War; especially during the 1962 Cuban Missile crisis and the Able Archer crisis of 1983.

Cimbala is well aware of these facts but argues that a minimum deterrence regime is the most realistic alternative to an unregulated nuclear world. Cimbala devotes one chapter to the idea of nuclear abolition (chapter 4) but concludes that global zero is not only improbable but also impractical because in a world without nuclear weapons no one could guarantee that rogue states or anti systemic non-state actors might secretly build the bomb. Is there an alternative to Cimbala's minimum deterrence regime and a completely disarmed world? Accepting the inevitability that nuclear weapons will be used again, a small group of scholars argue that the only apparent way to put a *permanent* end to the possibility of a global nuclear war is to develop a 'world nuclear government', an entity that would control all nuclear weapons and materials and effectively limit the rights of states and non-state actors to manufacture nuclear weapons. Despite the fact that the idea of world government is now returning to the mainstream of scholarly thinking about international relations, Cimbala discusses its possibility in only one paragraph and concludes that its achievement is even less realistic than global zero since no state would ever give up its sovereignty. Nevertheless, Cimbala ignores many recent works of leading scholars on world government which demonstrate that it could actually exist as a small, federal authority rather than global Leviathan.

Cimbala's account of the dangers which global human society is facing in the second nuclear age is insightful, systematic and comprehensive. Nonetheless, where his book falls short is to offer a thorough discussion of viable alternatives to a nuclear-armed world. His dismissal of global zero and world government as utopian solutions to the problem of global nuclear war takes not into account the possibility of change over time in the role and appeal of nuclear weapons. On the other hand, this is also a strength, as Cimbala's pessimism reminds us of the constraints our actions have to account for when trying to change the contemporary nuclear order.

Ali Diskaya has recently completed a master's degree in International Relations at Aberystwyth University. His research interests include international relations theory (especially realism and cosmopolitanism), the thermonuclear revolution and its impact on contemporary world politics and conceptions of transnational government. [Read more reviews by Ali.](#)