

# The Myth of “Just” Nuclear Deterrence: Time for a New Strategy to Protect Humanity from Existential Nuclear Risk

Joan Rohlfing 

Nuclear weapons are unique, distinguishing themselves from every type of weapons technology that came before them by both their power and the far-reaching and long-lasting consequences of their use, which can be measured on both global and epochal scales.<sup>1</sup> From a moral reasoning perspective, nuclear weapons are a technology with the potential to cause catastrophic, or even existential, harm to humanity and the planet. Their awesome destructive potential and the unparalleled consequences of their use oblige us to think critically about the ethics of nuclear possession, planning, and use.

We owe Joe Nye a debt of gratitude for his careful thinking and seminal scholarship on ethics and nuclear weapons. Nye’s lead essay for this symposium, “Nuclear Ethics Revisited,” proposes a moral framework for guiding nuclear weapons policy and practical measures for reducing nuclear risks through the application of “just war” principles. His analysis is anchored by the basic moral obligation that we owe future generations roughly equal access to important values, including equal chances of survival. Nye uses this moral obligation to derive a set of moral maxims and policy recommendations for guiding policymakers toward a practice of “just deterrence” consistent with just war theory.

---

Joan Rohlfing, Nuclear Threat Initiative, Washington, D.C., United States ([rohrfing@nti.org](mailto:rohrfing@nti.org))

*Ethics & International Affairs*, 37, no. 1 (2023), pp. 39–49.

© The Author(s), 2023. Published by Cambridge University Press on behalf of the Carnegie Council for Ethics in International Affairs. This is an Open Access article, distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives licence (<https://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is unaltered and is properly cited. The written permission of Cambridge University Press must be obtained for commercial re-use or in order to create a derivative work.

doi:10.1017/S0892679423000023

Professor Nye's recognition of our generation's moral obligation to the future is crucial, but his proposed conditions for achieving just deterrence rely on flawed assumptions about the nature of nuclear weapons and the inherent risks of the nuclear deterrence system. The world has changed profoundly since his book *Nuclear Ethics* was first published in 1986, in ways that change the variables informing our moral calculus. "Nuclear Ethics Revisited" has not caught up with these changes. In today's increasingly complex world, Nye's "just" nuclear deterrence conditions cannot be met.

We need a different security framework to meet the solid moral objectives laid out by Nye, one that replaces nuclear deterrence with a more ethical, durable paradigm for providing existential security. Only then will we have a shot at preserving humanity's long-term future and our values.

## THE WORLD HAS CHANGED

In the three generations since the logic and operating system of nuclear deterrence was created, the world has evolved significantly. Instead of the slow, analog, bipolar world of 1950, today we have an extremely complex and fragile global architecture of nine entangled nuclear arsenals comprising some thirteen thousand nuclear weapons. Contemporary arsenals include nuclear weapons more powerful and lethal by a factor of 10 to 130 compared to those detonated in Hiroshima and Nagasaki and include more accurate and survivable delivery vehicles that can fly faster than the speed of sound. Indeed, ballistic missiles and other hypersonic delivery vehicles for nuclear weapons are so fast that leaders of nuclear states essentially have only a few minutes to decide how to respond to a warning of an incoming nuclear attack, putting extreme pressure on them to make civilization-altering decisions with potentially incomplete, misleading, or incorrect information. Nuclear early-warning and weapon systems may or may not be reliable given their cyber vulnerabilities. These growing system stressors are occurring on top of a multidecadal track record of human mistakes and technical failures involving nuclear weapons, causing near misses, lost bombs, and lost lives.<sup>2</sup>

At a minimum, nuclear deterrence is an insufficient strategy for preventing the use of nuclear weapons. In today's world, instead of a considered, deliberate decision to use nuclear weapons, a mistake, misperception, accident, cyber exploit, technical failure, or false warning are equally likely pathways to nuclear use. Deterrence was never designed to address any of these threat vectors. Indeed,

we have doubled down on preventing a single pathway to nuclear use—deliberate use—so much so that the system requirements to support nuclear deterrence (high numbers of increasingly lethal weapons, deployment of “ready-to-fire” nuclear missiles, and regular performative exercises simulating the launch of nuclear forces to demonstrate our preparedness) now compound the risks of use of these weapons through blunder, accident, or mistake at an unimaginable cost to our collective future. Nuclear weapon states have developed and continue to maintain a highly complex system comprised of fallible humans and vulnerable high tech that is spring-loaded for disaster.

Russia’s war against Ukraine is the latest challenge to the global nuclear order. The Ukraine crisis has upended long-held beliefs about the rules of nuclear deterrence and illustrates a real-world “unjust” application of the theory. Instead of serving as a last-resort defense against the existential threat of nuclear use by others, Russia is using the threat of a nuclear attack as an offensive tactic to enable its unjust aggression against a nonnuclear weapon state and to deter NATO engagement. And if Russia were to break the nearly seventy-eight-year-old taboo against nuclear use, the risk of further instances of use and nuclear proliferation could rise. Russia’s nuclear threats against Ukraine are a clear violation of the negative security assurances<sup>3</sup> it made both generally to nonnuclear weapon states and specifically to Ukraine in the 1994 Budapest Memorandum. The reality is that Russia’s nuclear threats could well affect the security calculus of other non-nuclear states that now have reason to doubt the credibility of security assurances, both positive and negative. Is it not possible that Japan or South Korea may now reconsider their nonnuclear status in light of the growing security threat they perceive from China? While Nye urges us not to exaggerate the damage to the nonproliferation regime caused by Russia’s behavior in Ukraine, would it not also be a mistake to underestimate the damages?

Nye points out in “Nuclear Ethics Revisited” that the consequences of nuclear use must also be considered, but he does not address the far-reaching effects nuclear war would have on modern societies. A nuclear war could harm or kill billions of people well beyond the combatant states, yet insufficient work has been done to comprehensively assess the broad societal effects of nuclear war on any scale—local, regional, or global. Despite the fact that media attention to nuclear winter has waned, the threat of nuclear winter and a subsequent famine has not diminished but grown. Understanding and considering these

consequences is fundamental to assessing whether a nuclear attack could satisfy the just war principle of proportionality.

We live in a deeply interconnected world. Societal systems for the economy, governance, and continuity of critical infrastructure services such as power, water, food, and health care distribution, as well as the global financial architecture and international trade system, are connected, interdependent, and demonstrably fragile. While good work has been done on the phenomenon of nuclear winter and its effects on agriculture, no comprehensive research exists to assess the broad societal effects of the simultaneous or cascading loss of multiple critical infrastructures. Consider any number of downstream effects from infrastructure crises in recent years: the supply chain disruptions caused by COVID-19; the impact on supply chains of a single container ship stuck in the Suez Canal for six days; the devastating impact of the 2021 winter storm on 10 million Texans' power, water, and food supplies; or the disruption of global grain supplies and rising risks of famine around the world associated with the closure of Ukrainian Black Sea ports in the wake of Russia's invasion of Ukraine. These are small indicators of the potentially vast consequences that could occur if critical infrastructure systems were physically destroyed or disrupted on a global scale for a sustained period of years.

Despite fundamental changes in the security environment, with rapidly growing risks and immense, perhaps unknowable, consequences, Nye has nevertheless concluded that "the basic nuclear dilemma has not changed."<sup>4</sup> But the nuclear dilemma has grown riskier, more urgent, more dangerous, and much less stable. In a profoundly changed world, the increased risks of nuclear deterrence failing means that the moral calculus and achievability of just deterrence have fundamentally changed. The world has changed. Nuclear risks have grown. But our thinking and strategy have not.

It is time to rethink the global strategy for managing nuclear risks. If the objective of a nuclear security strategy is to ensure that nuclear weapons are never used, or that if they are ever used their use is so limited that it would not jeopardize or set back human civilization, then the current high-risk, high-consequence, annihilation-based strategy of nuclear deterrence must be fundamentally redesigned. Nye encourages us to believe that the risk of use can be maintained at an acceptably low level of probability. But given the catastrophic consequences, is any level of man-made existential risk acceptable? A security system that

poses a global-scale risk to humanity is fundamentally flawed and is not in fact a security system at all.<sup>5</sup>

## WHY NUCLEAR DETERRENCE CANNOT BE JUST

In “Nuclear Ethics Revisited,” Nye outlines a set of three conditions for accepting nuclear deterrence that stem from the “just war” tradition, including: (1) a just and proportionate cause; (2) limits on means; and (3) prudent consideration of all consequences. From these three conditions, Nye derives five related moral maxims: “(1) understand that self-defense is a limited but just cause. . . (2) never treat nuclear weapons as normal weapons, and (3) minimize harm to innocent people. And regarding consequences, (4) reduce risks of nuclear war in the near term, and (5) try to reduce reliance on nuclear weapons over time.”<sup>6</sup>

These five moral maxims present an excellent framework for conditioning our acceptance of nuclear deterrence. The challenge, however, is that nuclear deterrence fails to meet any of these conditions, and possessor states do not necessarily honor or abide by the maxims.

Let us look briefly at each maxim.

First, on the question of self-defense as a “just cause,” this moral maxim appears to be the strongest and most defensible of the five. But the extreme consequences of nuclear war, including the potential for global famine and collapse of governments and societies, raise serious questions about whether the principle of “self-defense” can really be considered just. Can a defense with nuclear weapons to save the existence of a state, or government, or people be considered just if it has the potential to cause the collapse of not only the aggressor state and its society but also other noncombatant states and societies that would become collateral damage in a global nuclear exchange? Is the self-defense of a state still defensible if the act of nuclear self-defense can trigger a holocaust so great that humans become extinct (or nearly so)? While it may be possible in theory to construct a defensive nuclear response that is “limited,” there is little evidence that a nuclear exchange will remain so in practice. An act of nuclear self-defense that triggers escalating consequences that are disproportionate to military aims is not justifiable from a moral standpoint.

Second, on not treating nuclear weapons as “normal” weapons—nuclear deterrence fails to meet this condition, precisely because of the usability paradox referenced by Nye. It is hard to imagine how nuclear deterrence could ever be

considered “credible” without treating nuclear weapons as normal. For deterrence to be effective it must be credible, and for it to be credible, nuclear possessor states must plan, build, and rehearse the launch of nuclear weapons. In effect, these weapons are very much treated like other normal military weapons. Nuclear systems acquisition, policy planning, target planning, personnel training, and even launch exercises are all performed on a routine basis. Nuclear weapons are on high alert by the thousands in the United States and Russia alone, with tens of thousands of troops deployed in missile launch control centers, on submarines, on standby to pilot aircraft, and actively staffing warning and control systems. A global nuclear arms race adds urgency to these activities.

Further, arguments for low-yield nuclear weapons to maintain control of “escalation ladders” are premised on the idea that they are more “usable” and thus more credible. The recent threats of use by President Putin in the Ukraine war are dangerously undermining a long-standing tacit understanding that even threatening nuclear use is taboo. Both of these trends risk further normalizing nuclear weapons and blurring the line between nuclear and normal (conventional) weapons. Nuclear weapons are most definitely not being treated as if they were weapons of last resort, stored in some dusty basement for a future emergency. All of these practices increase the risk of use, whether inadvertent, accidental, or intentional. The usability paradox is in fact a “usability trap.”

Third, on minimizing harm to innocent people, nuclear weapons are by their very nature indiscriminate. Even if a nuclear weapon hits its target with pinpoint precision, the widespread effects beyond the massive blast zone in the form of hurricanes of fire, electromagnetic pulse, ionizing radiation, and the potential for radioactive fallout hundreds of miles downwind from the detonation point ensure a very high likelihood of harm to potentially millions of innocent people. In the worst scenario—a major nuclear exchange between two large nuclear powers—we know that the consequences could extend well beyond the two combatant states and affect much of the world with nuclear winter or nuclear autumn, potentially causing the starvation of billions.<sup>7</sup> Nuclear weapons are inhumane weapons of terror. It is hard to square nuclear use scenarios with the idea that harm to innocents could be kept minimal and proportionate to military aims, especially given the ever-present risk of escalation.

Fourth, on reducing the risks of nuclear war in the near term: This is certainly a worthy goal and there are many steps that could be taken immediately that would reduce the risk of nuclear war. But the circular logic of nuclear deterrence has

successfully inhibited the adoption of many such reasonable measures over the last several decades since deterrence depends on a state's capacity to credibly threaten mass annihilation. Measures such as deep reductions, a commitment to no first use of nuclear weapons, and taking weapons off hair-trigger launch are dismissed as undermining not only leadership options but also the credibility of the deterrent and ambiguity of action. We see this playing out in the United States at present, where, regrettably, the logic of nuclear deterrence is now driving a conversation about the possible need for *increasing* U.S. nuclear firepower to combat multiple peer competitors—namely Russia and China. As long as the United States and other nuclear-armed states continue to rely on the logic of nuclear deterrence, serious steps toward reduced reliance and nuclear risk reduction will remain difficult, if not impossible. Moreover, rather than reducing the risk of nuclear war in the near term, it is more likely that a system based on maintaining a credible system for nuclear annihilation will increase the risk over time that a nuclear weapon will be used, even if only inadvertently.

Finally, on the fifth moral maxim, reducing reliance on nuclear weapons over time, there are steps that leaders could take that would immediately and measurably reduce our reliance on these weapons. Global leaders and publics alike should prioritize such measures just as they have convened to address climate change as essential to safeguarding the future. But again, the circular logic of nuclear deterrence mitigates against such actions. A nuclear security system premised on the belief that the possession and credible threat of use of nuclear weapons is central to its security, by definition, creates a dynamic that reinforces, rather than reduces, reliance on those weapons for its own security.

All that said, even if nuclear weapon states were to abide by each of the moral maxims proposed by Nye, we would still be left with a system that asks humanity to bear a significant degree of existential risk. Nye asks us to suspend disbelief and trust that nuclear risks can continue to be safely managed across decades, perhaps centuries, through a strategy that rehearses the use of those weapons and is premised on the infallibility of humans and technology. Even if such a low-risk system were achievable, what purpose would it serve? In the end, we are still left with a system that perpetuates existential risk to humanity. Would “just deterrence” absolve nuclear states of responsibility for a global nuclear catastrophe if, after making our best efforts to bolt guardrails onto nuclear deterrence, it still failed? It seems that “just nuclear deterrence” further rationalizes the continuation of an existentially risky system.

In short, the dynamics of the nuclear deterrence system actually countervail Nye's core objectives for human survival and values preservation.

## WHAT WE OWE THE FUTURE: EXISTENTIAL SECURITY

We owe the future a system that will prevent global catastrophe or even extinction and allow humanity to flourish, not just one that gives humanity a chance of survival. The global system of nuclear deterrence, even just deterrence, fails this test.

What might a new nuclear security system look like? For starters, it should be built on the design principle that the consequences of system failure cannot threaten to end or fundamentally disrupt civilization by years, decades, or centuries. It should be premised on the fundamental moral argument that we owe it to the world today and to generations yet to come to allow future humans to exist and flourish.<sup>8</sup> Only then could we label such a security system a "just" system.<sup>9</sup> Only then might we be able to meet the moral objectives for future generations articulated by Professor Nye.

A just security system need not and should not assume conflict has disappeared from the world. On the contrary, it must recognize that conflict is an inherent human and societal challenge, one that must be managed differently in a world where humanity has developed technologies that can destroy civilization. We are not asking, as Nye assumes, for the "absence of all risk,"<sup>10</sup> but rather for the absence of risk of civilization collapse.

## MORAL REASONING SUPPORTS A NUCLEAR WEAPONS BAN

Given the inherent consequences, indiscriminate effects, and disproportionate and extreme harms that nuclear weapons pose, their possession and use, or threat of use, cannot be aligned with just war principles. The possession and use, or threat of use, of nuclear weapons, and the deterrence strategy that necessitates their possession and the threat of their use, is unethical and immoral.

Professor Nye suggests that such thinking leads us to naïve and dangerous territory where our freedoms and those of future generations are at risk from nuclear adversaries. Nuclear abolition is treated as a fantasy, derived solely from primitive intuition and moral outrage, instead of from moral reasoning and rational security judgments about risks, benefits, and consequences.

Where does that leave us? According to Nye, it leaves us in a state of unavoidable existential risk. But such defeatist and short-term thinking has kept us

trapped in the outdated paradigm of nuclear deterrence for decades, even as the risks of nuclear catastrophe rise. The strategists who developed nuclear deterrence did not believe they had discovered the answer to the challenge of managing nuclear technology for the rest of time, or as Bertrand Russell said “until the sun goes cold.”<sup>11</sup> Instead of dismissing a nuclear weapons prohibition as the naïve aspiration of moral outrage, we should treat it as the existential and moral imperative that it is, with an obligation to engage in a serious effort to create a system for managing nuclear technology that provides existential security.

A security system without nuclear weapons, while not easy to realize, is not an unachievable dream. An alternative strategy for preventing nuclear use could rely on a strict and effective technology-control regime around the dual-use technologies that can be utilized for peaceful purposes as well as for nuclear weapons. Seventy years ago, the technical capacity to do that did not exist. Today, it does. We have learned a lot about how to monitor, detect, and regulate nuclear technology that could be used or diverted for weapons purposes.<sup>12</sup> Such a regime would need to be coupled with a legal prohibition against nuclear weapons possession, deployment and use, as well as with the policies, institutions, and capabilities necessary to implement, verify, and enforce such a prohibition. Each of these goals is formidable and will require steady effort over a generation or more.

## CONCLUSION

In “Nuclear Ethics Revisited,” Nye articulates a set of moral objectives that should serve as a north star for building a better, more just nuclear system. He urges us to measure the ethics of the nuclear system by how well it advances the moral objectives of ensuring both the survival of future generations and the core values that can enable humanity to flourish. While it is possible to achieve a just nuclear system that follows Nye’s commendable moral maxims, that system can never rely on the logic of nuclear deterrence. A just system would not pose an existential threat to the survival of humanity, but instead provide a high probability of existential security.

To create such a system, one must first imagine it and desire it. We need to start by unshackling our thinking from the straitjacket of nuclear deterrence. We can choose to have a system that, even if it fails, would not fail catastrophically for humanity. That should be our moral guidepost.

## NOTES

- <sup>1</sup> Indeed, they are the only weapon whose use and testing is being considered as the marker of an entirely new geological era, that of the Anthropocene—an era where human activity is accelerating measurable global change in the geology, climate, and survival of species and ecosystems across the entire planet. See *National Geographic*, s.v. “Anthropocene,” [education.nationalgeographic.org/resource/anthropocene](https://www.education.nationalgeographic.org/resource/anthropocene).
- <sup>2</sup> See Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton, N.J.: Princeton University Press, 1993). See also William J. Perry, *My Journey at the Nuclear Brink* (Stanford, Calif.: Stanford University Press, 2015); and Eric Schlosser, *Command and Control: Nuclear Weapons, the Damascus Accident, and the Illusion of Safety* (New York: Penguin, 2013).
- <sup>3</sup> A negative security assurance is a guarantee by a nuclear-armed state that it will not use or threaten to use nuclear weapons against another state, usually a nonnuclear weapon state. For a brief history of negative security assurances, see United Nations Office for Disarmament Affairs, “Fact Sheet: Conference on Disarmament and Negative Security Assurances,” July 2017, [www.un.org/disarmament/wp-content/uploads/2017/07/CD-and-NSA-Fact-Sheet-Jul2017.pdf](https://www.un.org/disarmament/wp-content/uploads/2017/07/CD-and-NSA-Fact-Sheet-Jul2017.pdf).
- <sup>4</sup> Joseph S. Nye Jr., “Nuclear Ethics Revisited,” *Ethics & International Affairs* 37, no. 1 (Spring 2023), p. 6.
- <sup>5</sup> One of the world’s premier experts in systems thinking, Donella Meadows, notes that “a system’s function or purpose is not necessarily spoken, written, or expressed explicitly, except through the operation of the system. The best way to deduce the system’s purpose is to watch for a while and *see how the system behaves*” (emphasis added). For example, “if a government proclaims its interest in protecting the environment but allocates little money or effort toward that goal, environmental protection is not, in fact, the government’s purpose. Purposes are deduced from behavior, not from rhetoric or stated goals.” Donella H. Meadows, *Thinking in Systems: A Primer* (White River Junction, Vt.: Chelsea Green, 2008), p. 14. Similarly, we can deduce from the behavior of the nuclear deterrence system that, because it behaves in a way that produces an existential risk to humanity, its purpose is not in fact one of providing security but is instead one of threatening mass destruction, despite its professed purpose of preventing nuclear use.
- <sup>6</sup> Nye, “Nuclear Ethics Revisited,” p. 12.
- <sup>7</sup> Lili Xia, Alan Robock, Kim Scherrer, Cheryl S. Harrison, Benjamin Leon Bodirsky, Isabelle Weindl, Jonas Jägermeyr, Charles G. Bardeen, Owen B. Toon, and Ryan Heneghan, “Global Food Insecurity and Famine from Reduced Crop, Marine Fishery and Livestock Production due to Climate Disruption from Nuclear War Soot Injection,” *Nature Food* 3 (August 2022), pp. 586–56. See also Jonas Jägermeyr, Alan Robock, Joshua Elliott, Christoph Müller, Lili Xia, Nikolay Khabarov, Christian Folberth, et al., “A Regional Nuclear Conflict Would Compromise Global Food Security,” *PNAS* 117, no. 13 (March 2020), pp. 7071–81; and Lynn Eden, *Whole World on Fire: Organizations, Knowledge, & Nuclear Weapons Devastation* (Ithaca, N.Y.: Cornell University Press, 2004). Eden points out that the effects of fire have not been taken into account by the military in calculating damage effects from nuclear weapons, likely leading to a gross underestimation of the damages caused by nuclear weapons use.
- <sup>8</sup> Toby Ord, *The Precipice: Existential Risk and the Future of Humanity* (New York: Hachette Books, 2020).
- <sup>9</sup> There is a nascent but growing body of work on the need to reconceptualize security around the central tenet that security frameworks must protect humanity from existential risks. Today, neither national security frames nor human security frames are centered on the principle of securing humankind’s survival from man-made threats. See Nathan Alexander Sears, “Existential Security: Towards a Security Framework for the Survival of Humanity,” *Global Policy* 11, no. 2 (April 2020), pp. 255–66. See also the United Nations’ Secretary-General’s report *Our Common Agenda* (New York: United Nations, 2021); and the United Nations Development Programme, *Human Development Report 2021/2022: Uncertain Times, Unsettled Lives; Shaping our Future in a Transforming World* (New York: United Nations, 2022), which includes Toby Ord’s essay on page 70 regarding the kinds of institutions needed to provide existential security. These UN reports recognize the importance of protecting the survival of future generations from existential risks, including nuclear weapons.
- <sup>10</sup> Nye, “Nuclear Ethics Revisited,” p. 11.
- <sup>11</sup> Bertrand Russell, “Last Essay: ‘1967,’” Bertrand Russell Research Centre, McMaster University, [russell.humanities.mcmaster.ca/bressay.htm](https://www.humanities.mcmaster.ca/bressay.htm).
- <sup>12</sup> There are many examples of effective monitoring, detection, and verification tools that have been developed over the decades; for example, the International Atomic Energy Agency’s safeguards program that monitors the production and non-diversion of nuclear materials from civil nuclear programs to nuclear weapon programs; the Comprehensive Test Ban Treaty Organization’s International Monitoring System, comprised of 321 monitoring stations in 89 countries that monitor and detect nuclear weapon

test explosions; the New START Treaty's verification provisions that verify limits on deployed strategic nuclear warheads in the United States and Russia; the Joint Comprehensive Plan of Action's verification provisions that ensure the peaceful use of all fissile materials produced in Iran; and the International Partnership for Nuclear Disarmament Verification, a public-private partnership involving the U.S. Department of State, the Nuclear Threat Initiative, and more than two dozen other governments to develop verification and monitoring tools for nuclear disarmament. While more work remains to be done to close gaps in a future verification regime for a nuclear weapons prohibition, the primary impediment to such a universally accepted treaty will almost certainly be the absence of political will, and not technical barriers.

---

**Abstract:** Nuclear weapons are different from every other type of weapons technology. Their awesome destructive potential and the unparalleled consequences of their use oblige us to think critically about the ethics of nuclear possession, planning, and use. Joe Nye has given the ethics of nuclear weapons deep consideration. He posits that we have a basic moral obligation to future generations to preserve roughly equal access to important values, including equal chances of survival, and proposes criteria for achieving conditional or “just deterrence” to minimize the risk of nuclear use and help preserve these values. While Nye's conditions are laudable, they are not achievable. They rely on flawed assumptions about the nature of nuclear weapons and the inherent risks of the nuclear deterrence system. Since the Cold War ended, the strategy and practice of nuclear deterrence has grown riskier, more urgent, more dangerous, and less stable. It is time to rethink how we manage nuclear risks. A new nuclear security system must be built on the design principle that the consequences of system failure cannot threaten to end or fundamentally disrupt civilization. We owe the future a new nuclear security strategy that can prevent an existential global nuclear event.

**Keywords:** nuclear, nuclear weapons, nuclear deterrence, nuclear ethics, just deterrence, existential threat, nuclear security, Joe Nye