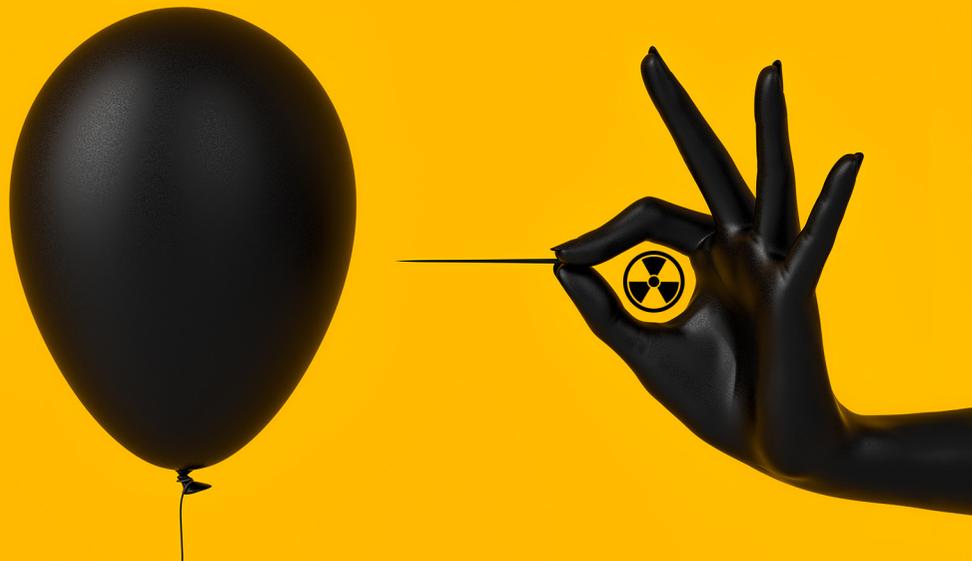


# RESPONDING TO NORTH KOREAN NUCLEAR FIRST USE

Minimizing Damage to the Nuclear Taboo

Workshop Proceedings



Erin Hahn | James Scouras | Robert Leonhard | Camille Spencer



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# 1

## INTRODUCTION

The conviction that nuclear weapons should not be used except in the most dire of circumstances is widely held today. This perspective both supports and reflects the emergence of the global norm that many refer to as the *nuclear taboo*. Related to—but distinct from—the tradition of nonuse of nuclear weapons and the strategy of deterrence, the taboo is a result of revulsion at the horrific toll nuclear use would take on humanity.

The nuclear taboo is increasingly recognized as a critical element of nuclear stability. Clearly, the nuclear taboo is most vulnerable after it is first violated, but norm theory suggests that the response to a violation can have a strong influence on whether a norm is irrevocably damaged or ultimately reinforced. Thus, the purpose of this workshop was to examine how alternative US responses to the first future use of nuclear weapons might further undermine or, alternatively, restore and perhaps even strengthen the nuclear taboo.

We did not expect a great deal of consistency in expert perspectives on this topic. To capture a broad spectrum of opinion and reasoning, we invited experts in various disciplines to address this workshop's central questions in face-to-face discussions. Participants are listed in Table 1.

**Table 1. Workshop Participants**

<b>Participant</b>	<b>Affiliation</b>
Justin Anderson	National Defense University
Andrew Bennett	Georgetown University
Christopher Bidwell	Federation of American Scientists
Duncan Brown	Johns Hopkins University Applied Physics Laboratory
Thomas E. Doyle II	Texas State University
Dennis Evans	Johns Hopkins University Applied Physics Laboratory
Robert H. Gromoll Jr.	US Department of State (Ret.)
Erin Hahn	Johns Hopkins University Applied Physics Laboratory
Peggy Harlow	Johns Hopkins University Applied Physics Laboratory
Jiyoung Ko	Bates College
Jeffrey Lantis	The College of Wooster
Susan Lee	Johns Hopkins University Applied Physics Laboratory
Robert Leonhard	Johns Hopkins University Applied Physics Laboratory
Bruce MacDonald	Johns Hopkins School of Advanced International Studies
Thomas McIlvain	US Department of State
LTC Ronondo Moore	Defense Threat Reduction Agency
Adam Mount	Federation of American Scientists
Susan Pagan	Johns Hopkins University Applied Physics Laboratory
Jennifer Perry	Defense Threat Reduction Agency
Robert Peters	Defense Threat Reduction Agency

<b>Participant</b>	<b>Affiliation</b>
Andrew Ross	Texas A&M University
Frank Sauer	Bundeswehr University Munich
James Scouras	Johns Hopkins University Applied Physics Laboratory
Natalia Slavney	Stimson Center
Camille Spencer	Johns Hopkins University Applied Physics Laboratory
Nina Tannenwald	Brown University
John K. Warden	Institute for Defense Analyses
Zachary Zwald	University of Houston

Our focus is on North Korea, one of the more troublesome challengers to US deterrence strategy as well as a topic of public attention and concern. Workshop participants discussed four presentations on the nature and status of the nuclear taboo. They then considered a spectrum of scenarios that culminate in North Korean nuclear first use. The workshop concluded with discussions of key questions. We believe that capturing the diversity of opinion and reasoning regarding nuclear retaliation will enrich discussions of nuclear strategy in the Department of Defense (DoD), the broader international security community, and the public. After the workshop, we developed recommendations for government stakeholders.



# 2

## PRESENTATIONS

The workshop began with the following four presentations intended to provide current thinking regarding the nuclear taboo:

- “The State of the Nuclear Taboo Today” presented by Nina Tannenwald
- “Morally Justified Responses to North Korean Nuclear First Use: Reflections on the Nuclear Taboo” presented by Thomas Doyle
- “Atomic Anxiety in a Hypothetical Second-Use World: Responses to a North Korean Nuclear Attack” presented by Frank Sauer
- “The Nuclear Taboo and Norm Cluster Resiliency: Insulating against a North Korean Nuclear First Use” presented by Jeffrey Lantis

Summaries of these presentations follow.

## The State of the Nuclear Taboo Today

Nina Tannenwald

The nuclear taboo is a normative inhibition against the first use of nuclear weapons. It is a widespread revulsion at the incredible destruction that a nuclear strike would cause and a sense of moral opprobrium. In 2017, the nuclear ban treaty codified the nuclear taboo, causing much controversy.

The nuclear taboo has had five main effects on international politics. First, the taboo has helped restrain the use of nuclear weapons since 1945. Second, stigmatization has made it impossible to think of a nuclear weapon as “just another weapon.” This is the single most important and long-lasting contribution of the international nuclear movement. Third, it has raised the moral and political costs of threatening to use nuclear weapons. Nuclear threat-making had been declining over time until recently. During the Cold War, most nuclear threats were made between the United States and the Soviet Union. After the Cold War, the majority of nuclear threats were made by India and Pakistan toward each other and by the United States toward countries perceived to be outside the normative community. And more recently, there has been an increase in nuclear brinksmanship. Fourth, the taboo has reinforced deterrence between nuclear-armed states. Norms are part of—not versus—deterrence. Norms reinforce the need for restraint; this was demonstrated by the United States and the Soviet Union during the Cold War. Neither country was comfortable living in a balance of terror, but both wanted to codify their understanding about stable deterrence in arms control agreements and security institutions. Finally, the taboo has undermined deterrence between nuclear and nonnuclear states. While this is a speculative concept, there is a significant amount of supporting evidence. For example, North Vietnam was not deterred in the Vietnam War. There is also significant empirical research by Todd Sechser and Matthew Fuhrmann concluding that nuclear coercion does not achieve much.<sup>1</sup>

In examining how strong the nuclear taboo is today, we can look at states’ behaviors and policies (e.g., nuclear doctrine and posture), institutions (norms are embedded in institutions—e.g., arms control agreements, law), and discourse (how people talk about the Bomb as well as public and elite opinions). The public arrived at a “no-first-use” position in the 1950s and maintained that position through most of the ensuing decades. Recently, however, public opposition to nuclear first use has been declining, which is a

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<sup>1</sup> For a major scholarly analysis concluding that nuclear weapons have little coercive value beyond deterrence of attacks on the homeland, see Sechser and Fuhrmann, *Nuclear Weapons and Coercive Diplomacy*.

signal that the taboo and all the nuclear norms—nonuse, deterrence, nonproliferation, and disarmament—are under pressure.

Doctrines are lowering the threshold for nuclear use. Some argue that lower-yield warheads are more ethical because they cause less collateral damage. Also, conventional and nuclear weapons have become entangled because of new weapons technologies (i.e., hypersonics). The understanding of what contributes to stability and deterrence is unclear today. The state of deterrence and disarmament is very worrisome.

More generally, institutions today are dismantling and discrediting arms control and norms of restraint. While this trend precedes President Donald Trump, he has put the nail in the coffin. It looks like arms control may be dead for a while. We are now entering a world of excess in terms of both arms and discourse.

The discourse has turned into bellicose rhetoric among leaders such as Trump, Chairman Kim Jong Un, President Vladimir Putin, and now Indian Prime Minister Narendra Modi, and this rhetoric risks normalizing nuclear weapons use. In April, India threatened Pakistan with a nuclear weapon, and Trump did not publicly condemn the threat. Traditionally, the United States has played a significant role in moderating the India–Pakistan conflict. This brandishing of the nuclear sword and saber-rattling are extremely dangerous because they normalize nuclear weapons use, and this normalization could lead to rhetorical entrapment. In contrast, in 2010, President Barack Obama and Indian Prime Minister Manmohan Singh released a joint statement affirming that they “support strengthening the six decade-old international norm of nonuse of nuclear weapons.”<sup>2</sup> Similar statements were echoed in the Nuclear Posture Review and public speeches under the Obama administration.<sup>3</sup>

Some opinion surveys suggest that the taboo is weakening among the public. A 2017 survey study conducted by Sagan and Valentino found that 60 percent of Americans would approve of killing two million Iranian civilians to prevent an invasion of Iran that might kill twenty thousand US soldiers.<sup>4</sup> This apparent weakening of the taboo could be explained by “nuclear forgetting” and/or a general downward pressure on norms of restraint since 9/11. Additionally, the taboo is increasingly an elite phenomenon, generally still held by members of government, bureaucracies, and political elites. Standard public opinion polling shows that the public is in favor of nuclear disarmament. Europe has a strong antinuclear sentiment. Elite queuing also makes a difference in public opinion polling.

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<sup>2</sup> White House Office of the Press Secretary, “Joint Statement.”

<sup>3</sup> Office of the Secretary of Defense, *Nuclear Posture Review Report*, 2010.

<sup>4</sup> Sagan and Valentino, “Revisiting Hiroshima in Iran,” 58.

Does North Korea hold the nuclear taboo? On April 20, 2018, Kim Jong Un made a series of statements that he would like North Korea to be considered a normal nuclear power.<sup>5</sup> For example, he stated that “the DPRK will never use nuclear weapons nor transfer nuclear weapons or nuclear technology under any circumstances unless there are nuclear threat and nuclear provocation against the DPRK.” He also said that “the discontinuance of the nuclear test is an important process for the worldwide disarmament, and the DPRK will join the international desire and efforts for the total halt to the nuclear test.” It is unclear whether this is just talk or we could actually hold Kim to these statements.

Steps can be taken to strengthen the taboo. Most important now, world leaders should publicly reaffirm their commitment to the taboo (“taboo talk”). The role of nuclear weapons in security policies should be reduced. Congress should be involved in any US first use of nuclear weapons. No-first-use policies should be declared. There should be more dialogue about the conditions under which first use would be morally acceptable.

## Bibliography

- Kirby, Jen. “North Korea Announces a Freeze on Nuclear and Missile Tests Starting in April.” *Vox*, April 20, 2018. <https://www.vox.com/2018/4/20/17264316/north-korea-nuclear-test-site-missile-program-freeze-trump-twitter>.
- Office of the Secretary of Defense. *Nuclear Posture Review Report*. 2010. [https://dod.defense.gov/Portals/1/features/defenseReviews/NPR/2010\\_Nuclear\\_Posture\\_Review\\_Report.pdf](https://dod.defense.gov/Portals/1/features/defenseReviews/NPR/2010_Nuclear_Posture_Review_Report.pdf).
- Sagan, Scott, and Benjamin Valentino. “Revisiting Hiroshima in Iran: What Americans Really Think about Using Nuclear Weapons and Killing Noncombatants.” *International Security* 42, no. 1 (2017): 41–79.
- Sechser, Todd, and Matthew Fuhrmann. *Nuclear Weapons and Coercive Diplomacy*. Cambridge: Cambridge University Press, 2017.
- White House Office of the Press Secretary. “Joint Statement by President Obama and Prime Minister Singh of India.” Press release, November 8, 2010. <https://obamawhitehouse.archives.gov/the-press-office/2010/11/08/joint-statement-president-obama-and-prime-minister-singh-india>.

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<sup>5</sup> Kirby, “North Korea Announces a Freeze.” The full statement is available here: [https://www.ncnk.org/resources/publications/dprk\\_report\\_third\\_plenary\\_meeting\\_of\\_seventh\\_central\\_committee\\_of\\_wpk.pdf](https://www.ncnk.org/resources/publications/dprk_report_third_plenary_meeting_of_seventh_central_committee_of_wpk.pdf).

# Morally Justified Responses to North Korean Nuclear First Use: Reflections on the Nuclear Taboo

Thomas Doyle

The nuclear taboo is a moral prohibition on the use of nuclear weapons in warfare. Nina Tannenwald argues that the nuclear taboo largely explains the overwhelmingly positive yet puzzling fact of nuclear nonuse since 1945,<sup>1</sup> and thus it is important to determine whether the nuclear taboo could survive a nuclear first-use event and whether it might even be enhanced by a response that includes nuclear reprisal strikes. To address these questions, it is necessary to briefly discuss the role of moral principles as mechanisms of social regulation and how such principles might inform policy planning for cases of existential threats against states. To flesh out these answers, the following analysis will make use of a hypothetical scenario of North Korean nuclear first use against US military bases in the East Asia region.

Morality is an informal instrument of social regulation whose principles identify the proper constraints on actions taken in pursuit of self-interest. Similar to formal (i.e., legal) instruments of social regulation, moral principles prohibit actions harmful to other people insofar as they bear rights of life and liberty that must be respected. This means that the moral rights of others impose moral duties on oneself that must be observed on pain of moral sanction. These duties are binding on us, even in relation to citizens of other countries. And the moral sanctions suffered for the violation of duty are not insignificant, even in contexts of national and alliance security. This is not to say that individual or state actors are always (or even often) motivated by moral principle. Nonetheless, the United States prides itself as a world leader in the protection of civil and human rights, democracy, and freedom. This means that the United States, of all the world's states, has largely tethered its identity to action that corresponds with morality.

In the past, many scholars and policy experts have addressed the question of the ethics of nuclear defense and deterrence. For instance, Joseph Nye's 1986 book on nuclear ethics synthesized key elements of moral consequentialism with deontological ethics.<sup>2</sup> Nye ultimately proposed five ethical maxims for nuclear-weapons policy:

1. Self-defense is a just but limited cause.
2. Never treat nuclear weapons as normal weapons.
3. Minimize harm to innocent people.

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<sup>1</sup> Tannenwald, *Nuclear Taboo*. See also Tannenwald, "How Strong."

<sup>2</sup> Nye, *Nuclear Ethics*.

4. Reduce the risks of nuclear war in the near term.
5. Reduce reliance on nuclear weapons over time.<sup>3</sup>

Nye's five maxims are not themselves moral principles. Rather, they are rules or guidance that rest on a series of moral principles. The first maxim affirms and limits the right of national self-defense, and it rests on the moral principle prohibiting the use of excessive force.<sup>4</sup> For the second and third maxims, the sovereign right of nuclear warfighting must be limited by the noncombatant immunity principle.<sup>5</sup> And for the fourth and fifth maxims, the greater good principle from utilitarian ethics requires states to do what is necessary to prevent nuclear war, including significantly shifting policy away from nuclear weapons.<sup>6</sup> Importantly, Nye's maxims do not rule out the use of nuclear weapons as a response to nuclear aggression, but they do not make it a required course of action, either. Indeed, they advise nuclear restraint in the term's strictest sense.

As I reflect on Nye's nuclear ethics, I arrive at two conclusions. One is that Nye's ethics permit the limited use of nuclear weapons to restore deterrence. But the restoration of deterrence is conceptually and morally distinct from preserving the nuclear taboo. This distinction might not be immediately clear to those who wish to link the nuclear taboo with nuclear deterrence. If North Korea uses nuclear weapons first and against US bases in East Asia, and US nuclear reprisal strikes convince Pyongyang to avoid nuclear second use, *it will not be for the reason that nuclear strikes are in and of themselves wrong or illegitimate*. It will instead be because of the fear of suffering a second round of nuclear reprisals. By contrast, the nuclear taboo motivates nuclear nonuse because *nuclear use is intrinsically abhorrent, inhumane, and not an act that civilized nations would undertake*. Accordingly, the second conclusion is that by permitting nuclear reprisal, Nye's maxims are inconsistent with the nuclear taboo. One does not preserve a taboo by engaging in the behavior it prohibits.

If these conclusions are correct, the United States must respond to North Korean nuclear first use in a way that satisfies national security imperatives and preserves the nuclear taboo. Of course, the operational details are not for the moral theorist to determine. However, the moral theorist is charged to recommend that policy design and implementation focus on the means to induce North Korea to choose future nuclear nonuse on the basis of the taboo over and above the fear of nuclear reprisal.

<sup>3</sup> Nye, *Nuclear Ethics*, 99.

<sup>4</sup> Nye, *Nuclear Ethics*, 27–41.

<sup>5</sup> Orend, *Morality of War*, 111–152.

<sup>6</sup> For an overview of utilitarianism in international ethics, see Ellis, "Utilitarianism and International Ethics."

Of course, the pressure on the US president to undertake nuclear reprisal will be extraordinarily high in the immediate aftermath of a North Korean nuclear first use. Even so, domestic political pressure does not necessarily reflect an upright moral sensibility. The moral theorist Michael Walzer emphasizes that even a well-motivated policy of nuclear reprisal amounts to “an immorality we can never hope to square with our understanding of justice in war. Nuclear weapons explode the theory of just war. . . Nuclear war is and will remain morally unacceptable, and there is no case for its rehabilitation.”<sup>7</sup>

Nuclear reprisal is an immoral act because it violates the nuclear taboo, even more so than the original North Korean nuclear first use. Nuclear reprisal does not square with our understanding of justice in war because it must involve (grossly) indiscriminate killing and destruction, except in the rarest of counterforce scenarios. It explodes the theory of just war because it abolishes the idea that self-defense is a just but limited right. And if there are no other-regarding limits to the means of self-defense, there is no such thing as a morality that has authority to constrain self-interest.

The challenge for the United States, as a liberal democratic superpower, is to respond to nuclear first use and achieve its national security in ways that also preserve an international society ordered by the rule of law and norms, such as the nuclear taboo. To do this, the United States should plan to adequately respond to North Korean nuclear first use with a mix of conventional military force and diplomatic efforts that, in concert with allies and partners, facilitates the greater internalization and motivating force of the nuclear taboo.

## Bibliography

- Ellis, Anthony. “Utilitarianism and International Ethics.” Chap. 8 in *Traditions of International Ethics*, edited by Terry Nardin and David R. Mapel, 158–179. Cambridge: Cambridge University Press, 1992.
- Nye, Joseph S. *Nuclear Ethics*. New York: The Free Press, 1986.
- Orend, Brian. *The Morality of War*. 2nd ed. Buffalo, NY: Broadview Press, 2013.
- Tannenwald, Nina. “How Strong Is the Nuclear Taboo Today?” *Washington Quarterly* 41, no. 3 (2018): 89–109.
- . *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons since 1945*. Cambridge: Cambridge University Press, 2007.
- Walzer, Michael. *Just and Unjust Wars: A Moral Argument with Historical Illustrations*. 5th ed. New York: Basic Books, 2015. First published 1977.

<sup>7</sup> Walzer, *Just and Unjust Wars*, 281–282.

## Atomic Anxiety in a Hypothetical Second-Use World: Responses to a North Korean Nuclear Attack

Frank Sauer

This short essay assumes a North Korean first use of a nuclear weapon against the United States of America. The hypothetical is deliberately scarce in details, except for the fact that the nuclear attack targeted the US heartland or a territory such as Guam, thus immediately affecting vital US interests. In what follows, I will first give a brief outline of Atomic Anxiety.<sup>1</sup> I then use this concept to develop a few thoughts on the response in the immediate aftermath, especially regarding the interplay between the nuclear taboo and nuclear deterrence.

### Atomic Anxiety: The Collective Fear of Death en Masse in Nuclear War

I developed the concept of Atomic Anxiety against the background of the scholarship on fear during the Cuban missile crisis and the fact that the pivotal role of fear was never systematically connected back to the bigger picture—that is, the research in international relations on the more general causes of nuclear nonuse. International relations presents us with two explanations for why nuclear weapons were never used again after 1945: nuclear deterrence and the nuclear taboo.

Deterrence is firmly wedded to the notion of rationality embodied by the emotionless *homo economicus*, a being of pure cognition. Within this paradigm, emotion is primarily seen as a reason for deterrence to fail—not as the key condition for it to work—despite the facts that “terror,” to cause fear, is at the root of the word “deterrence” and that fear used to be the conceptual core of early deterrence thinking.<sup>2</sup> The nuclear taboo, in contrast, is based on the notion of a norm-conformatively behaving *homo sociologicus*. However, it does not pay much attention to emotion either.

A look into neighboring disciplines such as cultural studies reveals that the fear of nuclear war has been systematically documented. There is a whole body of literature exposing, as cultural historian Paul Boyer puts it in his seminal book *By the Bomb's Early Light*,<sup>3</sup> how quickly Americans began to articulate “a primal fear of extinction” right at the dawn of the

<sup>1</sup> Sauer, *Atomic Anxiety*.

<sup>2</sup> See for example Brodie, *Absolute Weapon*. Looking back at his own work on deterrence theory in 2004, eminent deterrence scholar Robert Jervis called giving the role of emotions short shrift a “major blunder”; see Balzacq and Jervis, “Logics of Mind and International System,” 567.

<sup>3</sup> Boyer, *By the Bomb's Early Light*.

nuclear age—that is, even at a time when the United States still held the nuclear monopoly. Radio legend Edward Murrow put it this way three days after the bombing of Nagasaki: “Seldom, if ever, has a war ended leaving victors with such a sense of uncertainty and fear, with such a realization that the future is obscure and survival is not assured.”<sup>4</sup> He describes Atomic Anxiety in a nutshell: it is the collectively experienced feeling of fear, the visceral fear of death en masse in nuclear war—a defining feature of the nuclear age.

## Atomic Anxiety and Why the Nuclear Taboo Hampers Deterrence in Practice

Atomic Anxiety is not causing nuclear deterrence and the nuclear taboo, it is constitutive to them. It underlies and precedes them; in other words, deterrence and taboo “make sense” only because there is Atomic Anxiety. Both can be conceptualized as emotion-management strategies referring back to Atomic Anxiety, albeit in very different ways: Deterrence is the attempt to weaponize it, to turn fear against your opponent. The taboo—in turn—is how your own anxiety crystallizes in the strong normative conviction that nuclear weapons are not to be used.

Viewing presidential decision-making through this lens explains why nuclear deterrence and the nuclear taboo—understood as political efforts to “manage” the collective fear—are not mutually reinforcing each other. Instead, it explains why the nuclear taboo hampers nuclear deterrence: practicing deterrence perpetuates a situation of reciprocal fear, which fuels the taboo, which in turn weakens your determination to threaten the use of nuclear weapons. In William Walker’s words: “A principal goal of policy should be to strengthen, worldwide, inhibitions on the use of nuclear weapons. . . . Yet this goal, if too successfully pursued, is inimical to nuclear deterrence.”<sup>5</sup>

## Atomic Anxiety, the Taboo, and Deterrence after a First Use of Nuclear Weapons

I contend that Atomic Anxiety, after a period of over seventy years of uninterrupted nuclear nonuse, would run rampant in the aftermath of a North Korean nuclear attack—not only in the United States but also globally. After all, “nuclear weapons have a unique status. . . . You say ‘nuclear bomb’ and everybody immediately thinks of the end of the world.”<sup>6</sup>

The nuclear taboo would—in this immediate situation—be fueled and strengthened by the uptick in Atomic Anxiety. In addition, norms do not erode when they are broken.

<sup>4</sup> Quoted in Hunner, “Reinventing Los Alamos,” 38.

<sup>5</sup> Walker, “Absence of a Taboo,” 875.

<sup>6</sup> Bulletin Staff, “Interview: Spencer R. Weart,” 12.

They erode only when they are contested, when their claim to validity is attacked. The chemical weapon attacks in Syria, for example, are not eroding the chemical weapons taboo. They are breaking it. But for the norm to begin eroding, it would also have to be drawn into question. In other words, its violation by one actor would have to be found acceptable by others. So far, the reaction by the international community suggests that the opposite is happening.<sup>7</sup> The nuclear taboo, immediately after the attack, would present a similar case.

The paradigm of deterrence, in contrast, would suffer. The idea of adopting a deterrence posture is to prevent an adversary's first use. But despite the United States' deterrence posture, the North Korean first use took place—deterrence clearly failed. As soon as we enter a second-use world, deterrence would have a newly intensified credibility problem.

### Atomic Anxiety, the Taboo, Deterrence, and Nuclear Retaliation

What would happen if the United States responded in-kind, using nuclear weapons despite the availability of viable nonnuclear options? This is where things get very speculative.

From a taboo perspective, the one violation by North Korea would not erode the norm. But a nuclear response by the United States could start that process. The signal this would send is that the use of nuclear weapons is no longer just the one singular aberration but that it has become a thinkable course of action again, even for “civilized nations.” I speculate that the fact that the nuclear taboo has so far been conceptualized as a norm prohibiting only first use would not factor in heavily here. However, a nuclear response would most likely also fuel Atomic Anxiety further. Would this not allow for an even stronger rather than an eroding taboo? It bears repeating at this point that Atomic Anxiety is not causing the taboo in an “if, then” fashion. It only conditions the possibilities for it to exist and be meaningful in the first place; and so it stands to reason that a US second use would lift some of the stigma off nuclear weapons and leave the nuclear taboo less valid than before and open to further challenges. So even with a lot of Atomic Anxiety going around, the taboo could wither away and be replaced. Civil defense, for instance, was once important as an emotion-management strategy, yet it is much less meaningful today. All in all, this suggests that a nuclear reprisal is not desirable if there is an interest in upholding the nuclear taboo.

From a deterrence perspective, conventional wisdom would dictate that swift nuclear retaliation is required to fix the paradigm of deterrence and declare the “irrational” North Korean attack a one-off event. Otherwise your threat of a second strike will never

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<sup>7</sup> Price, “Syria and the Chemical Weapons Taboo.”

be credible again, and thus you will never be able to manipulate any adversary's cost-benefit calculus the same way again—the whole nuclear deterrence enterprise would be rendered worthless otherwise. This line of thought assumes that deterrence arises from a rational weighing of costs and benefits, as suggested by mainstream deterrence theory. However, if one posits that deterrence in reality is based on leveraging Atomic Anxiety—that is, on visceral fear much more than on cool-headed cognition—it is less clear whether this “fix” will have the intended effect of restoring credibility. Fear is met by some with flight, by others with fight. So if deterrence demonstrably failed one time, why would it not fail again against some fearless adversary? In this line of thought, the credibility problem remains.

## Conclusion: The Most Desirable Response Is Not the Most Likely Response

Drawing on a nonnuclear response option is desirable for many reasons, among which the upholding of the nuclear taboo is only one. Clearly, keeping a robust international norm against nuclear use would be in the strategic interest of the United States. Also, it is not as obvious as some might make it out to be that nuclear deterrence would be restored by retaliating with nuclear means. In that sense, it would seem prudent to—at least in the immediate aftermath—give preference to a nonnuclear response.

However, the US president alone decides the use of nuclear weapons. Since President Donald Trump took office, this has been some cause for concern. But these concerns were voiced with regard to a possible presidential first use and caused by Trump's loose talk about nuclear weapons and demonstrated ignorance toward their military mission and the implications of their use. Against this background, I have little doubt that after a North Korean nuclear attack, if presented with a nuclear response option, his decision will be to retaliate with nuclear weapons. In that sense, the most desirable response, a nonnuclear one, would not be the most likely one.

## Bibliography

- Balzacq, Thierry, and Robert Jervis. “Logics of Mind and International System: A Journey with Robert Jervis.” *Review of International Studies* 30, no. 4 (2004): 559–582.
- Boyer, Paul. *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. Chapel Hill, NC: University of North Carolina Press, 1994. First published 1985.
- Brodie, Bernard, ed. *The Absolute Weapon: Atomic Power and World Order*. New York: Harcourt, Brace & Co., 1946.

- Bulletin Staff. "Interview: Spencer R. Weart." *Bulletin of the Atomic Scientists* 64, no. 2 (2008): 9–12.
- Hunner, Jon. "Reinventing Los Alamos: Code Switching and Suburbia at America's Atomic City." In *Atomic Culture: How We Learned to Stop Worrying and Love the Bomb*, edited by Scott C. Zeman and Michael A. Amundson, 33–48. Boulder, CO: University Press of Colorado, 2004.
- Price, Richard. "Syria and the Chemical Weapons Taboo." *Journal of Global Security Studies* 4, no. 1 (2019): 37–52.
- Sauer, Frank. *Atomic Anxiety: Deterrence, Taboo and the Non-Use of U.S. Nuclear Weapons*. Basingstoke: Palgrave Macmillan UK, 2015.
- Walker, William. "The Absence of a Taboo on the Possession of Nuclear Weapons." *Review of International Studies* 36, no. 4 (2010): 865–876.

## The Nuclear Taboo and Norm Cluster Resiliency: Insulating against a North Korean Nuclear First Use<sup>1</sup>

Jeffrey Lantis

The nuclear nonproliferation regime and the norm of nonuse of nuclear weapons, or the “nuclear taboo,”<sup>2</sup> have faced serious challenges in recent decades. Confrontations between the United States and adversaries over nuclear weapons represent one domain where these have occurred. For example, after the 9/11 terrorist attacks, US President George W. Bush launched a global war on terrorism that targeted groups like al Qaeda as well as states seeking to acquire weapons of mass destruction. North Korea detonated its first nuclear test in 2006 and soon threatened to use nuclear weapons against its adversaries. United Nations Review Conferences for the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) in 2005 and 2015 collapsed in acrimony. In 2017, US President Donald Trump ramped up rhetoric regarding the possible use of nuclear weapons, warning that North Korea and Iran might suffer a devastating attack if they advanced their programs. In 2018, the White House even called for expanding the nuclear arsenal and withdrawing from the Intermediate-Range Nuclear Forces Treaty, citing Russian provocations. Experts warn that the international security environment might be tilting back to the dangerous days of the Cold War.<sup>3</sup>

Nevertheless, the nonproliferation regime and the nuclear taboo persist. Even in “troubled times,” most policy makers acknowledge the longevity and success of the regime in restraining proliferation and preventing nuclear war.<sup>4</sup> Supporters have hailed the grand bargain of the NPT between nuclear-weapons states and non-nuclear-weapons states. The NPT prohibits transferring nuclear weapons, commits non-nuclear-weapons states to forswear development of nuclear weapons, supports peaceful uses of nuclear energy, and calls for negotiations toward disarmament. Although the norm of nonuse was not explicitly part of the nonproliferation regime developed in the 1960s, it was clearly the regime’s original inspiration—and it remained an implied norm, between the lines of the NPT, for decades. Governments have issued no-first-use declarations, developed launch authorization protocols, installed safeguards like permissive action links, and created nuclear-weapons-free zones. As a result, the nuclear-weapons taboo is considered by many

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<sup>1</sup> This presentation draws directly from Lantis and Wunderlich, “Norm Cluster Resiliency.”

<sup>2</sup> Tannenwald, *Nuclear Taboo*; and Schelling, “An Astonishing 60 Years.”

<sup>3</sup> Birnbaum and Hudson, “Trump Administration.”

<sup>4</sup> Fuhrmann and Lupu, “Do Arms Control Treaties Work?”; and White House Office of the Press Secretary, “Press Briefing.”

to be “one of the strongest norms in international politics.”<sup>5</sup> In 2017, UN member states negotiated the Treaty on the Prohibition of Nuclear Weapons, the first legally binding international agreement to prohibit nuclear-weapons development and possession. This made the implicit norm of nonuse much more explicit as part of a cohesive institutional and legal framework.

In this presentation, I advance three primary arguments regarding the nuclear nonproliferation regime, norm contestation, and the nuclear taboo. First, I adopt a constructivist lens to highlight how “norm clusters” lie at the heart of many prospering international regimes. In earlier work, we defined norm clusters as “collections of similarly aligned norms or principles at the center of a regime.”<sup>6</sup> Norm cluster theory argues that synergy between normative and institutional standards helps promote long-term resiliency and ontological security in the face of contestation. Second, I contend that the long-term resiliency of international norm clusters provides a better gauge of the health and durability of a regime than the “strength” of individual norms.<sup>7</sup> Any assessment of norm strength is by its nature a snapshot in time, and such an exercise effectively reifies a social construction. A more valuable reflection of patterns of international cooperation and state behavior can be found in longer-term assessments of the resiliency of norm clusters.<sup>8</sup> Third, this presentation examines the nuclear taboo as a norm at the heart of the nonproliferation regime norm cluster. To date, the literature on the nuclear taboo has described its development and nature primarily as an individual norm.<sup>9</sup> In contrast, this presentation seeks to understand its longevity with reference to its embeddedness in a cohesive and institutionalized norm cluster.

So, just how serious are recent pressures on the global nuclear normative order? Is the world facing its potential “unravelling”?<sup>10</sup> Will the nuclear taboo be broken by a reckless leader in the near future? I address these questions in the study, beginning with a survey of the literature on the nuclear taboo and how it is situated within the broader nuclear nonproliferation regime. I then briefly summarize the Lantis and Wunderlich model<sup>11</sup> of

<sup>5</sup> Gibbons and Lieber, “How Durable Is the Nuclear Weapons Taboo?,” 29.

<sup>6</sup> Lantis and Wunderlich, “Resiliency Dynamics of Norm Clusters,” 1.

<sup>7</sup> cf. Panke and Petersohn, “Norm Challenges and Norm Death”; Jose, “Not Completely the New Normal”; and Fields and Enia, “Health of the Nuclear Nonproliferation Regime.”

<sup>8</sup> Lantis and Wunderlich, “Resiliency Dynamics of Norm Clusters”; and Blondeel, Van de Graaf, and Colgan, “What Drives Norm Success?”

<sup>9</sup> Tannenwald, “How Strong Is the Nuclear Taboo Today?”; Paul, *Tradition of Non-Use*; and Mochizuki, “Japan Tests the Nuclear Taboo.”

<sup>10</sup> Tannenwald, “How Strong Is the Nuclear Taboo Today?”

<sup>11</sup> Lantis and Wunderlich, “Resiliency Dynamics of Norm Clusters.”

the resiliency of norm clusters versus less institutionalized or connected norms, which serves as the theoretical background of the empirical analysis at the heart of this paper. Next, I probe the plausibility of the model by examining two episodes of contestation of the norm of nuclear nonuse: (1) nuclear modernization efforts and the war on terror during the former President George W. Bush administration and (2) Trump-era challenges to the nonuse norm in the 2018 Nuclear Posture Review and the North Korean nuclear showdown. Case studies explore the power of the norm cluster to insulate the regime against potential violations.

These analyses appear to confirm the resiliency of the nonproliferation norm cluster and the persistence of the nuclear taboo. Insights can be applied to the consideration of North Korean first-use nuclear scenarios in several ways. First, the nonproliferation norm cluster, which includes the nuclear taboo, can be surprisingly resilient as a function of the cohesiveness of central principles and institutionalized support. Second, North Korean violations, or planned violations, of the taboo through nuclear use need not precipitate a “response in-kind.” Rather, the norm cluster and committed member states have the capacity to absorb this violation and to use the act as a catalyst for greater advancement of commitments to nonproliferation. The act of North Korean norm contestation might have the unexpected effect of strengthening global efforts to reduce the proliferation of nuclear weapons, stress peaceful uses of technology over potential diversions, and embrace the humanitarian movement toward weapons prohibition by pursuing disarmament. In short, the challenge of North Korean provocations may illustrate how cohesiveness and institutionalization can result in greater ontological security.

## Bibliography

- Birnbaum, Michael, and John Hudson. “Trump Administration Says It Will Leave INF Treaty If Russia Doesn’t Comply in 60 Days.” *Chicago Tribune*, December 4, 2018. <https://www.chicagotribune.com/nation-world/ct-trump-administration-russia-inf-treaty-20181204-story.html>.
- Blondeel, Mathieu, Thijs Van de Graaf, and Jeff D. Colgan. “What Drives Norm Success? Evidence from Anti-Fossil Fuel Campaigns.” Paper presented at the Annual Meeting of the International Studies Association, San Francisco, CA, 2018.
- Fields, Jeffrey, and Jason S. Enia. “The Health of the Nuclear Nonproliferation Regime: Returning to a Multidimensional Evaluation.” *Nonproliferation Review* 16, no. 2 (2009): 173–196.

- Fuhrmann, Matthew, and Yonatan Lupu. "Do Arms Control Treaties Work? Assessing the Effectiveness of the Nuclear Nonproliferation Treaty." *International Studies Quarterly* 60, no. 3 (2016): 530–539.
- Gibbons, Rebecca Davis, and Keir Lieber. "How Durable Is the Nuclear Weapons Taboo?" *Journal of Strategic Studies* 42, no. 1 (2019): 29–54.
- Jose, Betsy. "Not Completely the New Normal: How Human Rights Watch Tried to Suppress the Targeted Killing Norm." *Contemporary Security Policy* 38, no. 2 (2017): 237–259.
- Lantis, Jeffrey S. *Arms and Influence: U.S. Technology Innovations and the Evolution of International Security Norms*. Stanford, CA: Stanford University Press, 2016.
- Lantis, Jeffrey S., and Carmen Wunderlich. "Norm Cluster Resiliency: Norm Contestation and the Nuclear Taboo." Paper presented at the Workshop on Expanding the Study of the Nuclear Taboo: Cross-National and Multi-Dimensional Perspectives, Annual Meeting of the International Studies Association, Toronto, Canada, March 2019.
- . "Resiliency Dynamics of Norm Clusters: Norm Contestation and International Cooperation." *Review of International Studies* 44, no. 3 (2018): 570–593.
- Mochizuki, Mike M. "Japan Tests the Nuclear Taboo." *Nonproliferation Review* 14, no. 2 (2007): 303–328.
- Panke, Diana, and Ulrich Petersohn. "Why International Norms Disappear Sometimes." *European Journal of International Relations* 18, no. 4 (2012): 719–742.
- . "Norm Challenges and Norm Death: The Inexplicable?" *Cooperation and Conflict* 51, no. 1 (2016): 3–19.
- Paul, T. V. *The Tradition of Non-Use of Nuclear Weapons*. Stanford, CA: Stanford University Press, 2009.
- Schelling, Thomas C. "An Astonishing 60 Years: The Legacy of Hiroshima." Nobel Prize Lecture, December 8, 2005.
- Tannenwald, N. "How Strong Is the Nuclear Taboo Today?" *Washington Quarterly* 42, no. 3 (2018): 89–109.
- . *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons Since 1945*. Cambridge: Cambridge University Press, 2007.
- . "The Nuclear Taboo: The United States and the Normative Basis of Nuclear Non-Use." *International Organization* 53, no. 3 (1999): 433–468.
- . "Stigmatizing the Bomb: Origins of the Nuclear Taboo." *International Security* 29, no. 4 (2005): 5–49.

White House Office of the Press Secretary. “Remarks by President Barack Obama in Prague as Delivered.” April 5, 2009. <https://obamawhitehouse.archives.gov/the-press-office/remarks-president-barack-obama-prague-delivered>.

———. “Press Briefing by Press Secretary John Ernest.” January 17, 2017. <https://obamawhitehouse.archives.gov/the-press-office/2017/01/17/press-briefing-press-secretary-josh-earnest-11717>.



# 3

## DISCUSSION

Workshop participants considered four scenarios of North Korean nuclear first use. These scenarios involve relatively small (one to five) numbers of nuclear weapons because the question of whether to respond with nuclear or conventional weapons is less uncertain in scenarios involving large numbers of first-strike weapons. In addition, the contexts of these scenarios generally involve existential threats to the Kim regime because the plausibility of nuclear use is greatest under such circumstances.



## Exploration of First-Use Scenarios

Table 2 depicts the first-use scenarios presented to participants, as well as participants' judgments of both the most likely response and the response that would minimize damage to the nuclear taboo.

**Table 2. North Korean Nuclear First-Use Scenario Analysis**

First-Use Scenario	Most Likely Response	Response That Minimizes Damage to the Nuclear Taboo
<b>Korean war redux:</b> In the context of a new Korean war, North Korea launches two nuclear weapons at troop concentrations in the Demilitarized Zone and north of it, killing fifty thousand troops and ten thousand civilians.	Engage regional powers while simultaneously conducting a conventional strike to secure North Korean nuclear weapons. Reserve the right to use nuclear weapons.	Same. The United States underlines norm of nonuse.
<b>Regime collapse:</b> In the context of resumed nuclear and ballistic missile testing, tightened international sanctions threaten survival of the Kim regime. US satellites detect an intercontinental ballistic missile originating in North Korea, apparently targeting San Diego. The United States reports that it shot down the missile, but others speculate that the weapon malfunctioned.	Conduct an investigation to get the facts. Overtly signal commitment to preempt another launch. Launch a diplomatic public affairs campaign to garner the support of the international community to condemn North Korea. Consult and reassure allies.	Same
<b>Regime change:</b> Kim, fearing a US-orchestrated regime change operation in progress, fires five nuclear weapons. Extended-range Scud and Nodong missiles strike a port in Japan, a port in South Korea, and a headquarters/airbase in South Korea. Hwasong-12s strike Okinawa and Guam.	Destroy North Korean leadership and nuclear-weapons capabilities/stockpiles by employing nuclear and conventional weapons.	Conduct a ground invasion to topple leadership and destroy nuclear-weapons capabilities using conventional weapons only. Obtain a UN Security Council resolution authorizing invasion of North Korea.
<b>Proliferation to terrorists:</b> A crude two-kiloton nuclear device detonates in Mobile, Alabama, killing ten thousand people and causing thirty thousand additional casualties. US intelligence traces the fissile materials to North Korea and delivery of the bomb to a terrorist organization supported by Iran.	Conduct punishing conventional attacks against North Korea, the terrorists responsible for the attack, and Iran.	Engage the international community in multilateral diplomacy resulting in UN-authorized punitive strikes.

Several observations can be made regarding this scenario analysis. First, for a majority of the scenarios, respondents did not view a nuclear response as the most likely response. This could reveal an unexpected truth, be a result of bias in the workshop composition, or reflect confusion in some workshop participants between the most likely and the most desirable response. In any event, there was a sense that nonnuclear options should be exhausted before considering a nuclear response. In addition, there was an unjustified presumption that conventional military options would be effective and timely. Similarly, there was a presumption that a UN resolution authorizing military action against North Korea could be readily obtained. And finally, the responses that were intended to do the least further harm to the nuclear taboo often did not differ greatly, if at all, from those thought to be most likely. This could again reflect participant bias or suggest that presidential decision-making already—implicitly or explicitly—considers impact on the taboo.

## Central Questions

Four central questions were then posed during the workshop’s plenary session:

**1. What characteristics of first-use scenarios are important in deciding among second-use options? Suggested characteristics included:**

- What is the enemy capability to reattack with nuclear weapons?
- Location of attack—was it on allied territory, US territory, or the United States itself?
- Was the weapon used by a state or a terrorist organization?
- What were the levels of military and civilian deaths and casualties?

Many additional relevant characteristics of the first-use scenario were also suggested. The sheer number of characteristics, their inherent complexity and interrelationships, and the various degrees of uncertainty about them make this a complex question for which additional research is warranted. For the same reasons, no two first-use scenarios will likely share all characteristics in common, which means that a one-size-fits-all response doctrine is infeasible.

- 2. What are the assumptions and logically developed arguments that support the claims that (a) a nonnuclear response will enhance the nuclear taboo and (b) a nuclear response is necessary to restore the nuclear taboo?** One major assumption is that a nonnuclear response will help restore the taboo because it demonstrates respect for the taboo and because the alternative choice to use nuclear weapons would represent a further violation of the taboo. However, the group could not dismiss the idea that a nuclear response would restore the taboo, out of the horror and fear it would generate if nothing else. Alternatively, if using

a nuclear weapon proves beneficial, then the taboo would be further undermined. But it was also argued that no data exist to suggest that you must respond in-kind to restore a norm (e.g., chemical weapons).

**3. What is the role of DoD in reestablishing the nuclear taboo after first use?**

Several participants did not think DoD has *any* role in reestablishing the taboo. One asserted that “it’s not what DoD thinks about; DoD does not care about the taboo.” This claim was countered with the observation that DoD obviously does care about the taboo because it funded this project and representatives were in the room. Others acknowledged that even if the taboo is primarily within the realm of the president’s responsibility, DoD and other government entities also have a role in considering the implications of second use for the taboo.

**4. What options can an ad hoc advisory group offer to respond to North Korean first use to ensure no subsequent use (ever) and not undermine the nuclear taboo?**

One option offered was to pursue a massive conventional strike while messaging to the international community that the nuclear attack was barbaric and that the United States will respond in a civilized way. It was also suggested that a massive conventional strike would enable the United States to maintain the moral high ground. Alternatively, one participant suggested the United States launch a massive nuclear retaliatory strike followed immediately by diplomatic efforts to join the nuclear ban treaty and reinvigorate global zero discussions. This approach, it was argued, would address the immediate military risk and reestablish the taboo by forswearing nuclear weapons for good.

In any event, the best time to preserve the taboo is before any first use. And after first use, the government’s highest priority will be ensuring no further nuclear use by any adversary.



# 4

## **OBSERVATIONS AND RECOMMENDATIONS**

This workshop does not lend itself to definitive conclusions regarding issues associated with responding to first nuclear use by North Korea. Nevertheless, the stimulating—if somewhat chaotic—discussions do lend themselves to some preliminary observations and recommendations. Of course, these are those of the authors of this report and not necessarily endorsed by any participant.



Upon completion of the workshop, we made the following additional observations:

1. Some participants appeared to confuse the concepts of deterrence and the nuclear taboo. This is because both deterrence and the taboo have the effect of dissuading use of nuclear weapons. However, the mechanisms by which they accomplish this differ. Deterrence operates because of fear of nuclear retaliation. By contrast, the nuclear taboo operates because of ethical and moral revulsion at the consequences of nuclear use.
2. The workshop underscored the importance of assessing response options to first use well in advance of any actual crisis in which nuclear use is a possibility. Even with a sophisticated group knowledgeable on many aspects of the topic, it was challenging to develop and assess the impact of retaliation options on the taboo, or to clearly articulate options that might meet multiple objectives, including preservation of the taboo.
3. Some concepts seemed to be generally accepted uncritically, in particular the notion that a taboo cannot be supported by violating it. This may or may not be true. One counterargument is that for any taboo to endure, it must be periodically violated so that there is a tangible reminder of the horror that attends its violation. A more nuanced argument would be that nuclear first use would serve this function, so there is no need for any additional reminder by second nuclear use.
4. It is important for the future of both deterrence and the nuclear taboo that any first use of nuclear weapons be widely perceived as a military and political failure. Whether conventional capabilities can achieve this is scenario dependent, but there are overwhelming challenges. Moreover, to the extent that conventional weapons would succeed, it might only provoke further nuclear use by North Korea. It is not even clear that nuclear weapons could achieve this objective. Also unanswered is the question of whether there are valid reasons to prefer a nuclear response, even if conventional weapons would be effective.

Finally, after consulting with the Defense Threat Reduction Agency (DTRA) and selected workshop participants, we developed the following recommendations for US government stakeholders:

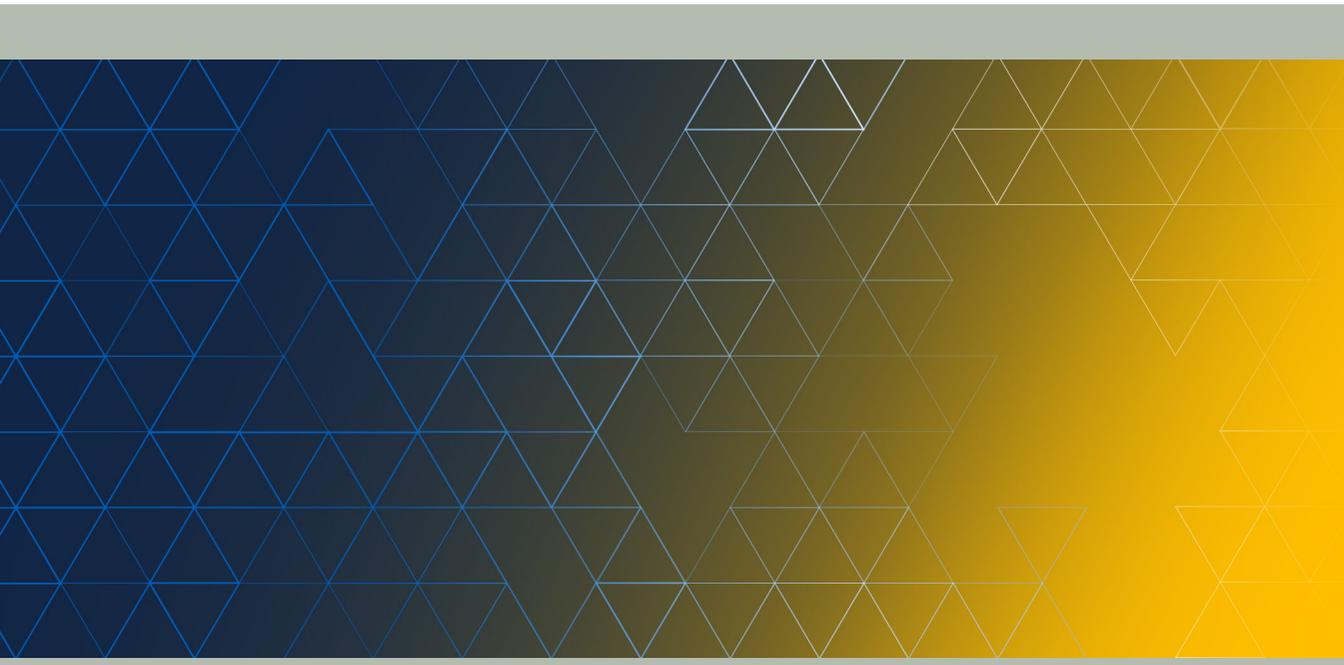
1. DoD stakeholders (e.g., US Strategic Command [USSTRATCOM], US European Command, US Indo-Pacific Command, and the Office of the Secretary of Defense [OSD]) as well as the Department of State and the National Security Council (NSC) need to take restoration of the nuclear taboo seriously as a US objective after an adversary's first nuclear use and undertake appropriate analyses and planning in advance to provide the president with effective nonnuclear retaliatory

options that could reduce the severity and duration of damage to the taboo. It is imperative to conduct the requisite analyses and planning in advance of any nuclear crisis because it is virtually impossible to accomplish this in the throes of many conceivable fast-paced crises.

2. After an adversary nuclear strike, USSTRATCOM and the NSC need to be prepared to make recommendations to the president regarding the effects of alternative nuclear and nonnuclear response options on the preservation of the nuclear taboo. This requires, inter alia, a thorough understanding of the effects of variables and the relationships among them that characterize alternative first-use scenarios.
3. DoD needs to provide effective conventional capabilities for effective response to limited first nuclear use so as not to unnecessarily constrain presidential options. While we understand this could be both difficult and expensive and that other DoD initiatives could be deemed higher priorities, the importance of the taboo to maintaining nuclear stability is a vital national security consideration. Providing such capabilities would entail both development and fielding (for which OSD/Research and Engineering and OSD/Acquisition and Sustainment have lead responsibilities) and associated employment doctrines (for which the Joint Chiefs of Staff and the Combatant Commands are primarily responsible). Ultimately, the decision to field such capabilities would involve both the president and Congress.
4. In coordination with the State Department, OSD needs articulate a policy supportive of the nuclear taboo, without undermining deterrence strategy or post-first-use damage-limitation goals. This policy should be reflected in future Nuclear Posture Reviews.
5. The intelligence community needs to understand the perspectives of other states—allies as well as adversaries—regarding the nuclear taboo and retaliation after first nuclear use.
6. DTRA needs to develop the capability to undertake comprehensive nuclear consequence assessments that include indirect as well as direct effects, delayed as well as prompt effects, and consequences to governance, economies, and other social structures as well as to physical structures and human life.

For the defense analysis and international relations communities, we encourage far greater analytic attention toward all dimensions of the nuclear taboo, including the lesser-explored topic of the impact of alternative retaliation options on the taboo. As Thomas Schelling stated, “How to preserve this inhibition, what kinds of policies or activities may threaten it, how the inhibition may be broken or dissolved, and what institutional arrangements may support or weaken it, deserves serious attention.”





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