The Nonproliferation Review

Routledge
Taylor & Francis Group

ISSN: 1073-6700 (Print) 1746-1766 (Online) Journal homepage: http://www.tandfonline.com/loi/rnpr20

Nuclear ambiguity, no-first-use, and crisis s-tability in asymmetric crises

Alexander Lanoszka & Thomas Leo Scherer

To cite this article: Alexander Lanoszka & Thomas Leo Scherer (2018): Nuclear ambiguity, no-first-use, and crisis s-tability in asymmetric crises, The Nonproliferation Review, DOI: 10.1080/10736700.2018.1430552

To link to this article: https://doi.org/10.1080/10736700.2018.1430552

Published online: 06 Feb 2018.

NONPROLIFERATION REVIEW, 2018
https://doi.org/10.1080/10736700.2018.1430552

Nuclear ambiguity, no-first-use, and crisis stability in asymmetric crises

Alexander Lanoszka and Thomas Leo Scherer

ABSTRACT

The United States has long embraced calculated ambiguity over the conditions under which it might use nuclear weapons against adversaries, a trend that President Donald J. Trump has continued. This ambiguity could unsettle some observers, especially those who believe that the United States should declare a no-first-use (NFU) policy such that it would not be the first state to introduce nuclear weapons in either a crisis or an armed conflict. NFU advocates identify three potential pathways whereby a more ambiguous posture can lead to increased danger: downward spiral, accidental war, and use-it-or-lose-it. For evidence, they invoke Saddam Hussein's risk-accepting decision to pre-delegate chemical-weapons use following US nuclear threats in the 1991 Gulf War. In analyzing the reasoning and evidence of these arguments, we argue that the alleged benefits of NFU may be overstated, at least for crisis stability in asymmetric crises, defined by one side's overwhelming conventional military superiority. Each of the three foregoing pathways is logically inconsistent and the empirical case is misinterpreted. Nuclear ambiguity may not be so dangerous as NFU advocates claim.

KEYWORDS

deterrence; no-first-use; crisis stability; nuclear use; nuclear posture

In statements since his successful presidential campaign, Donald J. Trump has embraced calculated ambiguity regarding the conditions under which his administration might use nuclear weapons.[1] This ambiguity is standard in the grand sweep of US nuclear strategy. Still, Trump's approach differs from his predecessor's in some ways. While in office, President Barack Obama called for a nuclear-weapon-free world and committed to the reduction of US nuclear weapons in speeches delivered in Prague in 2009 and Berlin in 2013, respectively. The 2010 Nuclear Posture Review (NPR) announced that the United States "will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the NPT [1968 Treaty on the Non-Proliferation of Nuclear Weapons] and in compliance with their nuclear non-proliferation obligations," thereby suggesting it retains the right to introduce nuclear weapons in conflicts involving nuclear-armed states, such as North Korea.[2] This NPR pledge meant that US leaders forswore the use of nuclear weapons in situations other than "to defend the vital interests of

CONTACT Alexander Lanoszka Alexander.Lanoszka@city.ac.uk

[1] "Donald Trump: US Must Greatly Expand Nuclear Capabilities," BBC News, December 22, 2016, <www.bbc.com/news/world-us-canada-38410027>.

[2] *2010 Nuclear Posture Review* (Washington, DC: Department of Defense, 2010), p. viii. To clarify, the 2010 NPR did not explicitly discuss NFU.

the United States or its allies and partners" in "extreme circumstances."[3] Nevertheless, despite stopping short of "a universal policy" whereby "deterring nuclear attack is the sole purpose of nuclear weapons," the 2010 NPR stated that the Obama administration "will work to establish conditions under which such a policy could be safely adopted."[4]

Toward the end of his presidency, rumors circulated that Obama was contemplating adoption of a nuclear no-first-use (NFU) policy, but, like every previous administration, the Obama administration ultimately did not adopt NFU.[5] The Trump administration seems to prefer renewing the United States's longstanding commitment to a flexible declaratory policy. Yet, even though its adoption appears improbable, NFU is still discussed in policy circles. Amid worries over the fitness of President Trump, Democratic House Representative Adam Smith (Democrat, Washington) introduced a bill to establish an NFU policy in November 2017.[6] This bill went even further than the bill that Senator Ed Markey (Democrat, Massachusetts) introduced in the Senate, which would have forbidden the conduct of a first-use nuclear strike absent a declaration of war by Congress.[7]

Trump's preference for a flexible declaratory policy may worry those who fear inadvertent nuclear escalation and the spread of nuclear weapons, which they had hoped to counter with an NFU policy in place. Yet how valid are these arguments? Would a renewal of what we call an ambiguous first-use (AFU) declaratory policy be destabilizing? Setting aside issues of norms and symbolic politics, what are the potential risks of an AFU policy?[8] Specifically, what difference would it make if Trump's NPR renounces the qualifications upon nuclear use articulated in the 2010 NPR?

At first glance, the case for NFU appears strong. Advocates argue that NFU enhances crisis stability by reducing incentives for a pre-emptive first strike. In a forceful exposition of the pro-NFU position, Michael S. Gerson claims that AFU is both unnecessary for the security challenges facing the United States today and dangerous because it undermines crisis stability through multiple pathways.[9] As evidence, NFU supporters point to Saddam Hussein's decision making in the early 1990s to highlight the dangers of issuing nuclear threats. They claim that US nuclear threats led Saddam to undertake policies that risked inadvertent escalation during the 1991 Gulf War.[10]

From examining the reasoning and evidence, we argue that both the benefits of NFU and the dangers of AFU may be overstated, at least concerning crisis stability—that is,

[3] Ibid., p. ix.
[4] Ibid., p. viii.
[5] See *Japan Times*, "Column Says Obama Weighing Declaration of 'No First Use' Nuclear Policy," July 12, 2016, <www.japantimes.co.jp/news/2016/07/12/world/politics-diplomacy-world/column-says-obama-weighing-declaration-no-first-use-nuclear-policy/#.WltQD5P1VE4>. Vice President Joe Biden's comments in January 2017 came close to articulating a NFU policy when he said that "the President and I strongly believe we have made enough progress that deterring—and if necessary, retaliating against—a nuclear attack should be the sole purpose of the U.S. nuclear arsenal." "Remarks by the Vice President on Nuclear Security," American Presidency Project, January 11, 2017, <www.presidency.ucsb.edu/ws/?pid=121419h>.
[6] "To establish the policy of the United States regarding the no-first-use of nuclear weapons," H.R.4415, 115th Congress (November 15, 2017).
[7] "To Prohibit the Conduct of a First-Use Nuclear Strike Absent a Declaration of War by Congress," ARM16N80, 114th Cong., January 24, 2017.
[8] Norms do matter, but we lack the space to consider them properly. For the classic text, see Nina Tannenwald, *The Nuclear Taboo: The United States and the Non-Use of Nuclear Weapons since 1945* (Cambridge, UK: Cambridge University Press, 2007).
[9] Michael S. Gerson, "No First Use: The Next Step for U.S. Nuclear Policy," *International Security*, Vol. 35, No. 2 (2010), pp. 7–47.
[10] Scott D. Sagan, "The Commitment Trap: Why the United States Should Not Use Nuclear Threats to Deter Biological and Chemical Weapons Attacks," *International Security*, Vol. 24, No. 4 (2000), p. 108.

the danger of escalation—in asymmetric crises. These crises are those that unfold between pairs of states that feature greatly disparate military capabilities, such as the United States, on the one hand, and Iraq or North Korea, on the other. Asymmetrical conditions may apply to the United States and Russia given the former's relative superiority in its conventional and nuclear arsenal.[11] We do not believe that these conditions apply to China, which appears increasingly able to compete with the United States in the conventional military sphere. We find that each of the destabilizing pathways attributed to AFU—the downward spiral, accidental war, and a use-it-or-lose-it mentality—involves inconsistencies or questionable assumptions about state behavior. Briefly put, US conventional military superiority can "destabilize" asymmetric crises in the same manner as AFU, thereby making US nuclear doctrine moot. Empirically, we find little evidence supporting the alleged danger of AFU. Saddam Hussein's risk-taking actions in the Gulf War had less to do with US nuclear threats and more to do with Iraq's pre-existing military policy.

We remain agnostic about how useful nuclear weapons may be for deterrence, compellence, and other political–military strategies, in an asymmetrical setting or otherwise. Nor do we argue in favor of nuclear ambiguity. We simply argue that the case for NFU—and fears regarding nuclear ambiguity—appear exaggerated.

This article proceeds with a review of the NFU debate in the United States. We then critically review the proposed pathways by which an AFU policy is expected to contribute to escalation in an asymmetric crisis or conflict. We address the case evidence NFU advocates use to show that AFU is dangerous: Saddam's decision making during the Gulf War. We conclude by noting the implications of our study for understanding nuclear policy in the age of Trump as well as for conducting further research.

A brief history of NFU in the United States

A nuclear NFU policy is a commitment by a state not to be the first to employ nuclear weapons against an enemy. This policy restricts nuclear weapons to a retaliatory role, limiting their purposes to deterrence and assurance, not warfighting. To make this policy credible to potential opponents, Scott Sagan suggests recalibrating military exercises and deployments in a manner consistent with an NFU doctrine.[12] Because deterrence requires only that nuclear weapons be available to retaliate after absorbing a nuclear first strike, proponents of NFU contend that AFU offers no strategic gain. That is, beyond the deterrence of other nuclear weapons, nuclear weapons offer no other value.[13]

Early NFU advocates alleged that the threat of nuclear first use had become superfluous.[14] George Kennan argued in a policy memo as early as 1949 that the United States had

[11] Kier A. Lieber and Daryl G. Press, "The End of MAD? The Nuclear Dimension of US Primacy," *International Security*, Vol. 30, No. 4 (2006), pp. 14–25. To be sure, Russia has been modernizing its nuclear (and conventional) forces since this article was published.

[12] Scott D. Sagan, "The Case for No First Use," *Survival*, Vol. 51, No. 3 (2009), p. 177.

[13] For contrasting views on whether this statement is true, see Matthew Kroenig, "Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes," *International Organization*, Vol. 67, No. 1 (2013), pp. 141–71; Matthew Fuhrmann and Todd Sechser, "Crisis Bargaining and Nuclear Blackmail," *International Organization*, Vol. 67, No. 1 (2013), pp. 173–95.

[14] For early academic discussion of NFU, see Robert C. Tucker, Klaus Knorr, Richard A. Falk, and Hedley Bull, *Proposal for No First Use of Nuclear Weapons: Pros and Cons* (Princeton, NJ: Woodrow Wilson School of International and Public Affairs,

sufficient conventional military power to adopt NFU.[15] Project Vista, an undertaking commissioned by the US military, produced a highly classified report that, though it embraced the use of tactical nuclear weapons, seemed to recommend NFU. It ambiguously suggested that nuclear weapons should only be used in response to the use of nuclear weapons by adversaries.[16] In a 1982 *Foreign Affairs* article, Kennan, along with McGeorge Bundy, Robert S. McNamara, and Gerard Smith, expressed concern that contemporary NATO strategy relied excessively on nuclear weapons to deter the Warsaw Pact from overrunning Western Europe. These former policy makers argued that the threat of nuclear first use creates instability because the requirements for controlling a nuclear crisis and escalation are too demanding. Accordingly, a nuclear war could not possibly be limited, making the threat of first use nonsensical. Adopting NFU would also have had the benefit of forcing the United States and NATO to plan better for conventional war.[17] After the Cold War, other former policy makers revived these arguments, claiming that US conventional superiority amounted to an effective non-nuclear deterrent.[18] These proposals failed to gain traction across administrations. Despite the end of the Cold War, the Bill Clinton administration's 1994 NPR articulated the need to maintain a robust nuclear force. One justification was to hedge against future threats; another was to maintain a strong deterrent posture that could address a range of regional contingencies.[19] The George W. Bush administration signaled its willingness to develop new nuclear weapons and even to expand their roles in countering chemical and biological weapon threats.[20]

President Obama's stated desire for a world free of nuclear weapons renewed interest in NFU.[21] Its advocates contended that NFU is a prerequisite for any US initiative toward the global abolition of nuclear weapons to succeed. They also claimed that NFU would improve the credibility of US nonproliferation efforts while furthering Obama's aim to reduce the role of nuclear weapons in US security policy.[22] The international context explains the rising interest in these concerns. As Gerson notes, former and current policy makers have reconsidered US nuclear-weapons policy in light of Iranian and North Korean nuclear ambitions.[23] NFU, its advocates assert, would be a significant step toward reducing the risks of nuclear proliferation by strengthening norms against these weapons.

Skeptics highlight several advantages of a flexible doctrinal policy for national security: ensuring the credibility of extended deterrence and assurance; pre-empting nuclear attack; and deterring chemical and biological attacks against the United States and its

1968); Richard H. Ullman, "No First Use of Nuclear Weapons," *Foreign Affairs*, Vol. 50, No. 4 (1972), pp. 669–83; Fred Iklé, "NATO's First Nuclear Use: A Deepening Trap?" *Strategic Review*, Vol. 8, No. 8 (1980), pp. 18–38.

[15] Kai Bird and Martin J. Sherwin, *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer* (New York: Vintage Books, 2006), pp. 428–29.

[16] Ibid., pp. 445–50; David C. Eliot, "Project Vista and Nuclear Weapons in Europe," *International Security*, Vol. 11, No. 1 (1986), p. 172.

[17] McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard Smith, "Nuclear Weapons and the Atlantic Alliance," *Foreign Affairs*, Vol. 60, No. 4 (1982), pp. 753–68.

[18] Seth Cropsey, "The Only Credible Deterrent," *Foreign Affairs*, Vol. 73, No. 2 (1994), pp. 13–20; William J. Perry, "Desert Storm and Deterrence," *Foreign Affairs*, Vol. 70, No. 4 (1991), pp. 66–82.

[19] Stephen A. Cambone and Patrick J. Garrity, "The Future of US Nuclear Policy," *Survival*, Vol. 36, No. 4 (1994), pp. 74, 90.

[20] Richard Sokolsky, "Demystifying the US Nuclear Posture Review," *Survival*, Vol. 44, No. 3 (2002), p. 133.

[21] George P. Shultz, William J. Perry, Henry A. Kissinger, and Sam Nunn, "Deterrence in the Age of Nuclear Proliferation," *Wall Street Journal*, May 7, 2011.

[22] Ivo Daalder and Jan Lodal, "The Logic of Zero: Toward a World Without Nuclear Weapons," *Foreign Affairs*, Vol. 87, No. 6 (2008), pp. 80–95.

[23] Gerson, "No First Use," p. 13.

allies.[24] The United States is able to pursue these goals through the uncertainty created by having nuclear weapons available in a crisis.[25] Nevertheless, though they may not have been addressing NFU per se, other deterrence theorists like Herman Kahn have argued that the fear of a nuclear first strike can bolster deterrence.[26]

Proposed pathways of AFU instability

Here we examine how NFU is expected to have salutary effects on asymmetric crisis stability. Following standard treatments of the concept, we define "crisis stability" as a "measure of the countries' incentives not to preempt in a crisis, that is, not to attack first in order to beat the attack of the enemy."[27] NFU proponents have argued that "the continued option to use nuclear weapons first risks creating instabilities in a severe crisis that increase the chances of accidental, unauthorized, or deliberate nuclear use."[28] In examining the assumptions underlying this argument, we find several inconsistencies.

NFU advocates have identified three pathways by which an AFU policy creates instability and makes conflict more likely: the downward-spiral pathway, the accidental-war pathway, and the use-it-or-lose-it pathway.[29] There are many paths a nuclear crisis could take, but NFU advocates focus on these because they argue these paths lead to war only with AFU and not with NFU. Below we explain each and scrutinize the validity of their logic in an asymmetric crisis. Here, "major power" refers to the strong state that chooses to adopt NFU (e.g., the United States), whereas "adversary" refers to the weaker opponent.

Our assessment relies on three assumptions. First, we do not assume complete information; we examine beliefs the weak adversary must have in order for the pathway to be possible, regardless of objective circumstances. Second, we assume that NFU is credible to the adversary and dutifully implemented by the major power. Third, we treat each pathway as a specific sequence of decisions designed to best capture the concerns of NFU advocates. For example, in our use-it-or-lose-it pathway, we assume the weak adversary decides whether to attack and the major power cannot strike first, whereas, in the downward-spiral pathway, we assume the major power decides whether to attack based on the adversary's actions.

The downward spiral

The first pathway that makes AFU dangerous arises from features of the classic security dilemma through the "spiral model." In the downward-spiral pathway, the adversary

[24] For a critical summary of these arguments, see ibid., pp. 11–13. On the effects of NFU on extended deterrence, see John J. Mearsheimer, "Nuclear Weapons and Deterrence in Europe," *International Security*, Vol. 9, No. 3 (1984), pp. 19–46.
[25] William M. Arkin, "Calculated Ambiguity: Nuclear Weapons and the Gulf War," *Washington Quarterly*, No. 4 (1996), pp. 3–18.
[26] See Herman Kahn, *The Nature and Feasibility of War and Deterrence* (Santa Monica, CA: RAND, 1960), pp. 38–39. For a similar argument, see Kenneth N. Waltz, "The Spread of Nuclear Weapons: More May Be Better," *Adelphi Papers*, Vol. 21, No. 171 (1981). pp. 21, 24.
[27] Charles L. Glaser, *Analyzing Strategic Nuclear Policy* (Princeton, NJ: Princeton University Press, 1990), p. 45. See also Schelling, *The Strategy of Conflict*, pp. 207–54.
[28] Gerson, "No First Use," p. 9.
[29] The names of these three pathways are our own, but the original discussion of them is found in Gerson, "No First Use," pp. 37–39.

pursues measures to increase its strategic capabilities because it fears a first strike by a nuclear-armed major power. These measures can include a launch-on-warning posture, raising alert levels, or pre-delegating launch authority. The adversary intends for these actions to deter a nuclear first strike by reducing the major power's ability to eliminate the adversary's strategic capabilities outright. Although defensive motives underlie these actions, the major power may misinterpret these actions as preparations for an offensive strike.[30] Apprehensive of an imminent attack, the major power may proceed with the pre-emptive attack that the adversary had originally feared. Thus, NFU advocates argue that, if the United States credibly declares NFU, adversaries would be less inclined to take the destabilizing escalatory measures described above. Because ambiguity in military postures may precipitate spiral effects, NFU would clarify US intentions and discourage states from acting upon worst-case assumptions.[31]

In making this argument, NFU proponents must show that the payoffs are such that the major power and the weaker adversary would both have incentives to escalate. Consider the Prisoner's Dilemma, whose incentive structure appears in Table 1. The reason that each prisoner is expected to defect is that this action constitutes the better response to either action undertaken by the other party. By cooperating, for example, a prisoner risks accepting the sucker's payoff if the other chooses to defect.

Now consider a variation of the Prisoner's Dilemma in which each actor faces the choice of whether to adopt a strategic posture that could be perceived as aggressive. Specifically, the major power chooses between adopting AFU and a credible NFU, whereas the adversary chooses whether to adopt measures to increase second-strike capabilities. We assume that the major power is more likely to attack if the adversary adopts those measures to increase second-strike capabilities.

The question then concerns whether the weaker adversary will escalate. This choice depends on the war payoffs, defined as the probability of victory times the value of the prize, minus the cost of war. As we are concerned about a war that neither side desires, we assume that peace payoffs for both sides are greater than any war payoff for either side. The adversary then should only escalate if the additional risk of costly war is offset by improved war payoffs.

Yet two other assertions by NFU supporters suggest that the war payoffs do not vary with the major power's decision to declare NFU or not. The first assertion is that AFU is unnecessary because the United States enjoys such conventional military superiority that it can prevail in any armed conflict without the use of nuclear weapons.[32] The second assertion is that "the threat to use nuclear weapons first may lack credibility in the minds of many current and potential adversaries."[33] AFU lacks credibility to the point that adversaries may feel sure that the major power will not use nuclear weapons. Both assertions imply that the adversary's war payoffs remain unchanged if the major power chooses NFU. By the first assumption, the adversary will lose regardless of nuclear policy thanks to US conventional military superiority. By the second, the

[30] Ibid., p. 37.
[31] Robert Jervis, "Cooperation under the Security Dilemma," *World Politics*, Vol. 30, No. 2 (1978), pp. 167–214; Charles L. Glaser, "Realists as Optimists: Cooperation as Self-Help," *International Security*, Vol. 19, No. 3 (1995), pp. 50–90.
[32] Gerson writes, "consequently, the threat of nuclear first use is unnecessary to deter conventional aggression and, if deterrence fails, unnecessary to help win the conflict because there is no country that can defeat the United States in a major conventional war." See Gerson, "No First Use," p. 18.
[33] Ibid., p. 33.

Table 1. Summary of Payoffs from the Prisoner's Dilemma

	Adversary Cooperate	Adversary Defect
Major Power Cooperate	Major Power: 3 Adversary: 3	Major Power: 1 Adversary: 4
Major Power Defect	Major Power: 4 Adversary: 1	Major Power: 2 Adversary: 2

adversary has already calculated that nuclear weapons will not be used, again regardless of nuclear policy.

Thus, by the assertions made by NFU advocates, the downward-spiral pathway is not possible. For a rational adversary to take only such survivability measures under AFU, it must believe that these measures are beneficial against a nuclear strike but not against a conventional strike. The downward spiral is only a valid concern if the adversary's payoffs decrease in the event that the major power declares AFU. A scenario that features this payoff structure could be one in which the adversary escalates due to the belief that its forces are more vulnerable to a nuclear strike than to a non-nuclear strike. In such a case, pre-emption to limit damage may be the best option. However, the destructive power of conventional military weapons (especially in the US arsenal) in the contemporary world makes this scenario debatable. It is thus unclear how the adversary's incentives to escalate should change when facing different nuclear policies.

Accidental war

The accidental-war pathway resembles the downward-spiral pathway, but it is instead predicated on organizational and human fallibility. In this situation, the adversary takes measures to increase the survivability of its forces and deter an attack by the major power.[34] These measures may include bringing weapons closer to launch by raising their readiness and adopting a launch-on-warning posture, as well as policies to prevent leadership decapitation, such as pre-delegating launch authority. By implementing them, the adversary raises the probability of accidentally launching an attack. This unintentional first strike can occur in the presence of uncoordinated decision making, poor information flows between various government departments, technical failures, or even rogue bureaucratic agents acting without authorization from top leadership.[35] Had the major power credibly declared NFU, the adversary would not undertake the risky measures that could produce the accident.

But, for a rational adversary to take only such survivability measures under AFU, it *must* believe that these measures are beneficial against a nuclear strike but not against a conventional strike. We can apply the same logic as before, the difference being that the probability of war represents an accidental initiation by the adversary. We can say that AFU may be dangerous, but under conditions of overwhelming conventional superiority we can also say that NFU may be dangerous.

We are not arguing that crisis fears cannot produce accidental war. Other explanations of accidental war are quite compelling, but they differ in two ways from the pathway

[34] Ibid., pp. 37–38.
[35] Scott D. Sagan, *The Limits of Safety: Organizations, Accidents, and Nuclear Weapons* (Princeton, NJ: Princeton University Press, 1995).

outlined here.[36] First, the adversary's fear springs not from US nuclear doctrine per se, but rather from US counterforce capabilities. Indeed, growing evidence from the Cold War suggests that the Soviet leaders grew apprehensive of these capabilities in the 1980s.[37] Second, the adversary's measures are able to increase survivability. With these stipulations, the threat of *any* kind of first strike is dangerous.

Use-it-or-lose-it

The previous two pathways considered an intentional attack by the major power and an accidental strike by the adversary, but what if the adversary intentionally strikes first? If the adversary is convinced that a major power will attempt a disarming first strike, perhaps with nuclear weapons, an adversary could choose to attack first. This desperate, use-it-or-lose-it attack occurs when the adversary believes that it will suffer similar costs regardless of whether it strikes first. In this scenario, the indifferent adversary becomes just as likely to launch an attack, or perhaps even more likely if it believes it could inflict enough pain to get the major power to stand down. If the major power declares NFU, however, then its adversary would not fear a disarming strike and would not feel the need to use its weapons while it still can.[38]

A hypothetical example true to this pathway highlights the scope conditions. Imagine a weak state deciding whether to use its weapons before it would lose them in a war with a major power. Its choice involves whether to use them. If the adversary uses them, then war occurs. If they are unused, then the major power attacks with some probability less than 1 and again war occurs; otherwise, no conflict occurs. If war has the same the payoff for the weak state regardless of whether it attacks first, then the weak state will not attack. Put differently, the use-it-or-lose-it pathway requires that the weak state believe that an attack by the major power is absolutely certain.

The use-it-or-lose-it pathway confronts the same logical problem as the downward-spiral pathway in terms of the assertions made by NFU supporters. If nuclear weapons are unnecessary for the major power to prevail, as some NFU supporters claim, and if AFU lacks credibility such that the adversary disregards it, then why would that same adversary feel pressure to "use it or lose it" against an NFU state and not an AFU state?[39] The argument that AFU is unnecessary contradicts the argument that AFU is dangerous. The weak state is ultimately choosing between likely annihilation if it does not attack first and certain annihilation if it does. Why would it ever choose the certain suicide of the latter remains unclear.[40]

We may suppose that if a weaker adversary believes that it is about to be hit first with nuclear weapons and wiped out, then it may take a chance on striking first to try to inflict

[36] Daniel Byman and Matthew Waxman, *The Dynamics of Coercion: American Foreign Policy and the Limits of Military Might* (Cambridge, UK: Cambridge University Press, 2002), p. 220; Charles L. Glaser and Steve Fetter, "Counterforce Revisited: Assessing the Nuclear Posture Review's Nuclear Missions" *International Security*, Vol. 30, No. 2 (2005), pp. 121–22.

[37] See e.g., Brendan R. Green and Austin Long, "The MAD Who Wasn't There: Soviet Reactions to the Late Cold War Nuclear Balance," *Security Studies*, Vol. 26, No. 4 (2017), pp. 606–41.

[38] Gerson, "No First Use," p. 38. NFU pledges may reflect a signal of intent rather than strategic calculations concerning the use of nuclear weapons. Of course, a strong state planning a conventional first strike could issue such a pledge, especially if it knows that the weak state would respond by lowering its defenses. In light of the risk of appearing dishonest, costlier forms of signaling intentions exist. See Morton H. Halperin, Bruno Tertrais, Keith B. Payne, K. Subrahmanyam, and Scott D. Sagan, "The Case for No First Use: An Exchange," *Survival*, Vol. 51, No. 5 (2009), pp. 17–32.

[39] Gerson, "No First Use," p. 18, 33.

[40] Rong Yu and Peng Guangqian, "Nuclear No-First-Use Revisited," *China Security*, Vol. 5, No. 1 (2009), p. 88.

pain on the major power in order to compel that major power to back down. But why would the major power back down if the adversary has already expended its arsenal, making it more vulnerable to a devastating riposte? There are cases where the weak state tried to impose costs against a stronger opponent to compel the major power to back down, such as Iraq in the 1991 Gulf War, as we discuss later. However, in these cases, the weaker state does not attempt to impose costs until after the major power has initiated the conflict. Once the conflict has started, the adversary indeed has nothing to lose by attacking, but until then the adversary will have much to lose.

These points raise an interesting question: might a weak state choose to attack first and sacrifice the possibility of better material outcomes for some emotional or psychological utility gained by imposing costs on the major power. Though plausible, such an assumption raises the additional question of whether the state can enjoy this immaterial benefit if it has successfully self-destructed. Similarly, in the event that the state somehow survives the conflict, would it still receive the same benefits?

The use-it-or-lose-it pathway is thus empirically very rare. One study finds that pre-emptive wars—that is, wars either fought to exploit military advantages before they disappear or caused by fear of surprise attack—"almost never happen."[41] In the nineteenth and twentieth centuries, cases that seem prima facie to have been pre-emptive wars were World War I, China's entry into the Korean War, and the 1967 Arab–Israeli War. Although World War I does not meet the asymmetrical conditions that our analysis emphasizes, it suggests that use-it-or-lose-it pressures embodied by mobilization schedules can exist in a purely conventional world, where nuclear doctrines are absent. Still, the case of the United States and China in 1950 better approximates the asymmetrical conditions explored by our analysis. According to the pre-emptive-war version of events, China intervened in the Korean War out of concern that the US-led forces moving toward the Yalu River were striving to reunify the peninsula under non-Communist control. By taking over all of Korea, these forces would pose an imminent threat to China's security.[42] Yet Chinese decision makers were not necessarily facing a use-it-or-lose-it conundrum even in this case. Other motivations—promoting the world Communist revolution and forestalling an indefinite US presence on the border—were also present.[43] To be sure, China did go on to acquire nuclear weapons, but the evidence suggests that it did so in order to be self-reliant following its dissatisfaction with the support it was receiving from the Soviet Union during the 1950s.[44]

Of course, just because something has not happened before does not mean that it could never happen. Nevertheless, if we believe that the use-it-or-lose-it pathway is possible, then the fundamental inconsistency in the argument that AFU is dangerous remains. We must believe that the adversary's incentives to strike first under AFU will reverse if the United States declares NFU, as in the instance where the adversary believes that its armaments could survive a conventional first strike but not a nuclear first strike. Though that is possible, it again goes against arguments made by NFU advocates that

[41] Dan Reiter, "Exploding the Powder Keg: Why Preemptive Wars Never Happen," *International Security*, Vol. 20, No. 2 (1995), p. 6.
[42] Ibid., p. 23.
[43] Ibid., pp. 23–24.
[44] Avery Goldstein, "Understanding Nuclear Proliferation: Theoretical Explanation and China's National Experience," *Security Studies*, Vol. 32, Nos 3–4 (1993), p. 239.

the first use of nuclear weapons would provide no tactical benefit to the United States.[45] Indeed, when other scholars discuss the adversary's use-it-or-lose-it incentives, the adversary is presumed to fear a result of any likely US first strike or effort toward regime change, regardless of whether nuclear weapons are used.[46] Nuclear weapons may even be a moot point if the strong state is unwilling to use them for normative reasons but maintains its conventional military superiority.

The Iraq case

Little empirical variation exists for understanding how nuclear doctrine or declaratory policy affects crisis stability. Debates have focused on the actions undertaken by Saddam Hussein to pre-delegate the deployment of chemical weapons to subordinates during the 1991 Gulf War. NFU advocates invoke this case because they believe Saddam's decision was a response to the US threat of nuclear first use, thereby raising the likelihood of accidentally widening the war. We conclude that the US threat of nuclear first use was not necessary for Saddam to pre-delegate the deployment of weapons of mass destruction.

Iraq during the Gulf War: nuclear threats and pre-delegation

NFU proponents refer to Iraqi decision making in January 1991 to assert that NFU would have made the prospect of accidental war less likely. Gerson claims that statements by President George H.W. Bush and Secretary of State James Baker in early January 1991 suggested a possible nuclear strike against Iraq.[47] The text of a letter from Bush reads as follows:

> The United States will not tolerate the use of chemical or biological weapons, support of any kind for terrorist actions, or the destruction of Kuwait's oilfields. The American people would demand the strongest possible response. You and your country will pay a terrible price if you order unconscionable actions of this sort.[48]

Secretary Baker writes in his memoirs that he intimated to Iraqi Foreign Minister Tariq Aziz that "the use of chemical or biological agents by Iraq could invite tactical nuclear retaliation."[49] Such a threat provoked Saddam to undertake risky action.[50] Specifically, Saddam attempted to decrease his vulnerability to nuclear strikes by spreading out his ballistic weapon systems and pre-delegating the use of chemical weapons to certain

[45] Gerson, "No First Use," pp. 18–32.

[46] See Forest E. Morgan, Karl P. Mueller, Evan S. Medeiros, Kevin L. Pollpeter, and Roger Cliff, *Dangerous Thresholds: Managing Escalation in the 21st Century* (Santa Monica, CA: RAND, 2008), p. 43; Byman and Waxman, *Dynamics of Coercion*, p. 220; Glaser and Fetter, "Counterforce Revisited," pp. 121–22; Lyle J. Goldstein, *Preventive Attack and Weapons of Mass Destruction: A Comparative Historical Analysis* (Stanford, CA: Stanford University Press, 2006), p. 152. This concern has been raised with respect to India and Pakistan, where short travel times and more symmetric capabilities increase the benefit of using it and the risk of losing it. Christopher Chyba and Karthika Sasikumar, "A World of Risk: The Current Environment for U.S. Nuclear Weapons Policy," in George Bunn and Christopher Chyba, eds., *U.S. Nuclear Weapons Policy: Confronting Today's Threats* (Washington, DC: Brookings Institution Press, 2006), p. 4.

[47] Gerson, "No First Use," p. 20.

[48] "Confrontation in the Gulf: Text of Letter from Bush to Hussein," *New York Times*, January 13, 1991: <www.nytimes.com/1991/01/13/world/confrontation-in-the-gulf-text-of-letter-from-bush-to-hussein.html>.

[49] James A. Baker III, *The Politics of Diplomacy: Revolution, War, and Peace, 1989–1992* (New York: G.P. Putnam, 1995).

[50] Gerson acknowledges that some analysts claim that these threats deterred Saddam Hussein from using chemical weapons. He disputes this claim in favor of the interpretation discussed here. See Gerson, "No First Use," pp. 20–22, 37.

commanders during the Gulf War. As Saddam remarked in one meeting, "I want to make sure that … the germ and chemical warheads, as well as the chemical and germ bombs, are available to those concerned, so that in case we ordered an attack, they can do it without missing any of their targets." He added that "[w]e will never lower our heads as long as we are alive, even if we have to destroy everybody."[51]

Sagan offers a similar interpretation of these events.[52] In arguing that states would engage in risky actions if they fear a nuclear strike, Sagan writes,

> Emerging evidence from the Gulf War suggests that Saddam Hussein felt compelled by military necessity to pre-delegate authority to use biological and chemical weapons to senior officers in a special military unit, and ordered that such weapons be used only in the event of a nuclear attack on Baghdad. Saddam's speeches clearly show that he was worried about a nuclear decapitation threat and sought, at a minimum, to deter it through declarations that predelegation existed for a retaliatory strike in retribution for an attack on Baghdad.[53]

Simply put, the threat of nuclear first use influenced Saddam's decision making.

Taking a historical view, however, we find that such actions formed an important part of Saddam's general military planning and should not be assumed to have resulted from Baker's threat. The claims advanced by Gerson and Sagan contain an important counterfactual assumption: Saddam would have eschewed such risky actions in a world where the United States adopted an NFU policy and did not make nuclear threats. Counterfactuals are fundamentally unobservable, but the plausibility of the counterfactual is crucial to this argument.[54]

Iraq's policy regarding the use of chemical weapons changed during the Iran–Iraq War. In 1983, three years into the conflict, Iraq first used chemical weapons. These weapons were only used with the approval of Saddam because, some analysts suggest, of Iraq's limited quantity of them and the subsequent need to ensure a reserve supply in the event of an Iranian offensive.[55] In late 1986, Saddam decided to pre-delegate the use of chemical weapons. One likely reason for this change in policy was the battlefield losses experienced by the Iraqi military that year, especially in Al-Faw and Mebran.[56] By the end of the year, Iran appeared to be prevailing in the war. Such was the strategic context in which Saddam undertook pre-delegation.[57] Saddam probably so lacked confidence in his conventional forces that he had to resort to widening the use of unconventional weapons.[58]

---

[51] Gerson, "No First Use," p. 20.

[52] Sagan draws on evidence discussed in an analysis offered by McCarthy and Tucker. He acknowledges that he is making his own interpretative judgment of the data. See Timothy V. McCarthy and Jonathan B. Tucker, "Saddam's Toxic Arsenal: Chemical and Biological Weapons and Missiles in the Gulf War," in Peter R. Lavoy, Scott D. Sagan, and James J. Wirtz, eds., *Planning the Unthinkable: How New Powers Will Use Nuclear, Biological, and Chemical Weapons* (Ithaca, NY: Cornell University Press, 2000).

[53] Sagan, "The Commitment Trap," p. 108.

[54] Jack S. Levy, "Counterfactuals and Case Studies," in Janet M. Box-Steffensmeier, Henry E. Brady, and David Collier, eds., *The Oxford Handbook of Political Methodology* (Oxford: Oxford University Press, 2008).

[55] McCarthy and Tucker, "Saddam's Toxic Arsenal," p. 63.

[56] Central Intelligence Agency, "CW Use in Iran–Iraq War," <www.gulflink.osd.mil/declassdocs/cia/19960702/070296_cia_72566_72566_01.html>. The unpublished memoirs of Lieutenant General Raad Hamdani claim Iraq lost over 51,000 men on the Faw Peninsula. See Kevin M. Woods, Michael R. Pease, Marke E. Stout, Williamson Murray, and James G. Lacy, *The Iraqi Perspectives Report: Saddam's Senior Leadership on Operation Iraqi Freedom from the Official US Joint Forces Command* (Annapolis, MD: Naval Institute Press, 2006). If true, these losses are comparable to Britain's losses during the first day of the Battle of the Somme in World War I.

[57] Our interpretation of Saddam's behavior fits the analysis of Iraqi civilian–military relations offered in Caitlin Talmadge, *The Dictator's Army: Battlefield Effectiveness in Authoritarian Regimes* (Ithaca, NY: Cornell University Press, 2015).

[58] Pre-delegation took the form of Saddam permitting the use chemical weapons by commanders of the air force, the missile defense force, and the Third and Seventh Army Corps. Field commanders resisted this policy, compelling Saddam to travel personally to the front in January 1987 to confirm the new orders. Thereafter, Iraqi commanders

Why then did Saddam refrain from using chemical weapons during the Gulf War against the United States? Several analysts cite Saddam's non-use of such weapons as evidence that US nuclear threats worked.[59] However, NFU advocates point to statements made by Saddam in 2004 during his incarceration that in fact suggest a very different explanation:

> Hussein stated [weapons of mass destruction (WMD) were] for the defense of Iraq's sovereignty. Iraq demonstrated this with the use of WMD during the Iraq and Iran War, as Iran had threatened the sovereignty of Iraq. Yet, Iraq did not use WMD during the 1991 Gulf War as its sovereignty was not threatened.[60]

Although we cannot be sure of Saddam's motives, this testimony supports a different interpretation of Iraq's choices about the use of chemical weapons. Specifically, for Saddam, the use of chemical weapons was a legitimate military tactic to defend against external aggression, regardless of whether it relied on nuclear or conventional military power. As McCarthy and Tucker write, "the forward deployment of chemical munitions and decontamination sites indicates that the Iraqis followed doctrinal and command and control practices for tactical employment of chemical weapons established *before* the Gulf crisis."[61]

The 1991 decision to pre-delegate the use of chemical weapons had a precedent. This observation offers an alternative to the explanation that Iraq's deployment, dispersion, and pre-authorization of chemical weapons were due to the possibility of a nuclear strike by the United States. Pre-delegation of chemical-weapons use was instead an established feature of Iraqi military planning in light of previous and disastrous battle outcomes. The 1991 decision can be correlated to US nuclear threats, but Iraq under Saddam had already shown itself equally prepared to employ chemical weapons against conventional threats to the continuation of the regime.

The case of Iraq raises key questions about how to think about asymmetrical crises more broadly. Our discussion has focused on means (i.e., whether to adopt NFU) rather than the ends. Yet Iraq suggests that perceptions of ends may be a more important driver of behavior. Is a declaration of limited military objectives (e.g., getting Iraq out of Kuwait) an important factor in getting a weaker adversary to exhibit restraint, and more so than nuclear declaratory policy?[62] Though we cannot definitively evaluate this hypothesis here, the evidence is suggestive.

Conclusion

We demonstrate that various logical inconsistencies and empirical weaknesses exist in arguments made by NFU advocates regarding crisis stability in the case of an asymmetrical

integrated the use of chemical weapons into their offensive battlefield operations. Saddam allegedly pre-delegated authority in April 1990 so as to be capable of launching a retaliatory unconventional attack. One possible explanation is that he wished to deter another Osirak-style attack by Israel. See McCarthy and Tucker, "Saddam's Toxic Arsenal," pp. 161–62.

[59] Robert G. Joseph and John F. Reichart, *Deterrence and Defense in a Nuclear, Biological, and Chemical Environment* (Washington, DC: National Defense University Press, 1999); Keith Payne, *The Great American Gamble: Deterrence Theory and Practice from the Cold War to the Twenty-first Century* (Fairfax, VA: National Institute Press, 2008).

[60] Joyce Battle, ed., *Saddam Hussein Talks to the FBI* (Washington, DC: National Security Archive, George Washington University, 2009).

[61] McCarthy and Tucker, "Saddam's Toxic Arsenal," p. 69. For a similar argument that Iraqi leaders saw chemical weapons as vital to their national security even before 1991, see Charles Duelfer, "The Inevitable Failure of Inspections in Iraq," *Arms Control Today*, Vol. 32, No. 7 (2002), p. 9; Charles Duelfer, "The Iraqi WMD Arsenal Today," in *The Future of Iraq: Conference Proceedings, December 2002* (Newport, RI: Center for Naval Warfare Studies, 2002), p. 76.

[62] We thank Joshua Pollack for this excellent observation.

confrontation. NFU advocates claim that retaining the option to introduce nuclear weapons first into a crisis is both unnecessary and dangerous. They offer, in our view, three pathways—the downward-spiral pathway, the accidental-war pathway, and the use-it-or-lose-it pathway—to support this assertion. They also invoke Saddam's decision to pre-delegate the use of unconventional weapons in the Gulf War to emphasize the dangers associated with an AFU policy.

We find these arguments are, at best, overstated. It is unclear how NFU would lower the risks of war if AFU were unnecessary as well. After all, weaker adversaries already have good reasons to fear US conventional military power. The threat of the United States bringing to bear this capability can provoke the same crisis dynamics as the threat of nuclear first use itself. Whether the United States switches to NFU does not matter for crisis stability *unless* the adversary can adopt sufficient countermeasures against conventional military power and not nuclear power. Failing this condition, a major argument in favor of NFU loses its persuasiveness.

Our analysis has implications for how we understand nuclear strategy in the contemporary age. Recent scholarship on the subject has only started to examine the causes and effects of nuclear postures.[63] How states structure and operationalize their nuclear arsenals can have serious consequences regarding international stability. Hence NFU advocates aspire to see a shift in US nuclear posture. Our analysis points to how the NFU would have little effect on crisis stability, especially considering the redoubtable ability of the United States to wage war without nuclear weapons.

Acknowledgments

We thank Michael Hunzeker, Farah Jan, Rhianna Tyson Kreger, Joshua H. Pollack, Kristopher Ramsay, Heather Williams, and the anonymous reviewers for comments on previous drafts. All errors are our own.

[63] For a superb analysis of the causes and effects of different nuclear postures, see Vipin Narang, *Nuclear Strategy in the Modern Era* (Princeton, NJ: Princeton University Press, 2014).