The Rule of Law and the Role of Strategy in U.S. Nuclear Doctrine

Scott D. Sagan and Allen S. Weiner

During the Cold War, the United States' nuclear doctrine focused primarily on the twin tasks of deterring a large-scale conventional attack on European or Asian allies through the threat of nuclear first-use and of deterring a nuclear attack through the threat of nuclear retaliation. U.S. nuclear doctrine still retains these objectives. Three important developments, however, have fundamentally transformed the challenges faced by U.S. nuclear strategists. Meeting these challenges will require significant rethinking of U.S. nuclear doctrine and deterrence policy.

The first development is that the proliferation of nuclear weapons to an increasing number of states and the threat posed by other weapons capable of inflicting massive harm against civilian populations—including chemical, biological, and cyberweapons—have created new and diverse strategic threats. Questions regarding the potential use of U.S. nuclear weapons now arise in an array of scenarios distinctly different from the Warsaw Pact tank assault across the Fulda Gap or a bolt-from-the-blue surprise Soviet nuclear attack. U.S. military planners must now focus on both potential adversaries with very small nuclear arsenals, such as North Korea, and one with a very large nuclear arsenal, Russia. Moreover, in an era of U.S. conventional superiority, it is U.S. adversaries that now contemplate limited nuclear first-use or the initial employment of chemical, biological, or cyberweapons as a coercive warfighting instrument. These strategic developments have placed the question of how best to respond to potential limited attacks on the United States, deployed U.S. forces, or American allies at the center of U.S. nuclear doctrine.

Second, an "accuracy revolution" in missile guidance technology has enabled the United States, and possibly other states in the future, to place nuclear

Scott D. Sagan is the Caroline S.G. Munro Professor of Political Science and Senior Fellow at the Center for International Security and Cooperation and the Freeman Spogli Institute for International Studies at Stanford University. Allen S. Weiner is Senior Lecturer in Law and Director of the Program in International and Comparative Law at Stanford Law School.

The authors are grateful for comments provided by participants in the Stanford Workshop on Revisiting the Laws on Nuclear Weapons, supported by the Stanton Foundation, in February 2019. They thank Geoffrey Corn, Janina Dill, C. Robert Kehler, Reid Pauly, Theodore Richard, Adam Roberts, Joan Rohlfing, Sean Watts, and the anonymous reviewers for additional comments. They also thank Alexandra Chau, Alicia Chen, Hamzah Daud, Deborah Jantz, Alida Haworth, Amanda McCaffery, Katherine McKinney, Tia Sewell, and Samantha Thompson for outstanding research assistance.

International Security, Vol. 45, No. 4 (Spring 2021), pp. 126–166, https://doi.org/10.1162/isec_a_00407

and conventional warheads much closer to an intended target than was possible during the Cold War. This technology development is coupled with a "low-yield revolution," which has enabled the United States to develop radically smaller strategic nuclear warheads, including flexible "dial-a-yield" weapons. For example, the Polaris A-1 submarine-launched ballistic missile (SLBM), deployed on U.S. submarines in 1960, had a circle error probable (CEP) of 5,900 feet and carried a 600-kiloton nuclear warhead.[1] Half of the time, therefore, that massive thermonuclear weapon would have detonated over 1.1 miles away from the intended target, killing many civilians. The Polaris A-1 SLBM was an indiscriminate weapon. In contrast, today the United States has deployed a nuclear weapon (the B61-mod 12) with a dial-a-yield capability that reportedly can reduce the yield to 2 percent of the atomic bomb that destroyed Hiroshima, generate less radioactive fallout, and has a CEP of less than 100 feet.[2] Although a vigorous debate has emerged among scholars and in Congress about the policy implications of these technological developments, the basic facts about increased accuracy, lower yield, and reduced fallout are undisputed.[3]

The third major development is the unqualified declaration by the U.S. government that the law of armed conflict (LOAC)[4]—including the principles of distinction, proportionality, and precaution—applies to all plans and decisions concerning the use of nuclear weapons. During the Cold War, the U.S. government stated that the 1977 Additional Protocol I to the 1949 Geneva Conventions (Protocol I), which codified the obligation of all state parties to follow the principles of distinction, precaution, and proportionality, did not apply to nuclear weapons.[5] In 2013, however, the Barack Obama administra-

1. *Rethinking the Trident Force* (Washington, D.C.: United States Congressional Budget Office, 1993), pp. 3–4, https://www.cbo.gov/sites/default/files/103rd-congress-1993-1994/reports/199307rethinkingtrident.pdf.
2. See William J. Broad and David E. Sanger, "As U.S. Modernizes Nuclear Weapons, 'Smaller' Leaves Some Uneasy," *New York Times*, January 11, 2016, https://www.nytimes.com/2016/01/12/science/as-us-modernizes-nuclear-weapons-smaller-leaves-some-uneasy.html; Kris Osborn, "Back in 2018, a B-2 Stealth Bomber 'Test-Dropped' a Nuclear Bomb," *National Interest*, September 25, 2019, https://nationalinterest.org/blog/buzz/back-2018-b-2-stealth-bomber-test-dropped-nuclear-bomb-83201; and "B61-12 Nuclear Bomb," *Airforce Technology*, n.d., https://www.airforce-technology.com/projects/b61-12-nuclear-bomb/.
3. See Keir A. Lieber and Daryl G. Press, "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence," *International Security*, Vol. 41, No. 4 (Spring 2017), pp. 9–49, doi.org/10.1162/ISEC_a_00273; Charles L. Glaser and Steve Fetter, "Should the United States Reject MAD? Damage Limitation and U.S. Nuclear Strategy toward China," *International Security*, Vol. 41, No. 1 (Summer 2016), pp. 49–98, doi.org/10.1162/ISEC_a_00248; and Amy F. Wolff, *A Low-Yield, Submarine-Launched Nuclear Warhead: Overview of the Expert Debate* (Washington, D.C.: Congressional Research Service, March 21, 2019), https://fas.org/sgp/crs/nuke/IF11143.pdf.
4. The law of armed conflict—the body of international law rules governing the conduct of warfare, or *jus in bello*—is also referred to as international humanitarian law.
5. *Protocol Additional to the Geneva Conventions of 12 August 1949, and Relating to the Protection of Vic-*

tion's official nuclear weapons employment report announced that "all plans must also be consistent with the fundamental principles of the Law of Armed Conflict. Accordingly, plans will, for example, apply the principles of distinction and proportionality and seek to minimize collateral damage to civilian populations and civilian objects. The United States will not intentionally target civilian populations or civilian objects."[6] According to Gen. Robert Kehler, the commander of U.S. Strategic Command, implementing this guidance led the command to develop nuclear delivery "tactics and techniques to minimize collateral effects" and to "expand non-nuclear strike alternatives, and add significant flexibility to our contingency plans."[7] The Donald Trump administration's 2018 Nuclear Posture Review (NPR) reaffirmed the U.S. commitment to "adhere to the law of armed conflict" in any "initiation and conduct of nuclear operations."[8]

These three developments interact to present new challenges for U.S. nuclear doctrine: how best to deter, and respond to, if necessary, a limited nuclear attack or significant nonnuclear attack on the United States or U.S. allies, while following the law of armed conflict. It is noteworthy how narrow and bifurcated the scholarly debates on law and nuclear doctrine have been. Political scientists and nuclear policy specialists focus primarily on deterrence and strategy, usually without seriously engaging with the complexities of the law of armed conflict. This focus has led numerous nuclear strategy scholars—both those who advocate for "minimum deterrence" and so-called countervalue targeting and those who argue for a wider range of nuclear response options—to ignore the legal prohibitions on direct targeting of civilian populations. The legal community, in turn, interprets the law of armed conflict, but too often ignores strategic and technological considerations, such as the military context within which nuclear use is contemplated and the reduced yield and increased accuracy of modern nuclear weapons, that are necessary to make reasonable calculations about distinction, precaution, and proportionality.

This article, coauthored by a political scientist and an international lawyer, seeks to build an intellectual bridge between these two scholarly communities,

---

tims of International Armed Conflict (Protocol I), 1125 U.N.T.S. 3 (Geneva: International Committee of the Red Cross [ICRC], June 8, 1977) (henceforth *Protocol I*), p. 434, https://treaties.un.org/doc/Publication/UNTS/Volume%201125/volume-1125-I-17512-English.pdf.

6. U.S. Department of Defense, *Report on Nuclear Employment Strategy of the United States Specified in Section 491 of 10 U.S.C.*, June 12, 2013 (Washington, D.C.: U.S. Government Printing Office [GPO], 2013 (henceforth *U.S. DOD Nuclear Employment Strategy*), pp. 4–5, https://www.hsdl.org/?view&did=739304.

7. C. Robert Kehler, "Nuclear Weapons and Nuclear Use," *Daedalus*, Vol. 145, No. 4 (Fall 2016), pp. 57, 59, doi.org/10.1162/DAED_ a_00411.

8. U.S. Department of Defense (U.S. DOD), *Nuclear Posture Review* (Washington, D.C.: GPO, February 2018), p. 23, https://media.defense.gov/2018/Feb/02/2001872886/-1/-1/1/2018-NUCLEAR-POSTURE-REVIEW-FINAL-REPORT.PDF.

contributing to both security studies and legal scholarship. We analyze how the law of armed conflict applies to U.S. nuclear doctrine and war planning. We also demonstrate how strategic calculations must be applied in any evaluation of the lawfulness of potential uses of nuclear weapons. We limit our analysis to legal issues concerning the use of U.S. nuclear weapons in war, and do not address other important issues at the intersection of law and nuclear strategy, such as the debate about no-first-use policy, states' legal responsibilities under the Nuclear Nonproliferation Treaty (NPT), and the legality of preventive war or preemptive attacks.[9]

We first demonstrate that the law of armed conflict's principle of distinction prohibits deliberate targeting of civilians (with the exception of civilians directly involved in military operations) or civilian objects. The principle of proportionality permits some, but not all, potential U.S. nuclear attacks against military targets, allowing counterforce attacks, for example, when they prevent or significantly reduce the expected damage to U.S. and allied populations with less (i.e., proportionate) foreign collateral damage. We also demonstrate that legal obligations under the precautionary principle mean that the United States must use conventional weapons or the lowest yield nuclear weapons possible in any attack against legitimate military targets. We finally argue that, although the U.S. government in the past asserted that the prohibition against deliberate targeting of civilians by way of reprisal in response to an adversary's attacks against U.S. or allied civilians (a prohibition stipulated in Protocol I) is not a binding rule of customary international law, the legal landscape has changed.[10] We argue that the widespread acceptance of the prohibition against targeting civilians by way of reprisal, demonstrated in part by the international community's condemnation of other states on the few occasions they have claimed the right to launch reprisal attacks against civilians,

9. On this debate see, Michael S. Gerson, "No First Use: The Next Step for U.S. Nuclear Policy," *International Security*, Vol. 35, No. 2 (Fall 2010), pp. 7–47, doi.org/10.1162/ISEC_a_00018; and Scott D. Sagan, "The Case for No First Use," *Survival*, Vol. 51, No. 3 (June/July 2009), pp. 163–182, doi.org/10.1080/00396330903011545. On NPT legal responsibilities, see Daniel H. Joyner, *Interpreting the Nuclear Non-Proliferation Treaty* (Oxford: Oxford University Press, 2011). On the legal and policy issues concerning preventive and preemptive strikes, see Abraham D. Sofaer, *The Best Defense? Legitimacy and Preventive Force* (Stanford, Calif.: Hoover Institution Press, 2010); and Michael W. Doyle, *Striking First: Preemption and Prevention in International Conflict*, Stephen Macedo, ed. (Princeton, N.J.: Princeton University Press, 2008).

10. Michael J. Matheson, "Remarks on the United States Position on the Relation of Customary International Law to the 1977 Protocols Additional to the 1949 Geneva Conventions" (January 22, 1987), reprinted in Martin P. Dupuis, John Q. Heywood, and Michéle Y.F. Sarko, "The Sixth Annual American Red Cross–Washington College of Law Conference on International Humanitarian Law: A Workshop on Customary International Law and the 1977 Protocols Additional to the 1949 Geneva Conventions," *American University International Law Review*, Vol. 2, No. 2 (1987) (henceforth Matheson, U.S. Position on the Relation of Customary International Law to the 1977 Protocols), p. 426, https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1660&context=auilr.

reflects that the prohibition has today gained the status of customary international law. We also demonstrate that the United States has failed to take actions that would allow it to qualify as a "persistent objector," a legal status under which it would not be bound by the customary international law prohibition on targeting civilians in reprisal.

The implications of these legal restrictions on U.S. nuclear weapons use are profound, but poorly recognized. The prohibition against targeting civilians means that strategists advocating countervalue targeting and minimum deterrence are advocating an illegal doctrine. The acceptance of the principle of distinction together with impermissibility of reprisal against civilians also means that it is illegal for the United States, contrary to what is implied in the 2018 NPR, to intentionally target civilians, even in reprisal for a strike against U.S. or allied civilians. The law of armed conflict also restricts targeting of an enemy's leadership to officials in the military chain of command or directly participating in hostilities, meaning that broad targeting to destroy an enemy's entire political leadership or partial membership is unlawful. Finally, the law of armed conflict prohibits any attack against a legitimate military target, if the intent is to cause what purports to be "incidental" civilian harm. When U.S. nuclear strategists rely on "collateral damage" for deterrence, the damage is no longer collateral and the strategy is no longer legal.

The article proceeds in five sections. First, we describe the sources and impact of international law, address which legal rules apply to U.S. nuclear weapons doctrine, and explain why those rules matter. This section also outlines the three main applicable principles of the law of armed conflict—distinction, proportionality, precaution—and the doctrine of belligerent reprisal. Second, we discuss how the strategic studies literature and the legal literature about nuclear weapons are separated into disciplinary silos, which results in incomplete and often misleading analyses in both communities. Third, we present our views on the proper application of the law of armed conflict to U.S. nuclear targeting and potential use. The fourth section demonstrates that the prohibition on targeting civilians as a belligerent reprisal has acquired customary international law status and refutes the idea that the United States is not bound by that prohibition under the "persistent objector" doctrine.

The concluding section discusses the policy implications of this analysis. We review legal constraints on potential U.S. nuclear-use scenarios with Russia and North Korea and argue that traditional fears that abiding by the law will weaken U.S. nuclear deterrence are exaggerated. We therefore call for changes in U.S. nuclear doctrine and decisionmaking procedures to increase the probability that the United States complies more consistently with the law of armed conflict. We do not believe that the U.S. government, or other governments,

will necessarily always abide by the law of armed conflict in the crucible of war. We do argue, however, that a first crucial step to discourage violations of the law is to ensure that the legal rules are clearly explicated and well understood by political leaders, senior military officers, scholars, and the public alike.

The Impact, Sources, and Principles of LOAC

Skeptics may well think that applying the law of armed conflict to nuclear targeting is a purely scholastic exercise, lawyers counting the number of angels dancing on the warhead of a missile. The evidence is strong, however, that the law influences conventional military operations, and that the U.S. military accepts the challenging mission of complying with the LOAC, even in the nuclear domain. The Judge Advocate General (JAG) Corps, which comprised thirty-three officers in the Civil War, has grown to a 10,000-strong legion of lawyers making it arguably the largest "law firm" on the planet.[11] All nuclear war plans are now formally reviewed by U.S. Strategic Command (STRATCOM) JAGs, a process stemming from the decades-long expansion of the U.S. military leadership's commitment to refine and apply the law of armed conflict to its military operations.[12] Following LOAC in targeting policy is partly designed to encourage reciprocity by others, but reciprocity is not a requirement for U.S. compliance: According to Jennifer O'Conner, the general counsel to the Department of Defense, "We comply with the law of war because it is the law. . . . We will treat everyone lawfully and humanely, even when our foes do not do the same."[13]

Furthermore, U.S. military personnel have a legal duty to disobey orders, including nuclear strike orders, that violate law of war, further encouraging cre-

11. Laura Ford Savarese and John Fabian Witt, "Strategy and Entailments: The Enduring Role of Law in the U.S. Armed Forces," *Daedalus*, Vol. 146, No. 1 (Winter 2017), p. 18, doi.org/10.1162/DAED_a_00419.

12. Important works on applications of LOAC to contemporary conflicts include Neta C. Crawford, *Accountability for Killing: Moral Responsibility for Collateral Damage in America's Post-9/11 Wars* (New York: Oxford University Press, 2013); Janina Dill, *Legitimate Targets? Social Construction, International Law, and US Bombing* (Cambridge: Cambridge University Press, 2015); Matthew Evangelista and Henry Shue, eds., *The American Way of Bombing: Changing Ethical and Legal Norms, From Flying Fortresses to Drones* (Ithaca, N.Y.: Cornell University Press, 2014); and Tanisha M. Fazal, *Wars of Law: Unintended Consequences in the Regulation of Armed Conflict* (Ithaca, N.Y.: Cornell University Press, 2018).

13. Jennifer M. O'Conner, "Applying the Law of Targeting to the Modern Battlefield," speech at New York University School of Law, New York, November 28, 2016, *Just Security*, https://www.justsecurity.org/34977/applying-law-targeting-modern-battlefield%E2%80%8E-full-speech-dod-general-counsel-jennifer-oconnor/. On reciprocity and the law of armed conflict, see James D. Morrow, *Order within Anarchy: The Laws of War as an International Institution* (New York: Cambridge University Press, 2014); and Sean Watts, "Reciprocity and the Law of War," *Harvard International Law Journal*, Vol. 50, No. 2 (2009), pp. 365–434.

ation of lawful war plans. Commanders of STRATCOM, for example, have noted that they have a duty not to follow an illegal order, even if it was issued by the president.[14] It is also possible that an official who orders or executes a nuclear attack that violates the law of armed conflict would be committing a crime under the War Crimes Act of 1996 and thus be subject to prosecution.[15] Such personal legal exposure provides another reason, and a very personal incentive, for senior officers to insist that the United States not violate the law of armed conflict. This is best seen in then-STRATCOM Commander John Hyten's 2017 description of how he thought about the rule of law: "[E]very year I get trained in a law of armed conflict. And the law of armed conflict has certain principles and necessities, distinction, proportionality, unnecessary suffering. All those things are defined. . . . And we get, you know, for 20 years it was the William Calley, My Lai thing that we were trained on because if you execute an unlawful order you will go to jail. You could go to jail for the rest of your life. It applies to nuclear weapons."[16]

We are not arguing that U.S. military lawyers or their civilian counterparts always interpret the law of armed conflict correctly. Indeed, a central purpose of this article is to identify where we believe the makers of U.S. nuclear doctrine have interpreted the law correctly and where they have not. Nor do we argue that the United States has always followed the law of armed conflict. The experience of war crimes committed by U.S. soldiers in Iraq and Afghanistan, and the official approval by senior government officials of "enhanced interrogation techniques" amounting to torture during the George W. Bush administration, should disabuse any reader of such ideas. But no legal system produces perfect compliance, and the incidence of some violations does not itself refute the constraining power of law.

International law, despite being written by state actors in pursuit of their interests, nonetheless constrains them later, often in unanticipated ways. As

14. See Statement of General C. Robert Kehler, United States Air Force (Retired), before the Senate Foreign Relations Committee, November 14, 2017, https://www.foreign.senate.gov/imo/media/doc/111417_Kehler_Testimony.pdf; and General John E. Hyten, "2017 Halifax International Security Forum Plenary 2 Transcript: Nukes: The Fire and the Fury," moderated by Steve Clemons (Halifax: Halifax International Security Forum, November 18, 2017) (henceforth Hyten, "Halifax Forum"), https://halifaxtheforum.org/wp-content/uploads/2017/11/HISF-2017-Transcript.Plenary-2.Nukes-The-Fire-and-the-Fury.pdf.

15. Under the War Crimes Act of 1996, it is a criminal offense for a member of the U.S. armed forces or other U.S. national to commit certain violations of international humanitarian law, including a "grave breach of Common Article 3" of the 1949 Geneva Conventions, 18 U.S.C. §2441(c)(3). Although there are legal ambiguities about the scope of this provision, there is a strong argument that it would be a crime under the War Crimes Act to launch attacks that intentionally target civilians or that are "knowingly disproportionate." Oona Hathaway et al., "The US, the War in Yemen, and the War Crimes Act—Part I," *Just Security*, April 2, 2018, https://www.justsecurity.org/54444/us-war-yemen-war-crimes-act/.

16. Hyten, "Halifax Forum."

Laura Ford Savarese and John Fabian Witt argue, international law creates "entailments": "What makes law strategically valuable is that it entails consequences beyond the control of the parties that invoke it."[17] These entailments can take many forms: actors to whom the law is addressed are "accultured" to adopt and internalize legal norms as beliefs; bureaucracies such as the JAG Corps institutionalize training and encourage compliance with legal rules; and domestic criminal statutes and international courts create the risk of prosecution of those who violate those rules.[18] Because the law of armed conflict is embedded in the war-planning process in peacetime, it shapes the military options that are available to decisionmakers in crises and war. Our analysis of the application of the law of armed conflict to U.S. nuclear doctrine provides powerful and surprising examples of such entailments.

TREATIES AND CUSTOMARY INTERNATIONAL LAW

Evaluating how international law applies to U.S. nuclear operations requires an understanding of how international law is made and which rules apply to the United States. The two main sources of international law are treaties and customary international law.[19] Treaties are written agreements between states, concluded either bilaterally or multilaterally, that set out rules establishing the rights and obligations of the parties. Customary international law, in contrast, develops incrementally on the basis of state conduct; in the words of the *Third Restatement of the Foreign Relations Law of the United States*, widely recognized as an authoritative account of the content of international law, it "results from a general and consistent practice of states followed by them from a sense of legal obligation."[20] If state practice is sufficiently widespread, rules of customary international law bind all states—even states that do not necessarily participate in that practice. Treaties, in contrast, ordinarily impose rights and obligations only on the parties to the agreement. As the *Restatement* notes, however, treaties "may lead to the creation of customary international law when such

17. Savarese and Witt, "Strategy and Entailments," p. 11.
18. On acculturation, see Ryan Goodman and Derek Jinks, *Socializing States: Promoting Human Rights through International Law* (New York: Oxford University Press, 2013). On the JAG Corps, see Laura A. Dickinson, "Military Lawyers on the Battlefield: An Empirical Account of International Law Compliance," *American Journal of International Law*, Vol. 104, No. 1 (January 2010), pp. 1–28, doi.org/10.5305/amerjintelaw.104.1.0001. On domestic criminal law, under the War Crimes Act of 1996, see Hathaway et al., "The US, the War in Yemen, and the War Crimes Act."
19. "General principles of law recognized by civilized nations" constitute an additional, but less prominent, source of international law. See Statute of the International Court of Justice, art. 38(c), June 26, 1945, 59 Stat. 1055, 33 U.N.T.S. 933. They are not a relevant source of law in the context of the use of nuclear weapons.
20. American Law Institute, *Restatement of the Law Third, the Foreign Relations Law of the United States*, sec. 102(2), Vol. 1 (Philadelphia: American Law Institute, 1987) (henceforth *Restatement*), p. 24.

agreements are intended for adherence by states generally and are in fact widely accepted."[21]

The means by which international law changes and develops are linked to the source of the law. States that wish to adopt a new legal rule can seek to negotiate a multilateral treaty; the treaties prohibiting the use of biological or chemical weapons are examples of this mode of development of international law. In other cases, treaties serve mainly to create greater clarity for states by codifying existing rules of customary international law. If a provision in a treaty is a codification of existing customary international law, the rule applies even to states that are not party to the treaty.

Because customary international law is based on practice that states believe is legally required, it is important to examine not only what states do, but the normative posture they take with respect to their actions. A state might, for instance, torture detainees, but if it denies engaging in such action, or claims that its "enhanced interrogation techniques" did not meet the definition of torture, the denial itself is an expression of what conduct the state believes is legally required.[22] In addition, in evaluating states' perceptions of their legal obligations, it is important to consider not only the claims states make in justifying their own actions, but also the representations they make in approving or condemning the actions of other states. As Michael Reisman explains:

> International law is still largely a decentralized process, in which much law making (particularly for the most innovative matters) is initiated by unilateral claim, whether explicit or behavioral. Claims to change inherited security arrangements, or any other part of the law, ignite a process of counterclaims, responses, replies, and rejoinders until stable expectations of right behavior emerge. . . . Hence the ceaseless dialectic of international law: Whether by diplomatic communication or state behavior, one state claims from others acquiescence in a new practice. Insofar as that new practice is accepted in whole or in part, the practice becomes part of the law.[23]

In short, ascertaining the content of the rules of customary international law requires an assessment of what states do, what they claim to have a right to do, and what they aver other states may or may not do.

Although rules of customary international law bind all states—even those

21. Ibid., sec. 102(3), Vol. 1, p. 24.
22. This approach to ascertaining the content of legal rules is reminiscent of Michael Walzer's account of how we ascertain moral rules: "The clearest evidence for the stability of our values over time is the unchanging character of the lies that soldiers and statesmen tell. They lie in order to justify themselves, and so they describe for us the lineaments of justice. Wherever we find hypocrisy, we also find moral knowledge." Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations*, 5th ed. (New York: Basic Books, 2015), p. 19.
23. W. Michael Reisman, "Assessing Claims to Revise the Laws of War," *American Journal of International Law*, Vol. 97, No. 1 (January 2003), pp. 82–89, at p. 82, doi.org/10.2307/3087105.

that have not actively participated in the widespread practice giving rise to the rule—there is a rarely invoked exception for states that "persistently object" to an emerging rule of customary international law while the rule is forming. When claims are made that a pattern of practice has generated a new customary international rule, states that from the outset and consistently oppose the purported rule will not be bound by it, even if it later "crystallizes" into an accepted rule of customary international law.[24] A state may not, however, object to the application to it of a customary international law rule that has already formed. Moreover, a customary international law rule will bind a state that abandons its objection; a state may not later seek to revive an objection that it has not persistently maintained. Additionally, there is some support for the notion that the development of customary international law rules requires the participation of states that are "specially affected" by the rule, although states disagree about the existence of that principle.[25]

KEY PRINCIPLES OF THE LAW OF ARMED CONFLICT

The United States is obligated to follow a number of fundamental principles of the law of armed conflict derived from the sources of international law. These rules are set out in Protocol I; they are widely accepted as codifications of preexisting principles of customary international law and therefore are binding even on states (such as the United States) that are not party to Protocol I. Although the United States government asserted during the negotiation of Protocol I that the treaty did not apply to nuclear weapons,[26] it later explicitly acknowledged in 1987 that the key principles of distinction, proportionality, and precaution codified in Protocol I reflect binding customary international law and apply to all U.S. military operations.[27] The Obama ad-

24. A classic example arose in the *Fisheries Jurisdiction* case brought by the United Kingdom against Norway in the International Court of Justice, a dispute over the method used by Norway to delimit its territorial sea and internal waters along its coastline, which featured many deep indentations. The United Kingdom invoked a purported customary international law rule under which only indentations with a closing line of less than 10 nautical miles constitute bays (which are part of a state's internal waters). The Court held that "the ten-mile rule would appear to be inapplicable as against Norway inasmuch as she has always opposed any attempt to apply it to the Norwegian coast." International Court of Justice, *Fisheries Jurisdiction (United Kingdom v. Norway)*, 1951 ICJ 116, December 18, 1951, p. 131, https://www.icj-cij.org/public/files/case-related/5/005-19511218-JUD-01-00-EN.pdf.

25. Kevin Jon Heller, "Specifically-Affected States and the Formation of Custom," *American Journal of International Law*, Vol. 112, No. 2 (April 2018), pp. 191–243, doi.org/10.1017/ajil.2018.22.

26. The United States stated: "It is the understanding of the United States of America that the rules established by this Protocol were not intended to have any effect on and do not regulate or prohibit the use of nuclear weapons." John A. Boyd, "Contemporary Practice of the United States Relating to International Law," *American Journal of International Law*, Vol. 72, No. 2 (April 1978), pp. 375–409, quote on page 407, doi.org/10.2307/2199962.

27. See Matheson, U.S. Position on the Relation of Customary International Law to the 1977 Protocols, pp. 426–427.

ministration 2013 nuclear employment strategy explicitly reaffirmed the application of these principles to nuclear operations, as did the 2016 *Department of Defense Law of War Manual*.[28]

The "principle of distinction" provides that the "civilian population, as such, as well as individual civilians, shall not be the object of attack."[29] "Civilian objects" also may not be made the "object of attack."[30] The related prohibition on indiscriminate attacks applies to attacks that (1) "are not directed at a specific military objective"; (2) "employ a method or means of combat which cannot be directed at a specific military objective"; or (3) "are of a nature to strike military objectives and civilians or civilian objects without distinction."[31]

Even when attacks are directed solely against military objectives, however, civilians are at risk of being killed or injured incidentally. The "principle of proportionality" in the *jus in bello* context seeks to limit such collateral civilian harm and prohibits attacks in which, according to the Additional Protocol I, the "expected . . . incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, . . . would be excessive in relation to the concrete and direct military advantage anticipated."[32] This legal definition of proportionality thus differs significantly from the common use of the term, which often simply means a symmetrical, equal, or "tit-for-tat" reaction.[33]

The law of armed conflict also obligates states to do more than satisfy themselves that the incidental civilian harm expected from an attack is minimally outweighed by the anticipated military advantage. Rather, under the "principle of precaution," when selecting the means and methods of attack, armed forces must "take all feasible precautions . . . to avoid[], and in any event to minimiz[e], incidental loss of civilian life, injury to civilians and damage to civilian objects."[34]

Finally, a legal concept that has played a role in U.S. understanding of the law of armed conflict is the customary international law doctrine of "belliger-

28. *U.S. DOD Nuclear Employment Strategy*; and *Department of Defense Law of War Manual* (Washington, D.C.: General Counsel of the Department of Defense, June 2015 [updated December 2016]) (henceforth *DOD Law of War Manual*), p. 417, https://dod.defense.gov/Portals/1/Documents/pubs/DoD%20Law%20of%20War%20Manual%20-%20June%202015%20Updated%20Dec%202016.pdf?ver=2016-12-13-172036-190.
29. *Protocol I*, Art. 51(2).
30. Ibid., Art. 52(1).
31. Ibid., Art. 51(4); Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law: Volume I: Rules* (Cambridge: Cambridge University Press, 2005), p. 40, https://www.icrc.org/en/doc/assets/files/other/customary-international-humanitarian-law-i-icrc-eng.pdf.
32. *Protocol I*, Art. 51(5)(b).
33. It also differs from the meaning of *jus ad bellum* proportionality regarding the initiation of war.
34. *Protocol I*, Art. 57(2)(a)(ii).

ent reprisal," which provides that "an action that would otherwise be unlawful . . . in exceptional cases is considered lawful under international law when used as an enforcement measure in reaction to unlawful acts of an adversary."[35] Protocol I restricts the permissible scope of belligerent reprisals by prohibiting attacks against the civilian population by way of reprisal.[36] In the past, most recently in 1995, the United States has taken the position that, unlike the principles of distinction, proportionality, and precaution, the prohibition on attacking civilians by way of reprisal does not have customary international law status and therefore does not bind nonparties to Protocol I.[37] Under this view, the prohibition on belligerent reprisal would not apply to the use of nuclear weapons (or any other military operation) by the United States.

INTERNATIONAL LAW IN THE NUCLEAR DOMAIN

In view of the limited number of nuclear weapons states, questions arise about how international law—particularly customary international law—applies in the nuclear domain. There is a key distinction in this regard between the operation of rules purporting to categorically ban the use of nuclear weapons as a class and the rules governing how nuclear weapons may permissibly be used. The general prohibition on the use of a particular category of weapon requires the adoption of a specific legal rule.[38] States can by treaty accept restrictions on the use of certain kinds of weapons, per se,[39] and such categorical restrictions can in time generate customary norms that bind even states that are not parties to treaties prohibiting particular categories of weapons. For instance, the prohibition on the use of chemical weapons is widely accepted to have acquired the status of customary international law that binds even states

35. Henckaerts and Doswald-Beck, *Customary International Humanitarian Law, Volume I*, p. 513.
36. *Protocol I*, Art. 51(6).
37. The most recent explicit official government statement of this legal position was the Written Statement of the Government of the United States of America before the International Court of Justice, Request by the United Nations General Assembly for an Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons, June 20, 1995 (henceforth U.S. Written Statement in the ICJ *Nuclear Weapons* case), https://www.icj-cij.org/public/files/case-related/95/8700.pdf. The position has, however, been advanced—or at least noted—more recently, but unofficially, by some military lawyers. See Charles J. Dunlap, Jr., "Taming Shiva: Applying International Law to Nuclear Operations," *Air Force Law Review*, Vol. 42 (1997), p. 163; and Theodore T. Richard, "Nuclear Weapons Targeting: The Evolution of Law and U.S. Policy," *Military Law Review*, Vol. 224, No. 4 (2016), p. 974.
38. "State practice shows that the illegality of the use of certain weapons as such does not result from an absence of authorization but, on the contrary, is formulated in terms of prohibition." International Court of Justice, *Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion*, 1996 ICJ 226, July 8, 1996 (henceforth ICJ *Nuclear Weapons* Advisory Opinion), p. 247, https://www.icj-cij.org/public/files/case-related/95/095-19960708-ADV-01-00-EN.pdf.
39. Examples include the Biological Weapons Convention, the Chemical Weapons Convention, and the Convention on Conventional Weapons, which prohibits, for example, the use of blinding laser weapons and weapons with undetectable fragments.

that are not parties to treaties banning their use.[40] In 2013, for example, President Obama condemned Syria's use of chemical weapons in the midst of Syria's civil war as "making a mockery of the global prohibition on the use of chemical weapons," even though Syria was not at the time a party to the Chemical Weapons Convention.[41] But as a general rule, states can express their objection to the purportedly customary international law character of an emerging prohibition on a particular type or class of weapons, and they will not be subject to the prohibition, provided that the objections are made in a persistent manner over time.

The nuclear weapons states have relied on these principles regarding the formation of international law prohibitions on types of weapons in objecting to claims that the use of nuclear weapons, as a class, is categorically prohibited under customary international law. For example, the United States, along with France and the United Kingdom, consistently voted against multiple resolutions in the UN General Assembly on the "Convention on the Prohibition of the Use of Nuclear Weapons" that stated that "any use of nuclear weapons would be a violation of the UN Charter and a crime against humanity."[42] In October 2018, after a majority of UN General Assembly members approved the Treaty on the Prohibition of Nuclear Weapons (TPNW), the United States, China, France, Russia, and the United Kingdom issued a joint statement that clearly staked out their view that the treaty's categorical ban on nuclear use would not become customary international law—and that they would persistently object to the application to them of any such ban purported to be emerging: "We will not support, sign or ratify this Treaty. The TPNW will not be binding on our countries, and we do not accept any claim that it contributes to the development of customary international law; nor does it set any new standards or norms."[43] The Indian government issued a similar statement maintaining that the "treaty in no way constitutes or contributes to any customary international law."[44]

40. Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, p. 259.
41. Barack Obama, "Text of President Obama's Remarks on Syria," address at White House Rose Garden, Washington, D.C., August 31, 2013, *New York Times*, https://www.nytimes.com/2013/09/01/world/middleeast/text-of-president-obamas-remarks-on-syria.html.
42. In 2006, the legal advisers to the State Department and Defense Department noted that the repeated U.S., British, and French objections to the proposed international prohibition on the use of nuclear weapons "clearly indicates that these three States are not simply persistent objectors, but rather that the rule has not formed into a customary rule at all." U.S. State Department, "U.S. Initial Reactions to ICRC Study on Customary International Law," November 3, 2006, U.S. Department of State Archive, Washington, D.C., https://2001 2009.state.gov/s/l/rls/82630.htm#_ftn35.
43. UN General Assembly, 1st Comm., 73rd sess., 14th mtg., A/C.1/73/PV.14, October 22, 2018, https://undocs.org/en/A/C.1/73/PV.14.
44. "Nuclear Ban Treaty Doesn't Contribute to Customary International Law: India," *Wire*, July 18, 2017, https://thewire.in/diplomacy/nuclear-ban-treaty-customary-law. For an analysis, see Jean-Baptiste Jeangene Vilmer, "The Forever-Emerging Norm of Banning Nuclear Weapons," *Journal of Strategic Studies*, published online 2020, pp. 1–27. doi.org/10.1080/01402390.2020.1770732.

The nuclear weapons states have not always been explicit about whether their view is that no customary international law rule prohibiting the use of nuclear weapons per se can develop without their participation, in view of their status as specially affected states, or whether they are staking out their status as persistent objectors even if a customary international law rule is deemed to have emerged. Nevertheless, none of these claims apply to the international law rules governing how those weapons may be used. The customary international law of armed conflict, including principles of distinction, proportionality, and precaution, applies to the use of any weapon system. When a new weapon is developed—be it a drone, or a hypersonic missile, or a low-yield nuclear warhead—there is no requirement for the accumulation of state practice on the use of that weapon before we may safely conclude that civilians may not be directly targeted with drones, hypersonic missiles, or low-yield nuclear warheads, or that states are prohibited from launching attacks with such weapons that cause disproportionate civilian harm. To argue otherwise, the International Court of Justice (ICJ) noted, "would be incompatible with the intrinsically humanitarian character of the legal principles in question which permeates the entire law of armed conflict and applies to all forms of warfare and to all kinds of weapons, those of the past, those of the present and those of the future."[45]

Critically, the nuclear weapons states themselves accept that the customary international law of armed conflict applies to the use of nuclear weapons. For example, the 2016 U.S. *DOD Law of War Manual* states: "The law of war governs the use of nuclear weapons, just as it governs the use of conventional weapons. For example, nuclear weapons must be directed against military objectives. In addition, attacks using nuclear weapons must not be conducted when the expected incidental harm to civilians is excessive compared to the military advantage expected to be gained."[46] The United States took the same position in 1995 before the ICJ, averring that the United States "has long taken the position that various principles of the international law of armed conflict would apply to the use of nuclear weapons as well as to other means and methods of warfare."[47] France, Russia, and the United Kingdom similarly stated in their submissions to the ICJ that the law of armed conflict would apply to any potential use of nuclear weapons.[48] China—like Russia—did not en-

45. ICJ *Nuclear Weapons* Advisory Opinion, p. 259.
46. *DOD Law of War Manual*, p. 417.
47. U.S. Written Statement in the ICJ *Nuclear Weapons* case, p. 21.
48. See, for example, Exposé écrit du Gouvernement de la République Français [Written statement of the Government of the French Republic], ICJ *Nuclear Weapons* Advisory Opinion, June 1995, p. 42, https://www.icj-cij.org/public/files/case-related/95/8701.pdf; Written Statement and Comments of the Russian Federation on the Issue of the Legality of the Threat or Use of Nuclear Weapons, ICJ *Nuclear Weapons* Advisory Opinion, June 1995, p. 18, https://www.icj-cij.org/public/files/case-related/95/8796.pdf; and Statement of the United Kingdom, ICJ *Nuclear Weapons* Advi-

ter any reservations about nuclear weapons when it ratified the Additional Protocols I, reflecting its acceptance that the law of armed conflict applies to the use of nuclear weapons.[49]

The Silos in Strategic Studies and Legal Studies

The scholarly community working on nuclear issues has failed to address strategic and legal issues in a thorough and integrated manner. During the Cold War, discussions of applications of legal principles in the scholarship on nuclear strategy were conspicuous in their absence. For example, there is no discussion of the law of armed conflict in Thomas Schelling's *Arms and Influence*, Paul Bracken's *The Command and Control of Nuclear Forces*, Robert Jervis's *The Illogic of American Nuclear Strategy*, Scott Sagan's *Moving Targets*, or Lynn Eden's *Whole World on Fire*.[50] This may be understandable, because U.S. Cold War nuclear doctrine itself was scarcely reconcilable with the principles of distinction and proportionality under the law of armed conflict. Although the U.S. government's nuclear employment guidance at the height of the Cold War prohibited nuclear war planners from targeting the Russian population per se, it also required that war plans be able to deny the Soviet ability to recover from a nuclear war.[51] Such "counter-recovery" targeting, STRATCOM JAG Theodore Richard later noted, was "a legal construct that undermined theoretical civilian protection."[52] Walter Slocombe, later U.S. undersecretary of defense for policy, acknowledged this when he wrote that the"[m]assive at-

sory Opinion, June 1995, p. 46, https://www.icj-cij.org/public/files/case-related/95/8802.pdf. No other state that was at that time a nuclear weapons state submitted written views to the Court.

49. For China's reservation (limited to extradition issues), see *Treaties, States Parties, and Commentaries*, ICRC, https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=4DCE0A2FC589B132C1256402003FB334. For the statement by the Soviet Union, Russia's predecessor as a party to Protocol I, that it had ratified without any reservations, see ibid., https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/Notification.xsp?action=openDocument&documentId=74BABBD71087E777C1256402003FB5D4.

50. Thomas C. Schelling, *Arms and Influence* (New Haven, Conn.: Yale University Press, 1966); Paul J. Bracken, *The Command and Control of Nuclear Forces* (New Haven, Conn.: Yale University Press, 1983); Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, N.Y.: Cornell University Press, 1984); Scott D. Sagan, *Moving Targets: Nuclear Strategy and National Security* (Princeton, N.J.: Princeton University Press, 1989); and Lynn Eden, *Whole World on Fire: Organizations, Knowledge, and Nuclear Weapons Devastation* (Ithaca, N.Y.: Cornell University Press, 2004). An exception is Russell E. Dougherty, "The Psychological Climate of Nuclear Command," in Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, D.C.: Brookings Institution Press, 1987), pp. 422–424. Another exception is Lawrence Freedman, *The Evolution of Nuclear Strategy* (London: Macmillan, 1983), pp. 200–207, though it is revealing that the sole mention of the Geneva Conventions comes in the discussion of what Freedman calls "nuclear pacifism."

51. See Sagan, *Moving Targets*, pp. 42–57; and Jeffrey Richelson, "Population Targeting and U.S. Strategic Doctrine," in Desmond Ball and Richelson, eds., *Strategic Nuclear Targeting* (Ithaca, N.Y.: Cornell University Press, 1986), pp. 234–249.

52. Richard, "Nuclear Weapons Targeting," p. 930.

tacks on industrial targets, transportation, and material resource targets," associated with "counter-recovery" targeting, "would not be distinguishable from attacks on the population as such."[53]

IN NUCLEAR WAR STUDIES, THE LAW IS SILENT

Although current U.S. nuclear doctrine purports to comply with the law of armed conflict, strategic studies scholars largely continue to disregard legal constraints. For example, Charles Glaser and Steve Fetter fail to address law of armed conflict constraints in their 2016 article assessing the "redundant assured destruction capability" of U.S. nuclear forces against China, which they measure by calculating the effects of targeting 96 U.S. D-5 SLBM warheads against the center of Chinese cities, killing an estimated 80 million Chinese citizens.[54] Another example is Bruce Blair and colleagues' 2018 study of a "deterrence-only" nuclear targeting doctrine, which advocates targeting Russian "leadership and war-sustaining industries" in attacks that would result in "the annihilation of scores of cities housing banking and oil infrastructure as well as key manufacturing and leadership facilities."[55]

Even scholars who focus on limited U.S. nuclear options misunderstand law of armed conflict constraints. A prominent example is Bruce Bennett's detailed analysis of alternative limited war scenarios in which he acknowledges the 2013 guidance on applying the LOAC to nuclear targeting: "the new 'Nuclear Employment Strategy' formalizes the long-held expectation that U.S. presidents would prefer a proportional response to adversary use of nuclear weapons; it could be proportional in terms of the number of weapons used, the nature or targets of the attack, and/or the nature or severity of the effects of the attack."[56] This statement, however, misrepresents both the nature of the principle of *jus in bello* proportionality and its content: the employment guidance states a legal requirement, not a "long-held expectation" of presidential preferences; and "proportionality" does not refer to symmetry with respect to either the number of weapons used, the nature or target of the attacks, or the nature or severity of the effects. *Jus in bello* proportionality requires a weighing

53. Walter Slocombe, "Preplanned Operations," in Carter, Steinbruner, and Zraket, *Managing Nuclear Operations*, p. 129.
54. Charles L. Glaser and Steve Fetter, "Appendix for 'Should the United States Reject MAD? Damage Limitation and U.S. Nuclear Strategy toward China,'" https://doi.org/10.7910/DVN/SKJMLU.
55. Bruce G. Blair, Jessica Sleight, and Emma Claire Foley, *The End of Nuclear Warfighting: Moving to a Deterrence-Only Posture* (Princeton, N.J.: Program on Science and Global Security, Princeton University, 2018), p. 6. To his credit, Blair acknowledged that his proposed nuclear strategy would "stumble over the law of war." Ibid., p. 57.
56. Bruce W. Bennett, "On US Preparedness for Limited Nuclear War," in Jeffrey A. Larsen and Kerry M. Kartchner, eds., *On Limited Nuclear War in the 21st Century* (Stanford, Calif.: Stanford University Press, 2014), p. 221.

of the negative consequences of collateral civilian damage compared to the positive contribution to military advantage of destroying a target.

INDISCRIMINATE ASSUMPTIONS IN TREATIES AND LEGAL SCHOLARSHIP

For their part, international lawyers who address the use of nuclear weapons—including international jurists, those who frame international treaties, and legal scholars—pay scant attention to strategic considerations, either those concerning the context in which nuclear weapons might be used or the operational features of modern nuclear weapons. The presumption that any use of nuclear weapons is necessarily disproportionate and indiscriminate appears, for example, in the preamble to the 2017 Treaty on the Prohibition of Nuclear Weapons, which states that "any use of nuclear weapons would be contrary to the . . . principles and rules of international humanitarian law."[57] Yet the failure to consider technical and strategic factors—such as variability in the yield or radioactive fallout of a nuclear weapon and the potential military advantage that might be gained by destroying an enemy target—renders any such blanket assessment radically incomplete. This view also fails to take note of the operational features of some U.S. nuclear weapons which can be delivered with high precision against military targets, and as such are not necessarily indiscriminate. The argument that any nuclear attack would be disproportionate also appears to assume that a counterforce attack against an adversary's nuclear forces could not succeed in protecting the U.S. or allied population from further nuclear attacks. That assumption may be accurate for states with large nuclear arsenals, including survivable submarine-based missiles, such as Russia. It is unlikely to be accurate, however, in the case of a potential U.S. military response to a North Korean nuclear attack, which might meaningfully limit damage to the U.S. homeland and allies.

The presumption that the use of nuclear weapons would necessarily and categorically violate the principles of international humanitarian law also pervades both the legal academic literature and civil society discourse. As an example of the latter, the Council of Delegates of the International Committee of the Red Cross (ICRC) claimed in 2011 that it was "difficult to envisage how any use of nuclear weapons could be compatible with the rules of international humanitarian law, in particular the rules of distinction, precaution and proportionality."[58] Among scholars, Burns Weston similarly asserted that

57. *Treaty on the Prohibition of Nuclear Weapons*, July 7, 2017, preambular para.10, United Nations Office for Disarmament Affairs, http://disarmament.un.org/treaties/t/tpnw/text.
58. *Council of Delegates 2011: Resolution 1*, Nov. 26, 2011, operative para. 2, ICRC, https://www.icrc.org/en/doc/resources/documents/resolution/council-delegates-resolution-1-2011.htm. See also Jakob Kellenberger, "Bringing the Era of Nuclear Weapons to an End," address to the Geneva Diplomatic Corps on April 20, 2010, ICRC, https://www.icrc.org/en/doc/resources/documents/statement/nuclear-weapons-statement-200410.htm.

"almost every use to which nuclear weapons might be put . . . appear[s] to violate one or more of the laws of war that serve to make up the contemporary humanitarian law of armed conflict, in particular the cardinal principle of proportionality."[59]

Not all legal scholars who analyze nuclear targeting ignore the existence of lower-yield nuclear weapons, yet they still tend to conclude that there is no scenario in which the use of nuclear weapons would not violate some, often multiple, principles of the law of armed conflict.[60] Susan Breau, for instance, suggests that apart from the destructive power of a low-yield nuclear blast, it is necessary to consider the radioactive fallout from such weapons, their potential long-term environmental impact, and the risk that the use of nuclear weapons would trigger counter-strikes and escalation, which leads her to conclude that nuclear use "on any scale" would be illegal.[61] Charles Moxely, John Burroughs, and Jonathan Granoff similarly assert that the radiation inherent in a nuclear weapons blast creates "unnecessary suffering" and that the effects of any nuclear weapons use could not be controlled, either because of spread of radiation or the dangers of nuclear escalation. They conclude that there is a "categorial" prohibition and that any "use of such weapons would be unlawful under the rules of distinction, proportionality, and necessity."[62] Such blanket statements ignore the reduced fallout produced by low-yield weapons and, most importantly, simply assume that use of a nuclear weapon in response to a nuclear attack would be more escalatory than other military options.[63]

The effects of possible radioactive fallout undoubtedly must be considered in assessing the collateral civilian harm of the use of nuclear weapons. Nevertheless, these analyses fail to balance the enemy state's civilian harm against the military advantage a state might gain by preventing further nuclear attacks

59. Burns H. Weston, "Nuclear Weapons versus International Law: A Contextual Reassessment," in Arthur Selwyn Miller and Martin Feinrider, eds., *Nuclear Weapons and Law* (Westport, Conn.: Greenwood, 1984), p. 179.

60. An exception is Stuart Casey-Maslen, "The Use of Nuclear Weapons under Rules Governing the Conduct of Hostilities," in Gro Nystuen, Casey-Maslen, and Annie Golden Bersagel, eds., *Nuclear Weapons under International Law* (Cambridge: Cambridge University Press, 2014), pp. 91–127.

61. Susan Breau, "Civilian Casualties and Nuclear Weapons: The Application of the Rule of Distinction," in Jonathan L. Black-Branch and Dieter Fleck, eds., *Nuclear Non-Proliferation in International Law*, Vol. 1 (The Hague: Asser, 2014), p. 130. See also Louis Maresca and Eleanor Mitchell, "The Human Costs and Legal Consequences of Nuclear Weapons under International Humanitarian Law," *International Review of the Red Cross*, Vol. 97, No. 899 (September 2015), p. 635, doi.org/10.1017/S1816383116000291.

62. Charles J. Moxley Jr., John Burroughs, and Jonathan Granoff, "Nuclear Weapons and Compliance with International Humanitarian Law and the Nuclear Non-Proliferation Treaty," *Fordham International Law Journal*, Vol. 34, No. 4 (2011), pp. 649, 669.

63. See also Simon O'Connor, "Nuclear Weapons and the Unnecessary Suffering Rule," in Nystuen, Casey-Maslen, and Bersagel, eds., *Nuclear Weapons under International Law*, p. 147. O'Connor refers to the "horrific blast and burn injuries nuclear weapons would inflict on hundreds of thousands of people across a huge area," and thus seems to have in mind a large-scale nuclear war.

against its own civilian population.[64] We agree that a state must use the means of attack that minimizes civilian harm in seeking to achieve a given military objective. Nevertheless, the assumption that any military objective could be achieved through conventional weapons and that the limited use of nuclear weapons is inherently escalatory is exactly that—an assumption—rather than a considered assessment of specific strategic circumstances.

Applying the Law of Armed Conflict to U.S. Nuclear Doctrine

If U.S. nuclear doctrine is indeed to conform to the law of armed conflict (as we argue the law should be interpreted), under what conditions would U.S. nuclear retaliation to an adversary's nuclear or major nonnuclear strategic attack be legal? It would depend on the answers to three specific questions: (1) is the target aimed at a legitimate military target or illegal civilian target? (2) is the collateral civilian harm caused by the attack proportionate or disproportionate to the concrete and direct military advantage gained by that target's destruction? and (3) has the United States taken all feasible precautions to minimize civilian fatalities? Whether a use of nuclear weapons is legal may further depend on answers to two additional questions, which require strategic assessments: (4) is there a reasonable or unreasonable chance that the war could be ended through a limited response that restores a state of mutual deterrence? and (5) is there a reasonable or unreasonable probability that most of the adversary's nuclear forces could be destroyed in a counterforce attack? In short, assessing whether an attack complies with the law can be answered only in the context of the prevailing strategic features of a given conflict. The fourth and fifth questions highlight strategic calculations that are necessary for a correct legal assessment of the military advantage of an attack, its *jus in bello* proportionality, and whether substitute means of attack would achieve that advantage.

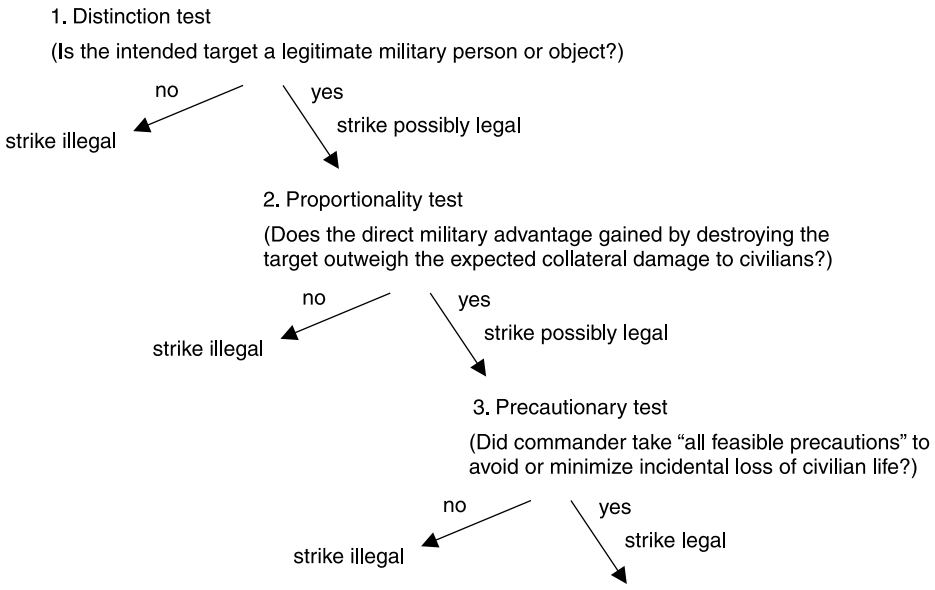
The United States would have to be in compliance to with all three of the LOAC principles for the U.S. use of nuclear weapons to be legal (see figure 1).

applying the principle of distinction

The first requirement in applying the law of armed conflict is compliance with distinction. When legislating, lawmakers commonly face a choice between "rules" and "standards."[65] Rules (e.g., "do not drive more than 60 miles per

64. A notable exception is Erik Koppe, *The Use of Nuclear Weapons and the Protection of the Environment during International Armed Conflict* (Portland, Ore.: Hart, 2008), pp. 375–376.
65. For a discussion of rules and standards in the context of the legal regime on the use of force, see Allen S. Weiner, "The Use of Force and Contemporary Security Threats: Old Medicine for New

Figure 1. Three Steps in the Nuclear Decision Tree



hour") are clear, easy to apply, and provide a high degree of predictability, but limited discretion, for those who implement them. In contrast, standards ("do not drive recklessly") are more general and allow a broader range of factors to be taken into account in application. The key law of armed conflict principles are, for the most part, standards that require military actors to interpret how to apply the relevant principle in particular military operations. Even the most rule-like LOAC principle, the prohibition against targeting civilians and civilian objects, still requires a judgment about who is a civilian and what specific industrial facilities are military targets.

In terms of individuals, Additional Protocol I effectively defines a "civilian" as any person who is not a combatant (i.e., who is not a member of the armed forces). Only combatants, or civilians who take direct part in hostilities, may be targeted.[66] In applying these rules, the *DOD Law of War Manual* adopts a functional and expansive approach: "Leaders who are not members of an armed force or armed group (including heads of State, civilian officials, and political leaders) may be made the object of attack if their responsibilities include the operational command or control of the armed forces. . . . In addition to leaders

Ills?" *Stanford Law Review*, Vol. 59 (2006), p. 426, https://heinonline.org/HOL/P?h=hein.journals/stflr59&i=428.

66. *Protocol I*, Arts. 50, 48, 51(3).

who have a role in the operational chain of command, leaders taking a direct part in hostilities may also be made the object of attack. Planning or authorizing a combat operation is an example of taking a direct part in hostilities."[67] Political officials not in the chain of command and not taking a direct role in hostilities, in contrast, are not legitimate targets in war.

APPLYING THE PRINCIPLE OF PROPORTIONALITY

A second requirement of LOAC prohibits disproportionate attacks. The challenge is how to balance two factors—military advantage and civilian harm—that would seem to be measured on different scales. This challenge is not distinctive to the potential use of nuclear weapons; it arises in judging the proportionality of any military attack.

The scholars and treaties that have simply assumed that any nuclear strike would be disproportionate because of large-scale civilian collateral damage have failed to balance these two components of proportionality. In a counterforce response to an adversary's nuclear attack on a U.S. city today, for example, this balance would have to include both the possibility of relatively limited collateral damage, due to U.S. low-yield weapons with reduced radioactive fallout, and high numbers of U.S. or allied civilian lives saved, which is the most direct military advantage of a U.S. nuclear strike that prevents an adversary from launching further nuclear attacks. As long as an adversary's nuclear forces were in relatively remote locations, a retaliatory strike that destroyed them would likely produce significantly less collateral damage against foreign civilians than the U.S. civilians killed by the use of those nuclear forces in additional attacks against American or allied nations' cities.

For purposes of a proportionality analysis, preventing the adversary from causing harm through continuing attacks constitutes a "concrete and direct" military advantage within the meaning of Article 51(5)(b) of Protocol I. Destroying a military object—be it a nuclear-armed intercontinental ballistic missile, a warplane on a tarmac, or a submarine port—provides the definitive military advantage of preventing any possibility of that weapon being used. If preventing attacks did not constitute a valid military advantage, a state engaged in armed conflict would be allowed to ward off only those attacks that were already under way. Critically, preventing harm to one's civilians, as well as to one's military forces, may also be considered in a proportionality analysis.[68] An alternative, narrow conception that allowed the United States to con-

67. *DOD Law of War Manual*, pp. 225, 231. See also William H. Boothby, *The Law of Targeting* (Oxford: Oxford University Press, 2012), pp. 529–530.
68. See, for example, Adil Ahmad Haque, *Law and Morality at War* (Oxford: Oxford University Press, 2017), p. 184.

sider only the benefit of denying the enemy's ability to cause harm against U.S. military assets as a definite military advantage in assessing proportionality would be perversely inconsistent with the fundamental goal of the law of armed conflict to minimize civilian suffering.

Following this logic, if the United States suffers a limited first nuclear strike, it should be permitted to consider the likely harm that will be prevented to its civilians if it denies the enemy the ability to conduct further attacks by, for example, using its own nuclear weapons to target an adversary's nuclear forces. Even though in many scenarios such U.S. nuclear strikes might cause extensive incidental civilian casualties, the countervailing military advantage of denying the enemy the ability to launch supplemental nuclear attacks could be larger and, if so, the U.S attack would not be disproportionate.

In addition, a proportionality analysis requires an assessment of the likelihood that the attack will achieve the anticipated advantage. If there is not a reasonable basis for believing that a retaliatory nuclear strike would prove effective in safeguarding the responding state's civilian population from further attacks, such a strike would not offer substantial military advantage.[69] One circumstance in which a retaliatory strike would not ensure an end to further attacks is where the adversary has substantial nuclear weapons and delivery vehicles that would survive the retaliatory strike. It is accordingly doubtful that the civilian injury inflicted by a large-scale retaliatory nuclear strike against a state with a large survivable nuclear force could be justified as proportionate. The strategic capabilities of the adversary accordingly will thus shape how the principle of proportionality should be applied in different nuclear scenarios.

Similar strategic considerations about permissible military advantages and the likelihood of achieving them operate in assessing the lawfulness not only of a nuclear response aimed at destroying the enemy's operational capacity to launch further nuclear attacks, but also of one that seeks to prevent such attacks by deterring them. The military advantage sought in each case is the same—reducing civilian casualties by preventing the adversary from launching additional nuclear attacks. Because a limited strike aimed at deterring further nuclear attacks by the adversary would presumably inflict significantly

69. Judgments about proportionality are predictive and based on reasonableness. The language of Article 51(5)(b) of Protocol I, which refers to the balance of "expected" civilian harm and "anticipated" military advantage, highlights the probabilistic nature of such calculations. Janina Dill also argues that "compliance with the principle of proportionality itself requires not only an estimation of the magnitude or significance of the attack's expected effects, but also of their probability." Janina Dill, "Do Attackers Have a Legal Duty of Care? Limits to the 'Individualization of War,'" *International Theory*, Vol. 11, No. 1 (March 2019), pp. 11–12, doi.org/10.1017/S1752971918000222. The *Department of Defense Law of War Manual* captures this as the "reasonable military commander" standard. *DOD Law of War Manual*, p. 244.

less incidental civilian harm than a large counterforce attack aimed at destroying the enemy's operational capacity to launch additional nuclear attacks, a U.S. response aimed at restoring deterrence would presumptively be more compatible with the principle of proportionality than the full-scope counterforce strike, if both were deemed equally likely to protect American civilians.

Assessing whether an attack aimed at deterrence is proportionate requires difficult judgments about how the adversary is likely to respond. A limited U.S. nuclear response intended to restore deterrence would seek to dissuade an adversary from launching further nuclear attacks by signaling both restraint and the willingness to launch further responsive strikes if necessary. Even though such a response is intended to limit the risk of further escalation, there is no guarantee that the adversary will not respond with another round of nuclear attacks. Because realizing the military advantage of a deterrence attack depends on intervening factors—namely, the strategic calculations and choices made by the adversary—and cannot be predicted with certainty, some experts suggest that such attacks do not offer the "definitive" military advantage required by law to treat a target as a military objective, much less one that offers a military advantage sufficiently "concrete and direct" to outweigh incidental civilian harm for purposes of the principle of proportionality.[70]

We do not share this categorical view. Responsive strikes aimed at deterring further nuclear attacks are not per se impermissible merely because the benefit of the attacks depends in part on an adversary's decisionmaking and thus cannot be guaranteed. International humanitarian law experts assembled by the ICRC have expressed support for the notion that the impact of an attack on the adversary's decisionmaking can "constitute a relevant military advantage," provided that such attacks were not designed to terrorize the civilian population. By way of example, the experts judged that "the fact that a commander reasonably believes that an attack will cause an enemy unit to surrender constitutes a relevant military advantage of this attack." They suggest that the deterrence value of a particular attack could be considered in assessing military advantage "when the following two criteria are fulfilled: there is reasonable certainty that an attack will cause the enemy to refrain from a certain operational activity; and preventing this activity can be achieved by attacks against military objectives contributing to it."[71]

70. The expert Commentary to Protocol I, which is frequently cited as carrying authoritative interpretive weight, states that the requirement that destruction of an object must offer a "definite" military advantage for that object to qualify as a military objective means that "it is not legitimate to launch an attack which only offers potential or indeterminate advantages." Yves Sandoz, Christophe Swinarski, and Bruno Zimmerman, eds., *Commentary on the Additional Protocols of 8 June 1977 to the Geneva Conventions of 12 August 1949*, ICRC (Geneva: Martinus Nijhoff, 1987), p. 636, https://www.loc.gov/rr/frd/Military_Law/pdf/Commentary_GC_Protocols.pdf.
71. Laurent Gisel, ed., *International Expert Meeting Report: The Principle of Proportionality in the*

Assessing the military advantage of an attack thus is not a purely tactical endeavor that must be, in Janina Dill's words, "directly connected to the competition between two militaries" or "narrowly defined, with the goal of overcoming the enemy militarily."[72] Rather, the concept of military advantage permits the attacking force to consider the effects of an attack against a military target on the strategic decisionmaking of the adversary's leadership and the likelihood of changing its judgment about whether or not to launch further attacks. A nuclear strike that seeks to deter the adversary from launching further attacks accordingly can, in some cases, offer a sufficiently likely "concrete and direct" military advantage to outweigh the incidental civilian harm caused by the strike.

Relying on the anticipated advantage of deterring the adversary from launching additional nuclear attacks would still not permit attacks that intentionally inflicting suffering on civilians.[73] Just as the principle of distinction clearly prohibits a party from attacking civilians or civilian infrastructure on the theory that such attacks might induce the enemy to surrender more swiftly, states may not seek to change the adversary's strategic calculus through attacks directed at civilian morale.[74]

The law of armed conflict requires interpretation informed by strategic judgment. The possibility that a U.S. nuclear strike—a large attack to destroy the adversary's capacity to launch further nuclear attacks, or a limited attack to deter it from doing so—may in some circumstances meet the test of proportionality may not help a decisionmaker determine which mode of attack should be chosen, or whether nuclear weapons should be used at all. Judgments about the potential use of nuclear weapons would be difficult, because they involve both technical calculations about military effectiveness of the kind military commanders routinely make, as well as more complex psycho-

Rules Governing the Conduct of Hostilities under International Humanitarian Law (Quebec: ICRC and Université Laval, June 2016), pp. 19–20, https://www.icrc.org/en/document/international-expert-meeting-report-principle-proportionality.

72. Janina Dill, "The American Way of Bombing and International Law: Two Logics of Warfare in Tension," in Evangelista and Shue, *The American Way of Bombing*, pp. 139, 143. Elsewhere, Dill argues that an attack may be no more than "one causal step" from the goal of contributing to "generic military victory," which she defines as "[o]vercoming the enemy's military through attrition of military capabilities of fielded forces." Janina Dill, *Legitimate Targets?* pp. 108, 350.

73. For consistent assessments, see Michael N. Schmitt, "Targeting and International Humanitarian Law in Afghanistan," in Michael N. Schmitt, ed., *The War in Afghanistan: A Legal Analysis*, Vol. 85 (Newport, R.I.: U.S. Naval War College, 2009), p. 323; Dill, *Legitimate Targets?* p. 105; Richard, "Nuclear Weapons Targeting," p. 972; and Yoram Dinstein, *The Conduct of Hostilities under the Law of International Armed Conflict*, 3rd ed. (Cambridge: Cambridge University Press, 2016), p. 107.

74. This conclusion is buttressed by Article 51(2) of Protocol I, which provides: "Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited." *Protocol I*, Art. 51(2), p. 26. The *DOD Law of War Manual* similarly states: "Diminishing the moral of the civilian population and their support for the war efforts does not provide a definite military advantage." *DOD Law of War Manual*, p. 216.

logical predictions and intelligence estimates about the choices an adversary is likely to make in response to different kinds of attacks. Moreover, even if a nuclear attack is deemed to comply with the law of armed conflict, the outcome of such an attack would not be certain and the harm caused would likely be extensive. Although a particular nuclear response might be lawful, that does not mean that it is sensible, prudent, or should be executed. A nuclear strike could be legal but unwise; it could be lawful but awful.

The extent to which applying the principle of proportionality depends on strategic considerations is illustrated by two possible U.S. nuclear retaliation scenarios. In the first scenario, Russian forces invade Estonia, a member of the North Atlantic Treaty Organization (NATO). In the course of that campaign, Russia uses a nuclear weapon against a NATO air base. In the second scenario, North Korea launches a single nuclear-armed missile that destroys San Francisco, killing 300,000 American civilians. In the first scenario, even very extensive nuclear counterforce attacks in response to the limited Russian nuclear strike would be unlikely to completely destroy Russia's ability to launch further attacks. The size and survivability of Russia's nuclear forces mean that the staggering incidental civilian harm that would result from a large-scale counterforce nuclear attack could not be justified under the principle of proportionality, because that attack would not prevent further Russian nuclear strikes against the United States or allied civilian targets. In contrast, against North Korea, the United States could launch a military campaign employing nuclear weapons that could reasonably be expected to destroy all or most of North Korea's ability to launch additional nuclear attacks, and the expected collateral damage would not necessarily be disproportionate to the expected U.S. lives saved.

Applying the Principle of Precaution

The third foundational law of armed conflict requirement, as stated in Protocol I, is to take "all feasible precautions" to avoid, or at least minimize, enemy civilian harm. Even in a scenario in which the United States is able to destroy an adversary's capacity to launch nuclear weapons, and such a nuclear attack would be proportionate in *jus in bello* terms, U.S. strategists would still need to assess whether the desired military advantage—namely, preventing further nuclear strikes—could reasonably be achieved with a more limited response. If so, the principle of precaution would require the United States to select that more limited response.

Beyond that, the precautionary principle creates an inherent trade-off that requires that the United States government to balance its judgment about the degree of confidence that a particular attack will destroy a legitimate target against the goal of minimizing incidental harm to civilians. Without this re-

quirement, a conservative military planner would always (subject to the limits of proportionality) choose a larger, more destructive weapon to maximize the "damage expectancy" against the target. During the Cold War, for example, civilian authorities discovered that reducing the "damage expectancy" guidance for some Soviet military targets to the Strategic Air Command led to smaller numbers of weapons assigned to those targets and reduced collateral damage.[75]

Today, the requirement to take feasible precautions means a decision would need to be made on whether to respond with nuclear or conventional weapons. In the Russia scenario, for instance, if the United States is unable to destroy Russia's ability to launch further nuclear attacks, it should choose a more limited response aimed at restoring deterrence. In electing between nuclear and conventional attacks, strategists must assess the risk of escalation. On the one hand, U.S. strategists might be inclined to conclude that a conventional attack would not signal the same willingness to escalate that a nuclear response would, and consequently may not have the same likelihood of dissuading Russia from launching additional nuclear attacks. On the other hand, a nuclear response, even if deployed in a way meant to limit the risk of further escalation, may generate greater pressure for Russia to respond with another round of nuclear attacks than a conventional response would, and thus might fail to realize the very military advantage (i.e., preventing further attacks) that it was meant to achieve. The proper application of the law will depend on intelligence estimates and strategic judgment.[76] The law requires a decision-maker to make a good faith and reasonable judgment about whether a powerful conventional attack could be more likely than a limited nuclear attack to restore deterrence in accordance with the principles of proportionality and precaution.

In the North Korea scenario, even if U.S. strategists concluded that a limited strike would not necessarily restore deterrence, and that preventing further attacks required the destruction of North Korea's capacity to launch further nuclear attacks, the law of armed conflict should still influence whether to use nuclear or conventional weapons, and if nuclear weapons are considered "necessary" to achieve the desired outcome, then what yield would be required. A U.S. response using conventional means is almost certainly likely to result in lower incidental civilian casualties than the use of even low-yield nuclear

75. See Fred Kaplan, *The Bomb: Presidents, Generals, and the Secret History of Nuclear War* (New York: Simon and Schuster, 2020), pp. 183–192.
76. As the *DOD Law of War Manual* notes in the context of assessing military advantage, decisions about application of the law of armed conflict "may require knowing the broader strategy being employed by the attacking party or knowing intelligence information about the strategic and operational context in which the attack takes place." *DOD Law of War Manual*, p. 243.

weapons. Compliance with the principles of proportionality and precaution should thus lead civilian and military planners to consider the use of conventional weapons, if they had a reasonable probability of destroying the adversary's nuclear targets without producing the greater incidental civilian casualties likely to result from the use of nuclear weapons.[77]

The principle of precaution is thus an important restraint on the U.S. use of nuclear weapons, even when the proportionality might otherwise permit their use. But an important caveat must be emphasized. A military commander must make legal decisions about feasible precautions based on the weapons then available in the arsenal.[78] If insufficient numbers of accurate conventional weapons or low-yield nuclear weapons are available, however, the precautionary principle would be less constraining.

Impermissibility of intentionally causing "incidental" civilian harm

Although we have identified circumstances in which the responsive use of nuclear weapons might comport with the law of armed conflict, even a strike that might plausibly appear to be permissible will be unlawful if the attack is in fact motivated by an impermissible objective. In other words, the intentions of the state considering a retaliatory nuclear strike matter. In the context of a responsive nuclear strike, a state could not legally strike a military target in an attack that caused extensive civilian casualties if the actual intention behind the attack is to inflict those incidental civilian casualties. Although a decision-maker might try to justify such an attack by claiming that destroying the military objective could prevent additional nuclear attacks, this would be an unacceptable pretextual justification. It is impermissible to intend to cause incidental civilian casualties in this manner, whether the motivation behind the attack is vengeance or whether it is to terrorize the enemy population to induce its government to change its behavior. The principle of precaution would also require a state to select a method of destroying a legitimate military target that minimizes—rather than maximizes—incidental civilian harm. Accordingly, if a government intends to cause incidental civilian harm in connection with an attack against an otherwise permissible military target, the attack should in fact be seen as an illegal attack against the civilian population.

77. Jeffrey G. Lewis and Scott D. Sagan, "The Nuclear Necessity Principle: Making U.S. Targeting Policy Conform with Ethics and the Laws of War," *Daedalus*, Vol. 145, No. 4 (Fall 2016), pp. 62–74, doi.org/10.1162/DAED_a_00412.

78. "International humanitarian law only imposes duties to use capabilities 'once in the inventory.'" Thilo Marauhn and Stefan Kirchner, "Target Area Bombing," in Natalino Ronzitti and Gabriella Venturini, eds., *The Law of Air Warfare: Contemporary Issues* (Utrecht, Netherlands: Eleven International, 2006), p. 102.

Rejecting Belligerent Reprisal against Noncombatants

Does the categorical assertion by U.S. officials that U.S. nuclear policy complies with the law of armed conflict mean not only that any use of nuclear weapons must comport with the principles of distinction, proportionality, and precaution, but also that the United States would not target civilians, even as a "belligerent reprisal"—an act that would otherwise violate international law—in response to an unlawful attack on U.S. civilians? Belligerent reprisals may not be used to punish the adversary for violating the law of armed conflict, but only to induce an adversary to bring its conduct into conformity with the law. Such reprisals are intended to restore a state of legality.

Theodore Richard suggests that the doctrine of belligerent reprisal, despite its relative obscurity, "remain[s] an important part of nuclear weapon policy and deterrence theory."[79] Under the classical understanding of belligerent reprisal, a U.S. nuclear attack on a civilian target would not violate the law of armed conflict, if (1) the initial enemy attack itself violated the law of armed conflict (e.g., by targeting civilians); (2) the response was proportionate to the enemy's illegal act; and (3) the U.S. response had the intent of deterring future enemy attacks.[80] Richard intimates that the belligerent reprisal doctrine could provide a legal justification for directly targeting civilian objects such as cities, in violation of the principle of distinction: "In the modern era, listing cities per se as potential targets of attack would no longer be considered legal unless they are targeted pursuant to application of belligerent reprisal."[81]

We contend that this traditional position no longer accurately characterizes the law, and that the law of armed conflict no longer permits making civilians or civilian objects the object of attack under the doctrine of belligerent reprisal. In the years after the conclusion of Protocol I, the United States rejected the notion that the prohibition in that treaty on targeting civilians by way of reprisal had achieved customary international law status. Even if that view may have been correct forty years ago, customary international law has continued to develop in the intervening decades. Although we take no categorical position on questions associated with all potential forms of belligerent reprisal, state practice and the associated expressions of legal obligation support our position

79. Richard, "Nuclear Weapons Targeting," p. 867.
80. In addition, belligerent reprisals must cease once the adversary resumes compliance with the law of war and the reprisal must be a method of last resort. See Shane Darcy, "The Evolution of the Law of Belligerent Reprisals," *Military Law Review*, Vol. 175 (March 2003), p. 184–251; and Frits Kalshoven, *Belligerent Reprisals* (Leiden, Netherlands: A.W. Sijthoff, 1971).
81. Richard, "Nuclear Weapons Targeting," p. 974.

that it is no longer legally permissible to make civilians the object of attack with nuclear (or other) weapons by way of reprisal.

Although the doctrine of belligerent reprisal has a long history, the application of the doctrine to specific groups of vulnerable persons has been subject to increasing restriction. The 1949 Geneva Conventions expressly prohibit reprisals against persons protected by those Conventions—namely, sick and wounded soldiers in the field; sick, wounded, and shipwrecked sailors; prisoners of war; and civilians who find themselves "in the hands" of enemy forces. Additional Protocol I extended the prohibition; Article 51(6) provides that "[a]ttacks against the civilian population or civilians by way of reprisals are prohibited."[82] As the International Criminal Tribunal for the Former Yugoslavia (ICTY) explained in its judgment in the *Kupreskic* case, because warfare has increasingly brought suffering to noncombatants, especially civilians, the law of armed conflict has increasingly shifted from the protection of state interests to "benefit[ting] individuals *qua* human beings."[83] Although belligerent reprisals are theoretically intended to induce compliance with the law of armed conflict, the ICTY noted that "reprisals against civilians are inherently a barbarous means of seeking compliance with international law. The most blatant reason for the universal revulsion that usually accompanies reprisals is that they may not only be arbitrary but are also not directed specifically at the individual authors of the initial violation. Reprisals typically are taken in situations where the individuals personally responsible for the breach are either unknown or out of reach."[84]

As a nonparty to Protocol I, of course, the United States is not bound by the prohibition on reprisals against civilians in Article 51(6), at least to the extent it reflects a new rule adopted in the Protocol, rather than a codification of preexisting customary international law. The United States indeed rejected the view that the prohibition on attacks against civilians by way of reprisal is prohibited under customary international law in 1987.[85] Then-State Department Legal Adviser Abraham Sofaer elaborated on the U.S. government's rationale:

82. *Protocol I*, Art. 51(6).
83. International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991, "Prosecutor v. Kupreskic," IT-95-16-T, Trial Chamber Judgment, January 14, 2000 (henceforth ICTY, "Kupreskic Judgment"), p. 203, https://www.icty.org/x/cases/kupreskic/tjug/en/kup-tj000114e.pdf.
84. Ibid., p. 208.
85. Matheson, U.S. Position on the Relation of Customary International Law to the 1977 Protocols, p. 426. As noted, the United States reiterated this position in 1995 in its written submission in ICJ *Nuclear Weapons* case. In asserting this view, the United States was not making a claim for special application of the principle of belligerent reprisal in the nuclear domain. Rather, it was staking out a position about the status of belligerent reprisals generally under the customary international law of armed conflict.

If [the prohibitions on reprisal attacks against the civilian population in] article 51 were to come into force for the United States, an enemy could deliberately carry out attacks against friendly civilian populations, and the United States would be legally forbidden to reply in kind. As a practical matter, the United States might, for political or humanitarian reasons, decide in a particular case not to carry out retaliatory or reprisal attacks involving unfriendly civilian populations. To formally renounce even the option of such attacks, however, removes a significant deterrent that presently protects civilians and other war victims on all sides of a conflict.[86]

Charles Dunlap, then-STRATCOM head JAG, justified this position relying not just on the logic of deterrence, but also on a dubious moral judgment, claiming that "people have a duty to restrain their government from committing nuclear aggression and if they fail in that duty, their absolute immunity as noncombatants is undermined."[87]

Notwithstanding the view that the United States government has expressed in the past, customary international law today would no longer permit attacks directed against the civilian population by way of reprisal, even for states that are not parties to Protocol I. To be sure, merely asserting that customary international law prohibits belligerent reprisals against civilians does not make it so. Equally, though, merely denying that customary international law prohibits belligerent reprisals against civilians does not refute the claim that it does. Bearing in mind the evolutionary dynamics by which customary international law is made (i.e., taking account of what states do, as well as their contentions about what they and other states may or may not do), we contend that the prohibition on attacks against civilians by way of reprisal has acquired the status of a customary international law rule.

In its comprehensive study on the customary rules of international humanitarian law, the ICRC in 2005 observed that the "vast majority of States have . . . committed themselves not to make civilians the object of reprisals."[88] At the time, the ICRC nevertheless suggested that "very limited" contrary practice made it "difficult to conclude that there has yet crystallized a customary rule specifically prohibiting reprisals against civilians."[89] The judges of the ICTY in the *Kupreskic* case noted above, in contrast, were more categorical, holding that "the demands of humanity and the dictates of public conscience

86. Abraham D. Sofaer, "Remarks on the Position of the United States on Current Law of War Agreements, January 22, 1987," reprinted in Dupuis, Heywood, and Sarko, "The Sixth Annual American Red Cross–Washington College of Law Conference on International Humanitarian Law," p. 469.
87. Dunlap, "Taming Shiva," p. 163, favorably quoting James W. Child, *Nuclear War: The Moral Dimension* (New Brunswick and London: Social Philosophy and Policy Center and Transaction, 1986), pp. 171–172.
88. Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, Vol. 1, p. 521.
89. Ibid., p. 523.

. . . have by now brought about the formation of a customary rule . . . binding upon those few States that at some stage did not intend to exclude the abstract legal possibility of resorting to reprisals [against civilians]."[90]

In recent decades, the number of states reserving the right to target civilians by way of reprisal has declined. Shane Darcy argues that when Additional Protocol I was negotiated, Egypt, France, Germany, Italy, and the United Kingdom made statements that seemed to affirm, with varying degrees of explicitness, the right to direct attacks against civilians by way of reprisal, notwithstanding Article 51(6)'s probation on reprisals against civilians.[91] A careful reading of the record, however, reveals that the statements of most of these states—Egypt, France, Germany, and Italy—merely affirmed the right to react to serious and repeated violations of the law of armed conflict with means admissible under international law. Given the strong support for the notion that international law prohibits reprisals against civilians, such statements hardly represent a clear assertion that these states believe that international law permits them to direct attacks against civilians. Subsequent statements by some of these states further undercut the view that they believe the law permits them to target civilians by way of reprisal. Egypt, in its submissions before the ICJ in the *Nuclear Weapons* case, stated that the prohibition on reprisals against civilians reflects customary international law, and recent military manuals of France and Germany prohibit reprisals against civilians, citing Article 51(6) of Additional Protocol I.[92] Neither the United Kingdom nor France in their 2015 statements on the use of nuclear weapons before the Nonproliferation Treaty Review Conference asserted that international law permitted them to launch reprisal attacks that target civilians.[93] As such, the ratification record of Protocol I, particularly in light of subsequent statements, does not refute the widespread nature of state condemnation of directing attacks against civilians by way of belligerent reprisal.

Indeed, state practice, when examined together with states' asserted beliefs, provides scant support for the notion that belligerent reprisals against civilians remain permissible under customary international law. Some commentators

90. ICTY, "Kupreskic Judgment," p. 211.
91. Darcy, "The Evolution of the Law of Belligerent Reprisals," pp. 225–227.
92. Written Comments of the Government of Egypt, ICJ *Nuclear Weapons* Advisory Opinion, September 1995, paras. 43–44, https://www.icj-cij.org/public/files/case-related/95/8722.pdf; and Henckaerts and Doswald-Beck, *Customary International Humanitarian Law*, Vol. 1, p. 521.
93. See Statement by Guy Pollard, Deputy Permanent Representative of the United Kingdom to the Conference on Disarmament, May 1, 2015, *2015 Review Conference of the Treaty on Non-Proliferation of Nuclear Weapons* (New York: United Nations, 2015), https://www.un.org/en/conf/npt/2015/statements/pdf/main_uk.pdf; and Statement by Jean-Hugues Simon-Michel, Permanent Representative of France to the Conference on Disarmament, April 28, 2015, *2015 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons* (New York: United Nations, 2015), https://www.un.org/en/conf/npt/2015/statements/pdf/FR_en.pdf.

who take a contrary view point out that states do in fact engage in such reprisals. Michael Newton, for example, refers to "the many instances of state practice . . . that would indicate recourse to reprisals in fact if not in phraseology."[94] Such practice alone, however, is insufficient unless states that engage in reprisals against civilians aver that they are legally entitled to do so. The argument that reprisals against civilians are permitted under customary international law because states sometimes employ them is no more persuasive than the argument that customary international law permits using chemical weapons in war because states have on occasion used them, or that there is no customary international law prohibition against torturing prisoners because states sometimes torture prisoners.

In evaluating the "ceaseless dialectic" by which international law is formed, what is striking is not only the near absence of cases in which states have directed attacks against civilians and asserted that such attacks were legally justified, but also the international community's emphatic condemnation of such attacks when they do occur. The only recent episode in which states affirmatively claimed the right to target enemy civilians was the "War of the Cities" during the 1980–88 Iran-Iraq conflict, in which the parties engaged in "reprisal bombardments" against civilian populations, purportedly to counter violations of the law of war by their opponent. In response to these events, in October 1983, the UN Security Council, far from acknowledging any right to directly target civilians by way of reprisal, explicitly condemned "all violations of international humanitarian law" committed by the parties to the conflict and "call[ed] for the immediate cessation of all military operations against civilian targets, including city and residential areas."[95] In January 1984, the U.S. State Department amplified that the United States "deplores the tragic and needless loss of both Iranian and Iraqi lives, especially through attacks on civilian populations. We urge both states to respect their obligations under international conventions designed to mitigate the human suffering of warfare."[96] A subsequent Security Council Presidential Statement, adopted in 1987 against the backdrop of letters submitted by Iran and Iraq to the United Nations in which they "justified their attacks on the other's cities as limited retaliatory measures to stop such attacks by the adversary,"[97] similarly rejected the notion that attacks against civilians were permissible, even in the context of such

94. Michael A. Newton, "Reconsidering Reprisals," *Duke Journal of Comparative and International Law*, Vol. 20 (2010), p. 378.
95. UN Security Council, *Resolution 540*, S/RES/540, October 31, 1983, https://undocs.org/S/RES/540(1983).
96. *Department of State Bulletin*, Vol. 84, No. 2085, April 1984, p. 64.
97. The Iranian and Iraqi correspondence is recounted in Jean-Marie Henckaerts and Louise Doswald-Beck, *Customary International Humanitarian Law*, Vol. 2: *Practice*, Pt. 1 (Cambridge: Cambridge University Press, 2005), pp. 3415–3417.

claims. That Presidential Statement strongly deplored "the escalation of hostilities between [Iran and Iraq], particularly the attacks against civilian targets and cities."[98] UN Security Council Resolution 598, which the United States voted for, also specifically deplored "the bombing of purely civilian population centres."[99]

Similarly, in 1995, after Croatia launched a military operation to recover territory controlled by a breakaway Serb political entity, allegedly in violation of cease-fire agreements in effect at the time, Serb forces responded by launching rocket attacks against Zagreb. One of the leaders responsible for the rocket attacks defended them by stating "[h]ad I not ordered the rocket attacks [. . .] they would have continued to bomb our cities."[100] The U.S. ambassador to Croatia at the time, rather than affirming the right of parties to armed conflict to target civilians by way of reprisal, instead stated: "Sending a rocket full of cluster bombs into a European capital is a repugnant act clearly intended to kill many people. . . . It's an act that can only be intended to provoke a full-scale war."[101] We are unaware of a single instance in which a state has invoked the doctrine of belligerent reprisal as a basis for directing attacks against civilians that has not generated harsh condemnation by the international community.

The contemporary record of widespread state practice informed by a sense of legal obligation (*opinio juris*) thus demonstrates that the prohibition on targeting civilians by way of belligerent reprisal has today developed into a binding rule of customary international law. It is true that a state that persistently objects to an emerging customary international law norm while it is being formed is not legally bound by that rule. U.S. behavior over the past decades, however, does not support the claim that it has persistently objected to the emergence of the customary intentional law prohibition on reprisal attacks against civilians.

Although the United States asserted in 1995, in its written submission to the ICJ, that the prohibition on reprisals against civilians in Article 51(6) of Additional Protocol I was a "new rule" that had "not been incorporated into customary international law,"[102] the United States government cannot point to a

98. UN Security Council, *Statement by the President*, S/PV.2798, March 16, 1988, https://undocs.org/en/S/PV.2798.
99. UN Security Council, *Resolution 598*, S/RES/598, July 20, 1987, https://undocs.org/S/RES/598(1987).
100. International Tribunal for the Prosecution of Persons Responsible for Serious Violations of International Humanitarian Law Committed in the Territory of the Former Yugoslavia since 1991, "Prosecutor v. Martic," IT-95-11-T, Trial Chamber Judgment, June 12, 2007, p. 119, https://www.icty.org/x/cases/martic/tjug/en/070612.pdf.
101. U.S. Ambassador Peter Galbraith, quoted in Roger Cohen, "Rebel Serbs Shell Croatian Capital," *New York Times*, May 3, 1995.
102. U.S. Written Statement in the ICJ *Nuclear Weapons* case, p. 25.

record of persistent objection during the subsequent twenty-five years. U.S. nuclear targeting guidance today categorically states that the United States "will not intentionally target civilian populations or civilian objects,"[103] and does not carve out any exception grounded in the doctrine of belligerent reprisal. The U.S. statement at the 2015 NPT Review Conference similarly declared that U.S. nuclear plans "will apply the principles of distinction and proportionality and will not intentionally target civilian populations or civilian objects," with no caveat reserving a right to target civilians by way of belligerent reprisal.[104] The *DOD Law of War Manual* updated in 2016 simply recounts the 1987 U.S. pronouncement that the prohibitions on belligerent reprisals against civilians in Additional Protocol I are "counter-productive and that they remove a significant deterrent that protects civilians and war victims on all sides of a conflict."[105] However, the Manual does not state expressly—as the United States demonstrated it knows how to do in its statement following the adoption of the Treaty on the Prohibition of Nuclear Weapons—that those prohibitions do not reflect or contribute to the development of customary international law. Instead of persistently affirming the right to target civilians by way of reprisal, United States has in fact participated in the condemnation of those states or armed groups that have on rare occasion purported to justify attacks against civilians on a theory of reprisal.

There is no precise formula on how persistently a would-be persistent objector must object to an emerging rule. But in a situation such as this, where the purported prohibition on attacking civilians by way of belligerent reprisal is clearly supported by an overwhelming majority of states, David Colson has persuasively argued that "the persistent objector must continually make its position known to ensure that the law does not find tacit consent through a relatively short period of silence. . . . [T]he more isolated a State becomes in its legal perspective, the more active it must be in restating and making clear its position."[106] The United States record of objection to the prohibition on targeting civilians by way of belligerent reprisal falls far short of that standard.

Even if the United States government sought in the future to inaccurately claim that it has persistently objected to the rule prohibiting reprisals directed against civilians, the categorical statement in U.S. nuclear employment guidance that prohibits making the civilian population the object of attack better

103. *U.S. DOD Nuclear Employment Strategy*, p. 5.
104. United States Report on *Actions 5, 20, and 21 of the Action Plan of the 2010 Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons*, NPT/CONF.2015/38, May 1, 2015 (New York: United Nations, 2015), p. 2, https://undocs.org/NPT/CONF.2015/38.
105. *DOD Law of War Manual*, pp. 1115–1116.
106. David A. Colson, "How Persistent Must the Persistent Objector Be?" *Washington Law Review*, Vol. 61, No. 3 (1986), p. 967.

aligns with the law. The failure to publicly disavow belligerent reprisal appears to be based more on the desire to use ambiguity to reinforce deterrence rather than the conviction that the belligerent reprisal doctrine permits states to lawfully target civilians. Commentators, including senior U.S. military lawyers, appear to recognize this. Theodore Richard and Sean Watts argue that "a careful accounting of both the operational benefits and public legitimacy costs of preserving reprisal doctrine is surely warranted." As they explain:

> A nation self-identifying as a champion of the rule of law and of international legal rights and obligations would have a difficult time making a believable case for deterrence by threatening patently illegal action. . . . [But in] some cases, ambiguity associated with the way States apply the law of war to nuclear targeting may be warranted. . . . Reprisal offers an enticing justification for aggressive nuclear planning. The extent of targets available in a reprisal scenario is limited only by the imagined extent of enemy depravity. It is unclear the extent to which publicly-stated disavowals of reprisal would undermine deterrence credibility.[107]

The debate about belligerent reprisal in the nuclear domain is therefore not really about the law; it is about the strategic consequences of removing ambiguities about whether the United States will follow the law. We contend that the inconsistency between the categorical nuclear policy guidance and lingering reliance by those charged with implementing that guidance on the right to target civilians by way of reprisal should be eliminated, and that the U.S. government should officially forswear any entitlement to target civilians, even in reprisal. The strategic consequences of such a commitment are discussed below.

Conclusion

We have demonstrated that the proper application of the law of armed conflict to U.S. nuclear doctrine requires both a close reading of the relevant legal principles and a close reading of the strategic scenarios in which attacks are contemplated. Legal logic and strategic calculation are intricately intertwined. This perspective has important policy implications.

Some elements of the 2018 Nuclear Posture Review are consistent with the analysis we have advanced; others are not. For instance, the 2018 NPR supported a "tailored deterrence" doctrine, which is significant in that it signals that nuclear weapons might be used in different ways to achieve different stra-

107. Ted Richard and Sean Watts, "The International Legal Environment for Nuclear Deterrence," *Just Security*, March 27, 2017, https://www.justsecurity.org/39281/international-legal-environment-nuclear-deterrence/.

tegic goals in different scenarios, or to respond to different adversaries. For Russia, given its purported interest in limited nuclear first strikes and its large and survivable arsenal, the NPR strategy appears to seek to deter, and if deterrence fails, to "restore deterrence" through escalation control. "Effective U.S. deterrence of Russian nuclear and non-nuclear strategic attack now requires ensuring that the Russian leadership does not miscalculate regarding the consequences of limited nuclear first use, either regionally or against the United States itself."[108] The NPR therefore insisted that "the President must have a range of limited and graduated options" including "a variety of delivery systems and explosive yields."[109] One element of the NPR's discussion of Russia, however, is difficult to reconcile with the law of armed conflict: the statement that Russian "nuclear first-use, however, limited" will trigger "incalculable and intolerable costs for Moscow" suggests a response that contemplates or at least threatens harm, possibly including civilian harm, that would not comply with the principles of distinction and proportionality.[110]

In contrast, the 2018 NPR suggested regime change and a war-ending counterforce strike would be the policy if North Korea used a single nuclear weapon: "For North Korea, the survival of the Kim regime is paramount. Our deterrence strategy for North Korea makes clear that any North Korean nuclear attack against the United States or its allies and partners is unacceptable and will result in the end of that regime. There is no scenario in which the Kim regime could employ nuclear weapons and survive."[111] Thus, the NPR suggests that U.S. strategy if North Korea uses nuclear weapons would not be to restore deterrence by dissuading the Kim regime from launching additional nuclear attacks, but to eliminate the Kim regime and to destroy North Korea's nuclear war-making capability.

We have argued that military attacks aimed at destroying North Korean's nuclear war-making capacity could be defended under the principle of *jus in bello* proportionality, but also argued that the principle of precaution would require that such attacks be conducted with the lowest yield nuclear weapons necessary to destroy the target or conventional weapons if possible. The importance of applying the principle of precaution is heightened in view of the expansive "requirements" military planners might bring to bear in their "damage expectancy" assessments. Ankit Panda, for example, has reported that U.S. war planners in 2017 targeted all known North Korean nuclear-capable long-range missile sites with twenty D5 submarine-launched nuclear warheads to

108. U.S. DOD, *Nuclear Posture Review*, p. 30.
109. Ibid., p. 31.
110. Ibid., p. 30.
111. Ibid., p. 33.

have "a very high probability of success," even though some planners believed that all but one site, a super-hardened command and control underground facility, could be destroyed with moderate confidence by conventional attacks.[112] This disturbing report highlights the importance of civilian authorities providing clear guidance about the desired levels of confidence demanded for destruction of legitimate targets to comply with the precautionary principle to minimize collateral damage to civilians.

As we have shown, the principle of distinction would not prohibit targeting Kim Jong-un and others in the chain of command of the North Korean military if North Korea initiated a war and used nuclear weapons against the United States and South Korea. However, the NPR's focus on "the end of [the Kim] regime," as opposed to North Korea's nuclear war-making capacity, is highly questionable from a legal targeting standpoint. Does ending the Kim regime mean a limited strike aimed at killing Kim Jong-un—who as the head of state exercises commander in chief authority of the North Korea's military and is a legitimate military target—or a broader attempt to destroy an entire leadership cadre and institutions of the North Korean government? The former strategy would be in compliance with law of armed conflict and the principle of distinction; the latter would not. It would be a permissible war aim, in our judgment, to seek an end to Kim's rule over North Korea if he initiated a nuclear attack; but it would not be permissible to violate the laws of armed conflict in order to achieve that aim.[113]

The 2018 NPR further stated that the United States would consider nuclear responses to "significant non-nuclear strategic attacks" including "attacks on the U.S., allied, or partner civilian population or infrastructure."[114] This was widely reported to be referring to a cyberattack that killed many Americans or allied civilians, for example, by targeting hospital power supplies. John Harvey, Franklin Miller, Keith Payne, and Brad Roberts, former senior officials who have written or consulted on many NPRs, for example, praised the 2018 NPR for threatening nuclear retaliation after an "adversary use of biological weapons, or an assault on critical national infrastructure, leading to mass U.S. or allied casualties approximating those inflicted by a major nuclear strike." Although these former officials do not identify Russian, or North Korean, or Chinese civilians as the target of such a nuclear response, it is difficult to read

112. Ankit Panda, *Kim Jong Un and the Bomb: Survival and Deterrence in North Korea* (Oxford: Oxford University Press, 2020), pp. 296–297.
113. On *jus ad bellum* proportionality and war aims, see Gabriella Blum, "Prizeless Wars, Invisible Victories: The Modern Goals of Armed Conflict," *Arizona State Law Journal*, Vol. 49 (2017), pp. 665–666; and Katherine E. McKinney, Scott D. Sagan, and Allen S. Weiner, "Why the Atomic Bombing of Hiroshima Would Be Illegal Today," *Bulletin of the Atomic Scientists*, Vol. 76, No. 4 (July 2020), pp. 157–165, doi.org/10.1080/00963402.2020.1778344.
114. U.S. DOD, *Nuclear Posture Review*, p. 21.

their opposition to "tak[ing] any military option off the table" as anything other than the threat of a "counter-population" retaliation.[115]

Responding to such a nonnuclear strategic attack with a U.S. nuclear weapon strike, however, is almost certainly indefensible under the law of armed conflict. Even if a cyberattack generated massive civilian harm on a scale comparable to that resulting from a nuclear attack, a U.S. nuclear response would be irreconcilable with the principle of precaution, because the United States would presumably have the capacity to halt, or to induce the adversary to halt, the ongoing cyber or other nonnuclear strategic attacks through other means—conventional or cyber—that would cause less harm to foreign civilians than a U.S. retaliatory nuclear strike. In short, it appears that this element of the NPR is a new version of reliance on the belligerent reprisal doctrine. But as we have argued, it is legally impermissible for the United States to target an adversary's civilian population, even in reprisal.

Some strategists assume that if the United States more formally commits to complying strictly with the law of armed conflict, even in the event that an adversary attacks U.S. cities, or cities in allied countries, adversaries will be more likely to execute such an illegal attack. There are, however, four reasons to question this assumption. First, the effectiveness of a deterrent threat is based on an adversary's estimate of both the likelihood of the threat being implemented and the cost of that response. Following the law of armed conflict as we have outlined may well reduce the potential deadly costs of U.S. nuclear (or conventional) retaliation to an enemy's nuclear attack, but it also would decrease the need for that retaliation by making U.S. threats more credible. Some senior U.S. military and civilian officials have agreed with this assessment. Former STRATCOM Cmdr. Robert Kehler has argued that "[u]nresolved dilemmas, especially those involving the enduring role of nuclear weapons or the basic ethical legitimacy for them can erode the credibility of our deterrent in the minds of our adversaries, cause our allies to question the validity of U.S. security threats to them, and ultimately influence the perceptions of our own military members . . . Such issues can make the very thing we are trying to prevent more likely."[116] Then Under Secretary of Defense James Miller similarly argued in 2016 that "minimizing civilian casualties if deterrence fails is both a more credible and a more ethical approach."[117]

Second, no one should underestimate the extreme costs that leaders consid-

115. John R. Harvey et al., "Continuity and Change in U.S. Nuclear Policy," *Real Clear Defense*, February 7, 2018, https://www.realcleardefense.com/articles/2018/02/07/continuity_and_change_in_us_nuclear_policy_113025.html.
116. Kehler, "Nuclear Weapons and Nuclear Use," pp. 51–52.
117. Quoted in Broad and Sanger, "As U.S. Modernizes Nuclear Weapons, 'Smaller' Leaves Some Uneasy."

ering launching nuclear strikes against the United States would suffer if the Pentagon executed nuclear or conventional retaliation options against strictly legitimate military and leadership targets. U.S. adversaries today and in the future are likely to be authoritarian governments. The leaders of such governments may not care greatly about the lives of their own civilian populations, but they are likely to care about their military power and their own personal lives, which would be imperiled by attacks that comply with the law of armed conflict.

Third, U.S. adversaries would not be able to be certain that U.S. leaders, even if they committed to follow the law ahead of time, would in fact do so if the United States or its allies are attacked with nuclear weapons. The psychological and political pressures to respond impulsively and disproportionately would be intense; the public would likely demand vengeance, and recent presidents such as Barack Obama and Donald Trump have held highly divergent retributive instincts and degrees of respect for the international and domestic law.[118]

Finally, it is worth remembering that U.S. strategists have been down this path before. When the U.S. government contemplated issuing nuclear security assurances that the United States would not use nuclear weapons against nonnuclear weapons states, even if they used chemical or biological weapons (CBW) against the United States or its allies, many strategists feared that this would weaken deterrence and tempt adversaries to use CBW against the United States.[119] The U.S. government nonetheless issued such assurances in the 2010 Nuclear Posture Review, and there has been no noticeable increase in adversaries' CBW threats or dangerous behavior in the subsequent decade.

The greater danger may not be that the law of armed conflict is too restrictive, but that it is too permissive and can in theory make U.S. nuclear weapons use too easy. That is why we have identified specific examples of how stricter interpretations and application of the law of armed conflict should add additional constraints on U.S. nuclear weapons use.

What would happen if a president ordered a nuclear attack that is illegal? Then-STRATCOM Commander Hyten's 2017 description is revealing: "I provide advice to the president. He'll tell me what to do and if it's illegal, guess what's going to happen. . . . I'm going to say, Mr. President, it's illegal. And

118. See Rose McDermott, Anthony C. Lopez, and Peter K. Hatemi, "'Blunt Not the Heart, Enrage It': The Psychology of Revenge and Deterrence," *Texas National Security Review*, Vol. 1, No. 1 (November 2017), pp. 68–89, http://hdl.handle.net/2152/63934; and Scott D. Sagan and Benjamin. A. Valentino, "Revisiting Hiroshima in Iran: What Americans Really Think about Using Nuclear Weapons and Killing Noncombatants," *International Security*, Vol. 42, No. 1 (Summer 2017), p. 41, doi.org/10.1162/ISEC_a_00284.

119. See Morton H. Halperin et al., "Forum: The Case for No First Use: An Exchange," *Survival*, Vol. 51, No. 5 (October/November 2009), pp. 23–32, doi.org/10.1080/00396330903309840.

guess what he's going to do? He's going to say what would be legal? And we'll come up with the option of a mix of capabilities to respond to whatever the situation is."[120] The STRATCOM commander's interpretation of the law of armed conflict, therefore, could be a constraint on any president's ordering a clearly illegal nuclear attack, for example, seeking to destroy a city where a terrorist group is located in reprisal for a terrorist attack against a U.S. city, or dropping a nuclear weapon on Pyongyang in revenge for a North Korean attack on a U.S. city. This places a great burden on a commander's knowledge of the law and personal judgment under stress. Senator Edward Markey and Congressman Ted Lieu have proposed mandating congressional consultation and a declaration of war prior to any U.S. first use of nuclear weapons. It is not clear, however, that this would be practical under many scenarios, nor whether it would be constitutional.[121] Richard Betts and Matthew Waxman have instead argued for an additional institutional entailment: that U.S. nuclear launch authority and procedures be altered to put the attorney general in the chain of command to ensure that the legality of any nuclear strike order is reviewed at the highest level.[122] Although it is questionable whether an act of Congress requiring this change in the chain of command would be constitutional, a future president could tie his or her hands through an executive order to implement this reform.[123]

An additional reform would be for the president or secretary of defense to add a requirement that a senior JAG or civilian executive branch lawyer be present in all nuclear-related exercises and decisionmaking meetings. Critics might maintain that pre-planned nuclear options have already been approved as legal, but this view ignores the importance of ensuring a new legal review in any unanticipated scenario. Moreover, although the *DOD Law of War Manual* mandates that commanders "make qualified legal advisers available at all levels of command to provide advice about law of war compliance during planning and execution of exercises and operations,"[124] it appears that making legal advisers "available" does not always ensure they will be present and consulted. For example, in 2016, the Obama administration ran a wargame in which the deputies of the National Security Council (NSC) decided to respond

120. Hyten, "Halifax Forum."
121. Hearing on H.R. 669, Restricting First Use of Nuclear Weapons Act of 2019, before the House Committee on Foreign Affairs, 116th Cong. (2019–2020).
122. Richard K. Betts and Matthew C. Waxman, "The President and the Bomb: Reforming the Nuclear Launch Process," *Foreign Affairs*, March/April 2018, https://www.foreignaffairs.com/articles/united-states/2018-02-13/president-and-bomb.
123. See Nina Tannenwald, "Life beyond Arms Control: Moving toward a Global Regime of Nuclear Restraint and Responsibility," *Daedalus*, Vol. 149, No. 2 (Spring 2020), p. 216, doi.org/10.1162/daed_a_01798; and Bob Bauer and Jack Goldsmith, *After Trump: Reconstructing the Presidency* (Washington, D.C.: Lawfare, 2020), pp. 281–314.
124. *DOD Law of War Manual*, p. 1079.

to a Russian use of a single nuclear weapon against a NATO military target in the Baltics with conventional means. The NSC Principals Committee, however, then repeated the wargame and in the same scenario decided to respond to the Russian nuclear strike by launching a number of nuclear weapons against military targets in Belarus—even though Belarus had not participated in the Russian attack on the Baltics. In neither committee were legal issues raised.[125] This account highlights the pressures policymakers may face to act in ways that may violate the law of armed conflict, especially if they are not expert on what the law requires or prohibits, and why integration of legal advisers into military exercises and crisis targeting decisions is vital.

A related political implication of our argument concerns military versus civilian responsibility for complying with the law of armed conflict. Following the principle of precaution, we have noted, requires a military commander to choose the lowest yield weapon that can destroy the target with reasonable confidence; however, the military officer must choose between weapons options based only on what is in the arsenal at the time. A major issue for future debate in Congress and in the public, therefore, is the degree to which the United States should develop and deploy conventional global long-range strike forces and more lower-yield nuclear weapons. Such developments will strongly impact the application of the law governing nuclear armed conflict.

Beyond this, however, efficacy and the logic of consequences are not the only considerations that govern how wars should be fought. The law of armed conflict has steadily evolved to promote humanitarian values and to protect civilians and others, such as prisoners of war, who take no active part in hostilities. With respect to the doctrine of belligerent reprisal, the fact that an adversary has violated the law does not provide a sufficient legal or moral reason to violate the rights of noncombatants merely because they are nationals of the breaching state. When North Vietnam tortured American prisoners of war, few argued that it would be ethical or legal for the United States to torture North Vietnamese prisoners held by U.S. forces. When the Islamic State in Iraq and Syria (ISIS) bombed cafés in Paris, beheaded prisoners, and sexually abused American aid workers, no one argued that it would ethical or legal for the United States to bomb markets in Syria, behead ISIS prisoners, or sexually abuse women supporting ISIS. It would be appropriate for the United States to stop threatening to deliberately kill millions of innocent civilians, even in the name of deterrence, when it rightly no longer threatens to perpetrate similar illegal acts against individual innocent civilians.

125. Kaplan, *The Bomb*, pp. 254–258; and Sagan email correspondence with Fred Kaplan, May 23, 2020.