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ARTICLE

The Duty to Disobey Illegal Nuclear Strike Orders

Anthony J. Colangelo*

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Abstract

This Article argues there is a legal duty to disobey illegal nuclear strike orders. Failure to carry out this duty may result in criminal and civil liability. Because nuclear weapons are quantitatively and qualitatively different from conventional weapons, typical legal calculations regulating their use under the laws of war or humanitarian law, as well as human rights law, change along with the change in weaponry.

At least five “unique characteristics” of nuclear weapons ominously distinguish them from conventional weapons in ways that promise only to increase civilian death and suffering. First, quantitatively, the blast power, heat, and energy generated far outstrip that of conventional weapons, likely rendering nuclear weapons indiscriminate. Second, qualitatively, the radiation released is so powerful that it damages DNA and causes death and severe health defects throughout the entire lives of survivors as well as their children. Third, nuclear weapons make virtually impossible humanitarian assistance to survivors at the blast scene struggling to survive, leading to more suffering and death. Fourth, damage to the environment may produce not only devastating environmental harm itself but also widespread famine and starvation. Fifth, nuclear weapons cause long-lasting multi-generational psychological injury to survivors of the blast.

All of these factors weigh heavily against the humanitarian goals of the law of war and human rights law, which are designed chiefly to prevent and reduce civilian death and suffering. These humanitarian and human rights rules require distinction between combatants and civilians, proportionality in attack, military necessity, prevention of unnecessary suffering and superfluous injury, and prevention of the arbitrary loss of life.

This Article’s thesis largely boils down to: If conventional weapons can be used to achieve the same or similar military objectives as nuclear weapons in proximity to civilians, and nuclear weapons are ordered to be used instead, that order may be manifestly illegal, leading to war crimes for which actors can be liable if they obey the illegal order. This universal customary international law applies both to state and non-state actors alike.

Table of Contents

I. Introduction.....	87
II. The Duty to Disobey.....	89
A. <i>The Duty</i>	89
B. <i>The Standard</i>	91
III. Nuclear Weapons Are Different.....	92
IV. Law.....	97
A. <i>Baselines</i>	97
B. <i>Humanitarian Law</i>	101
1. Distinction.....	102
2. Proportionality.....	104
3. Military Necessity.....	105
4. Prevention of Unnecessary Suffering and Superfluous Injury.....	107
5. Belligerent Reprisals.....	107
C. <i>Human Rights Law</i>	110
V. Chain of Command.....	112
A. <i>The President</i>	114
B. <i>STRATCOM and Related Bodies</i>	115
C. <i>Multistage Vetting</i>	116
D. <i>Immunities</i>	116
VI. Non-State Actors.....	119
VII. Conclusion.....	119

*The destructive power of nuclear weapons
cannot be contained in either space or time.*

—The International Court of Justice

I. Introduction

This Article answers a series of complex questions given urgency by the renewed attention around the world to the possible use of nuclear weapons.¹ For instance, is there such a thing as an illegal nuclear strike order? If so, what would it look like? And, if there is such an order, what kind of right or, more accurately, what kind of duty exists to disobey it? For the right arises out of, and is thus incidental to, a duty to disobey. Would the duty be simply moral or conscience-based? Or is there a legal duty as well? And if it is the latter, what law governs? National? International?

Moreover, what are the practical and theoretical implications of the answers to these questions? Are we talking about merely an affirmative defense to a domestic charge of not following orders? Or, perhaps, something of greater symbolic, real world, and legal value to the international system as a whole regarding how international law does and should treat the use of nuclear weapons around the globe. That is, an international legal framework applicable to all states—and even non-state actors—that holds specific personnel accountable for following illegal orders, even if the legality of nuclear weapons themselves as a general matter has not yet been definitively resolved.²

¹ For purposes of this Article, “use” means nuclear strike. Other possible “uses,” such as the role nuclear weapons play in deterrence and mutually assured destruction, are not included within the definition and are not the subject of this Article.

² The new Treaty on the Prohibition of Nuclear Weapons pushes toward outlawing nuclear weapons altogether under international law. See Rick Gladstone, *A Treaty Is Reached to Ban Nuclear Arms. Now Comes the Hard Part*, N.Y. TIMES (July 7, 2017), https://www.nytimes.com/2017/07/07/world/americas/united-nations-nuclear-weapons-prohibition-destruction-global-treaty.html?_r=0; Jacqueline Klimas, *Nuclear Powers Rebuked As 122 Nations Adopt U.N. Ban*, POLITICO, (July 7, 2017), <http://www.politico.com/story/2017/07/07/atomic-weapons-ban-united-nations-2017-240309> [<https://perma.cc/5MYX-P59D>]. But as we shall see, *infra* Part IV.A., as a treaty, once it enters into force it will bind only states parties. Moreover, those states most affected by the treaty—namely, nuclear weapons states—have refused to support the treaty ban and have rejected it as a broader norm-forming instrument necessary for the creation of general or “customary” international law. Both because this repudiation of the treaty is by the most powerfully affected states, and because the objections come at the genesis of the potential norm-formation, these nuclear “persistent objector” states stunt a broader, non-treaty prohibition on nuclear weapons under customary international law or, if such a norm were to form, it would not apply to the objecting states. See Dino Kritsiotis, *On the Possibilities of and for Persistent Objection*, 21 DUKE J. OF COMP. & INT’L L. 121, 129–30 (2010). To be sure, the very fact that these states have both updated their nuclear arsenals and maintained their right to use nuclear weapons is strong evidence

This Article proposes a novel account of the law's relationship to nuclear weapons. Thus far, the great bulk of policy and legal conversation regarding nuclear weapons has addressed in blanket fashion whether their use is legal at all. But the International Court of Justice (ICJ) has refused to categorically outlaw their use,³ and the reality is that states (and perhaps non-state actors) presently possess nuclear weapons and have expressed a willingness to use them. Accordingly, this Article addresses the different question of whether certain nuclear strikes would be illegal if nuclear weapons *were* used. And, further, whether there is a legal duty to refuse to carry out an illegal strike order, as well as the implications of any such duty—such as susceptibility to criminal prosecution or civil liability for serious violations of international law, like war crimes and the arbitrary deprivation of life.

Hence it is important at the outset to understand what this Article is and is not about: It is not advocating the outlawing of nuclear weapons across the board. Formal international institutions combined with components of customary international law have largely settled that question, at least for the time being. This Article is also not a policy piece about the strategic use of nuclear weapons, examining, say, the desirability of deterrence through nuclear weapon stockpiling or the role that mutually assured destruction plays in preventing a nuclear holocaust.

Rather, the Article's argument is fundamentally legal and comprises at least three key questions: (1) when is a nuclear strike order illegal; (2) is there a legal duty to disobey the illegal order; and (3) what are the implications of refusing to disobey the order? As a preliminary matter, the analysis does not contend that *all* uses of nuclear weapons are necessarily illegal. For purposes of the Article, nuclear weapons, like all weapons, are permissible unless they contravene the laws of war or what is called international humanitarian law.⁴ There may be some situations in which the use of nuclear weapons does not contravene the laws of war. For instance, the ICJ mused about "the use of nuclear weapons by a State in an extreme circumstance of self-defense, in which its very survival is at stake"⁵—a scenario that ties into the discussion of "belligerent reprisals" later in the Article.⁶ Others have argued that "use of a low yield nuclear weapon against warships on the High Seas or troops in sparsely populated areas"

that the components necessary to form customary international law are lacking, as also discussed *infra* at Part IV.A. In the absence of a solid prohibition on their use, nuclear weapons remain—the Nuclear Weapons Ban Treaty notwithstanding—legal for non-states parties to the treaty, i.e., those states that actually possess and therefore may use nuclear weapons. Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. Rep. 226, ¶ 21 (July 8) [hereinafter Advisory Opinion].

³ See Advisory Opinion, 1996 I.C.J. at ¶ 97.

⁴ *Id.* ¶ 21.

⁵ *Id.* ¶ 97.

⁶ *Infra* Part IV.B.5.

might be legal under international law.⁷ These situations occupy a legal limbo where the use of nuclear weapons might be legal but also might not necessarily be *illegal*—in short, their legality under international law would be contested.⁸

Instead of dwelling in this limbo, the Article concentrates on “clearly” or “manifestly” illegal nuclear strikes for which liability attaches and, in this regard, seeks to be a referent for commanders and soldiers tasked with the use of nuclear weapons in proximity to civilian populations. Part II begins by articulating the origins of a duty to disobey illegal orders and elaborates the “clearly” or “manifestly” illegal standard. Next, Part III explains why nuclear weapons have unique destructive powers, both quantitatively and qualitatively, as opposed to conventional weapons. The discussion of why nuclear weapons are uniquely destructive sets the stage for the Article’s principal thesis in Part IV: Under international humanitarian and human rights law, if conventional weapons can be used near a civilian population to achieve the same or similar military objectives as nuclear weapons, then it would most likely be manifestly illegal to use nuclear weapons. And, as such, liability would generally attach to a commander who fails to disobey a nuclear-strike order in this situation. One possible exception to liability attaching would be the doctrine of “belligerent reprisals.” As will be discussed, while the strike itself would remain illegal, it may nonetheless be justified under this doctrine and, accordingly, the doctrine may offer an affirmative defense to liability.⁹ Part V then discusses the chain of command in ordering a nuclear strike and issues of immunity, starting with the head of state on down. For only those with sufficient information to refuse an illegal order can be held liable under basic rule-of-law principles, so an individual’s position in the chain of command partly determines his liability risk. Finally, Part VI confronts the problem of non-state actors. It concludes that they are subject to the same standards and duties as state actors due to the universal nature of customary international law and international humanitarian and human rights law in particular, which are designed to prevent and minimize loss of civilian life.

II. The Duty to Disobey

A. *The Duty*

The duty to disobey an illegal order to launch a nuclear weapon originates in international law’s rejection of the defense that an individual is excused from

⁷ Advisory Opinion, 1996 I.C.J. at ¶ 91 (quoting the United Kingdom, Written Statement before the Court, ¶ 3.44).

⁸ Customary international law is largely an empirical phenomenon reliant upon the practice of states, including entering into treaties, to define the contours of its rules. The office of this paper will be strikes that are clearly or manifestly illegal at the core of established rules of humanitarian law. Absent a universally or near universally ratified treaty, the legality of the peripheral gray area scenarios could be discerned only by some additional data, in the form of actual strikes and reactions thereto by states.

⁹ See *infra* Part IV.B.5.

liability because he followed “superior orders.”¹⁰ Colloquially put, the defense goes something like this: “I cannot be liable for carrying out an illegal act because I was simply following orders.” At least since the Nazis were prosecuted for war crimes and crimes against humanity at Nuremberg, this defense has largely disintegrated. I say “largely” because the argument may sometimes be used as a mitigating circumstance where, for example, the court determines that justice so requires.¹¹ But because those atop the chain of command are most likely to be in the best position to question and refuse an illegal order to use nuclear weapons,¹² it is hard to imagine this mitigating situation adhering in the context of launching a nuclear strike.

In language that became pregnant for international humanitarian and human rights law instruments and jurisprudence, the Nuremberg Charter explicitly rejected the superior-orders defense. Article 8 provides: “The fact that the Defendant acted pursuant to order of his Government or of a superior shall not free him from responsibility, but may be considered in mitigation of punishment if the Tribunal determines that justice so requires.”¹³ Similar language appears in the Charter of the Military Tribunal for the Far East¹⁴ and in other international criminal tribunal statutes, like the Statute for the International Criminal Tribunal for the Former Yugoslavia,¹⁵ the Statute for the International Criminal Tribunal for Rwanda,¹⁶ and the Rome Statute constituting the International Criminal Court (ICC).¹⁷

The duty to reject illegal superior orders has also made its way into national law that follows or incorporates international law on liability for subordinates; for example, the U.S. Department of Defense Law of War

¹⁰ See, e.g., Charles Garraway, *Superior Orders and the International Criminal Court: Justice Delivered or Justice Denied?*, 81 INT’L REV. RED CROSS 785, 785–94 (1999).

¹¹ See *infra* notes 13–17.

¹² See *infra* Part V.

¹³ Charter of the International Military Tribunal, annexed to Agreement for the Prosecution and Punishment of Major War Criminals of the European Axis (London Agreement) art. 8, Aug. 8, 1945, 59 Stat. 1544, 82 U.N.T.S. 279 [hereinafter London Agreement].

¹⁴ Charter of the International Military Tribunal for the Far East art. 6, Jan. 19, 1946, T.I.A.S. No. 1589 (amended Apr. 26, 1946).

¹⁵ See Statute of the International Criminal Tribunal for the Former Yugoslavia, S.C. Res. 827, art. 7(4), U.N. Doc. S/RES/827 (May 25, 1993).

¹⁶ See Statute of the International Criminal Tribunal for Rwanda, S.C. Res. 955, art. 6(4), U.N. Doc. S/RES/955 (Nov. 8, 1994).

¹⁷ See Rome Statute of the International Criminal Court, July 17, 1998, 2187 U.N.T.S. 90 [hereinafter ICC Statute]. The ICC statute was innovative because it brought in the “manifestly illegal” standard that will be discussed immediately below. Article 33 reads in pertinent part: “The fact that a crime within the jurisdiction of this Court has been committed by a person pursuant to an order of a Government or of a superior, whether military or civilian, shall not relieve that person of criminal responsibility unless . . . [t]he order was not manifestly unlawful.” *Id.* art. 33(1)(c). For an explanation of this change and its ramifications, see Garraway, *supra* note 10, at 785–94. For a critique of the “manifestly illegal” standard, see Lydia Ansermet, Note, *Manifest Illegality and the ICC Superior Orders Defense: Schuldtheorie Mistake of Law Doctrine as an Article 33(1)(c) Panacea*, 47 VAND. J. TRANSNAT’L L. 1425, 1450–56 (2014).

Manual.¹⁸ As C. Robert Kehler, former Commander of U.S. Strategic Command (STRATCOM) explains, U.S. soldiers are “bound to question (and ultimately refuse) illegal orders.”¹⁹ Yet, presaging the discussion below of the standard that applies when holding actors accountable for refusing to disobey illegal orders,²⁰ both the Rome Statute and U.S. law require more than just the receipt of orders that are merely legally debatable as to legitimate disobedience. As we will see, this heightened threshold comports well with real-world practice.

Before addressing this heightened standard, it is important to clarify why disintegration of the superior-orders defense has birthed a duty and, incidentally, a right to disobey an illegal order to launch a nuclear strike. The reason is straightforward: If an actor does not refuse to disobey the illegal order, he or she violates the law and can be held liable. Both international and domestic law make plain that subordinates are not to carry out illegal orders. As the remainder of the Article shows, when it comes to nuclear strikes, those orders are likely to result in serious violations of international law, such as war crimes, for which actors can be held criminally and civilly accountable. In short, any command to break the law is *ultra vires* and gives rise to liability, which subordinates have a duty and a right not only to avoid but also to reject. What that law is and how it operates will be the subject of Part IV.

B. *The Standard*

But how to tell whether to impose liability and thus whether a duty arises? Yes, the order must be illegal—but *how* illegal? The entire structure of military command and efficacy would crumble if subordinates started second-guessing orders that they deemed of marginal or debatable legality. The standard adopted by the ICC and the U.S. military provides that the order must be “manifestly unlawful,”²¹ or constitute “clearly illegal orders to commit violations of the law of war.”²² Hence the threshold for disobeying an order is higher than just an arguably illegal order.²³ It means knowing, or being reasonably expected to know, that the order is illegal and does not hinge upon solely contextual or situational judgments.²⁴ Put another way, the relevant *mens rea* is that superior orders are not a defense if the actor knows or should know that the order is manifestly illegal, or grossly deviates from what a reasonable person knows or should know; the order

¹⁸ OFF. OF GEN. COUNS., U.S. DEP’T OF DEF., LAW OF WAR MANUAL 1075, § 18.3.2.1 (rev. vol. 2016),

<https://www.defense.gov/Portals/1/Documents/pubs/DoD%20Law%20of%20War%20Manual%20-%20June%202015%20Updated%20Dec%202016.pdf?ver=2016-12-13-172036-190> [https://perma.cc/GU3E-26AE] [hereinafter LOW MANUAL].

¹⁹ C. Robert Kehler, *Nuclear Weapons & Nuclear Use*, 145 DAEDALUS 50, 55 (2016).

²⁰ See *infra* Part II.B.

²¹ ICC Statute, *supra* note 17, art. 33(1)(C).

²² LOW MANUAL, *supra* note 18, at 1048.

²³ Mark Osiel, *Obeying Orders: Atrocity, Military Discipline, and the Law of War*, 86 CALIF. L. REV. 939, 971 (1998) (“Where a soldier must exercise situational judgment in order to ascertain the unlawfulness of a superior’s order, that order is not manifestly illegal.”).

²⁴ *Id.*

must be illegal on its face.²⁵ The U.S. Department of Defense manual cites as examples orders to “fire upon the shipwrecked” or to “kill defenseless persons who have submitted to and are under effective physical control” of U.S. forces.²⁶

It would also include the targeted murder of innocent civilians. For instance, if a soldier were ordered to shoot a baby in the head, that would be manifestly illegal and any subordinate should know it is illegal. It is this threshold that must be kept in mind as we move forward into the unique characteristics of nuclear weapons, the relevant international law governing armed conflicts, and the decisions made by those who have the power and the information to effectively launch nuclear weapons.

In short, where conventional weapons can be used in proximity to civilians to achieve the same or similar military objectives instead of nuclear weapons, an order to use a nuclear weapon would be manifestly illegal and anyone with sufficient factual knowledge regarding the circumstances of the order should know it. In turn, that person has both a duty and a right to disobey the nuclear strike order. All of this hinges, of course, on knowing why and how nuclear weapons are different.

III. Nuclear Weapons Are Different

As the ICJ has recognized, and as science and experience demonstrate, nuclear weapons are different from conventional weapons. According to the ICJ, nuclear weapons have “certain unique characteristics” resulting from the release of “not only immense quantities of heat and energy, but also of powerful and prolonged radiation,”²⁷ with the latter being “peculiar to nuclear weapons.”²⁸ In other words, there is a “qualitative as well as quantitative difference between nuclear weapons and all conventional arms.”²⁹ These differences render nuclear weapons not only uniquely catastrophic, but also uniquely unpredictable. Indeed,

²⁵ *CrimA 36/91 or 40/61 Attorney-Gen. of the Gov't of Isr. v. Eichmann*, 36 I.L.R. 275, 277 (1962) (Isr.) (quoting an earlier Israeli case, *Kafr Kassen case App. 279-83*, (1958), *Ofer v. Chief Military Prosecutor*, (A) vol. 44: 362). (“The distinguishing mark of a “manifestly unlawful order” should fly like a black flag above the order given, as a warning saying ‘Prohibited.’ Not formal unlawfulness, hidden or half-hidden, nor unlawfulness discernible only to the eyes of legal experts, is important here, but a flagrant and manifest breach of the law, definite and necessary unlawfulness appearing on the face of the order itself, the clearly criminal character of the acts ordered to be done, unlawfulness piercing the eye and revolting the heart, be the eye not blind nor the heart not stony and corrupt, that is the measure of “manifest unlawfulness” required to release a soldier from the duty of obedience upon him and make him criminally responsible for his acts.”).

²⁶ *LOW MANUAL*, *supra* note 18, at 1049.

²⁷ *Advisory Opinion*, 1996 I.C.J. at ¶ 35.

²⁸ *Id.* Importantly, I exclude here the ICJ’s holding that nuclear weapons may be lawful in “an extreme circumstance of self-defence in which the very survival of a state may be at stake.” *Id.* ¶ 97.

²⁹ *Id.* ¶ 86.

as the ICJ aptly and forebodingly put it, “[t]he destructive power of nuclear weapons cannot be contained in either space or time.”³⁰

While some debate among experts exists as to whether a particularly low-yield nuclear bomb might have a smaller blast yield than the most powerful conventional bomb,³¹ it is commonly accepted that nuclear weapons generally produce heat and energy that far exceed the capabilities of any conventional weapon, no matter how powerful.³² Unlike conventional weapons, which certainly can cause tremendous destruction (think the firebombing of Dresden), nuclear weapons create a fireball that forms in less than a millionth of a second at several tens of millions of degrees, vaporizing all matter into gas or plasma. There is no opportunity to plan for or escape the attack as in a comparatively “slow motion” firebombing; the nuclear detonation instantaneously incinerates everything in its path.³³ Hence, quantitatively, the potential for destruction and the resulting loss of human life from a nuclear weapon differ from conventional weapons. This affects the law-of-war or humanitarian law calculi discussed in Part IV.B, as a matter of sheer blast power, scope, and detonation timing.

Yet perhaps the most distinct feature of nuclear weapons is their qualitative differences from conventional weapons. Nuclear weapons release massive amounts of thermal and ionizing radiation. As Stuart Casey-Maslen notes, the effects of this radiation on the body are “prodromal, hematologic, gastrointestinal, pulmonary, cutaneous and neurovascular.”³⁴ In fact, ionizing

³⁰ *Id.* ¶ 35.

³¹ Compare email from Chris Jenks, Assistant Professor of Law, SMU Dedman School of Law, to Anthony Colangelo, Res. Fellow and Professor of Law, SMU Dedman School of Law (Apr. 17, 2017, 08:23 CDT) (on file with author) and follow-up email from Chris Jenks, to Anthony Colangelo (May 22, 2017, 10:29 CDT) (on file with author) (“MOAB, with an explosive yield of 11 tons of TNT, exceeds a number of lower yield/ tactical nuclear weapons. And I don’t believe that’s really arguable, there are federation of American scientists, US air force, and DoD sources, among others on the explosive yield of a number of tactical nukes being less than 11 tons of TNT, including the: B61, B65, W25, W54, the Davy Crockett, and the Special Atomic Demo Munition. To my limited knowledge neither the US nor any state intentionally develops tactical nukes any more, so anyone with that low yield a nuclear weapon is probably because they are struggling with design/manufacturing. But the broader point stands, that the MOAB has a greater explosive yield than a number of lower yield/tactical nuclear weapons the US has fielded at various points over the years.”), with email from John Burroughs, Exec. Dir., Lawyers Comm. on Nuclear Policy, to Anthony Colangelo (May 10, 2017, 12:33 CDT) (on file with author) (“So far as I know second-hand, and I have been following expert literature a long time, the lowest yield of the B-61 gravity bombs is .3 kiloton or so, an order of magnitude more than MOAB.”).

³² Advisory Opinion, 1996 I.C.J. at ¶ 35.

³³ See generally SAMUEL GLASSTONE & PHILIP J. DOLAN, THE EFFECTS OF NUCLEAR WEAPONS (3d ed. 1977).

³⁴ Stuart Casey-Maslen, *The Use of Nuclear Weapons and Human Rights*, 97 INT’L REV. RED CROSS 663, 673 (2015).

radiation is so strong and pervasive that it actually alters the structure of atoms.³⁵ Tilman Ruff explains:

It poses risks of acute illness (in high doses) and at any dose, long-term genetic mutations and increased risk of most cancers and a variety of chronic diseases, including cardiovascular and respiratory disease. Ionizing radiation has a high propensity to damage large, complex molecules like DNA, which are crucial to life, because its energy is delivered in large packets. A dose of radiation acutely lethal to a human being can contain no more energy than the heat in a sip of hot coffee.³⁶

Indeed, the duration of ionizing radiation's effects may cause serious harms that last throughout the lifetime of survivors. Studies show that the occurrence of solid cancers increases in proportion to radiation dose,³⁷ as do hematological malignancies of blood forming organs (i.e., leukemia).³⁸ To be sure, cancers caused by exposure to ionizing radiation at Hiroshima and Nagasaki persist to this day.³⁹

Just as devastating are the direct effects upon children and the unborn. Based on scientific reports,⁴⁰ Peter Hayes adroitly explains in accessible terms, "already fused zygotes at [the] time of exposure; or . . . genetically damaged eggs/sperms in the survivors . . . that subsequently fuse . . . are non-viable in the lifetime of the survivors,"⁴¹ thereby preventing births within the survivor group.⁴² Radiation exposure may also cause mental and growth retardation, "malformations such as microphthalmia, skeletal and genital malformations," as

³⁵ Tilman A. Ruff, *The Humanitarian Impact and Implications of Nuclear Test Explosions in the Pacific Region*, 97 INT'L REV. RED CROSS 775, 801 (2015).

³⁶ *Id.*; see also NAT'L RES. COUNCIL, HEALTH RISKS FROM EXPOSURE TO LOW LEVELS OF IONIZING RADIATION: BEIR VII PHASE 2, at 6 (2006) [hereinafter BEIR VII] ("Ionizing radiation has sufficient energy to change the structure of molecules, including DNA, within the cells of the human body. Some of these molecular changes are so complex that it may be difficult for the body's repair mechanisms to mend them correctly.").

³⁷ BEIR VII, *supra* note 36, at 6.

³⁸ Ruff, *supra* note 35, at 801–02.

³⁹ Paul Voorhees, *Hiroshima and Nagasaki Cast Long Shadows Over Radiation Science*, N.Y. TIMES (Apr. 11, 2011), <http://www.nytimes.com/gwire/2011/04/11/11greenwire-hiroshima-and-nagasaki-cast-long-shadows-over-99849.html?pagewanted=all>.

⁴⁰ See generally NAT'L RES. COUNCIL, COMM. ON THE BIOLOGICAL EFFECTS OF IONIZING RADIATION, HEALTH EFFECTS OF EXPOSURE TO LOW LEVELS OF IONIZING RADIATION: BEIR V (1990).

⁴¹ Email from Peter Hayes, Honorary Professor, Ctr. for Int'l Sec. Stud., Sydney Univ. (Austl.) and Dir., Nautilus Inst. for Sec. & Sustainability, to Anthony Colangelo (June 13, 2017, 20:17 CDT) (on file with author).

⁴² Some have even suggested that radiation exposure can cause trans-generational harms; that is, it may pass from one generation to the next as a result of the severely damaged DNA in those initially exposed to the blast. See Ruff, *supra* note 35, at 775; Advisory Opinion, 1996 I.C.J. at ¶ 35; *After the Atomic Bomb: Hibakusha Tell Their Stories*, 97 INT'L REV. RED CROSS 507, 510 (2015) (interview with Dr. Masao Tomonaga). However, the science has yet to empirically support this view. Thus, radiation exposure leading to trans-generational genetic effects is a perceived harm not demonstrated scientifically yet.

well as cancer during and subsequent to childhood.⁴³ Again, these uniquely extensive effects of radiation have major consequences for the law-of-war calculi in Part IV.B; namely, principles of distinction, proportionality, military necessity, and prevention of unnecessary suffering.⁴⁴

It is also uncontroversial that ionizing radiation would make extremely difficult, if not impossible, any meaningful humanitarian response to a nuclear attack, effectively stranding those most in need—a position long held by both the World Health Organization and the Red Cross and Red Crescent movement⁴⁵—further compounding and magnifying the suffering of victims, in both degree and number. Relatedly, the radiation released by a nuclear bomb is enormously unpredictable since it promises to cover a tremendous geographic area and is variously dependent upon uncertain factors like shifting weather patterns and atmospheric conditions, to which the bomb itself may significantly contribute.⁴⁶

Which leads into the dire environmental harms that major nuclear explosions or exchanges may generate,⁴⁷ causing depletion in, among other things, the ozone layer, farming, and food production, thereby potentially resulting in famine.⁴⁸ This is due in large part to the dispersal of dirt and dust,

⁴³ Email from Dr. Tilman Ruff, Assoc. Professor, Nossal Inst. for Global Health, Univ. of Melbourne (Austl.), Co-President of Int'l Physicians for the Prevention of Nuclear War, to Anthony Colangelo (Sept. 22, 2017, 09:37 CDT) (on file with author); Tilman A. Ruff, *Health Implications of Ionising Radiation*, in *LEARNING FROM FUKUSHIMA: NUCLEAR POWER IN EAST ASIA* 221, 227, 229 (Peter Van Ness & Mel Gurtov eds., 2017).

⁴⁴ See *infra* Part IV.

⁴⁵ Elizabeth Minor, *Changing the Discourse on Nuclear Weapons: The Humanitarian Initiative*, 97 INT'L REV. RED CROSS 711, 716 (2015); see also Gregor Malich, Robin Coupland, Steve Donnelly & Johnny Nehme, *Chemical, Biological, Radiological or Nuclear Events: The Humanitarian Response Framework of the International Committee of the Red Cross*, 97 INT'L REV. RED CROSS 647, 661 (2015) ("In reality, whilst calling for greater efforts at the international level as regards response to [nuclear] events, the authors recognize that the chances are near to zero of bringing effective assistance to victims of large-scale use of [nuclear] weapons."); Ruff, *supra* note 35, at 812 ("It is important in this context to emphasize that no effective humanitarian response is possible for even a single nuclear weapon detonated in a population centre, let alone nuclear war, as has been the unequivocal conclusion of the World Health Organization and the International Red Cross and Red Crescent Movement for many years . . .").

⁴⁶ See *infra* notes 47–50 discussing environmental harms generated by nuclear detonation.

⁴⁷ I say *may* generate because there is the possibility of a surgical nuclear strike that does not severely impact the environment. This is contingent upon the strike not triggering escalation in the use of nuclear weapons. Because the command and control apparatus is unable to foresee whether the surgical strike will in fact produce escalation, the law-of-war calculation as to environmental damage is necessarily a *post-hoc* inquiry in this situation. As such, it poses an interesting question for those ordered to use nuclear weapons in a comparatively discrete manner. It seems contrary to the rule of law to hold actors accountable for the unpredictable environmental effects of a single, low yield nuclear strike that fails to severely impact the environment since liability would essentially be retroactive because the effect—escalation—is not necessarily predictable.

⁴⁸ Louis Maresca & Eleanor Mitchell, *The Human Costs and Legal Consequences of Nuclear Weapons Under International Humanitarian Law*, 97 INT'L REV. RED CROSS 621, 625 (2015); see also Michael N. Schmitt, *Humanitarian Law and the Environment*, 28 DENV. J. INT'L L. & POL'Y 265, 266–67 (2000) ("Of course, the two incidents which caused the greatest environmental

contamination of water supplies by radioactive residuals, and the consequent deterioration of both plant and animal life, posing a very real and widespread risk of starvation for many millions of people.⁴⁹ In fact, using nuclear weapons for major attacks targeting cities or other highly populated areas could cause short term or even prolonged (decadal) nuclear winters for large civilian populations.⁵⁰

Finally, as informative as the cold hard science is, no account of the uniquely devastating effects of nuclear detonations would be complete without taking into consideration the actual human experiences, views, and psychological damage to those who have survived such attacks. In Japan, the survivors of the atomic blasts at Hiroshima and Nagasaki comprise a distinct class, referred to as *hibakusha*. One of the foremost experts on the effects of nuclear exposure is the *hibakusha* Dr. Masao Tomonaga. He survived the detonation of the second atomic bomb on August 9, 1945 in Nagasaki and has had a long and distinguished medical career documenting human health and other harmful consequences resulting from the bombings.⁵¹ Dr. Tomonaga recounts the horror of the experience itself and the lingering fears it instilled in survivors; namely, “[a]fter the initial wave of elevated rates of leukaemia, which continued for about fifteen years, a second wave of solid cancerous tumors began. Increased occurrence of these cancers still continues today and causes great suffering for atomic bomb survivors and their families.”⁵² Similarly, Mr. Yoshiro Yamawaki, also a *hibakusha* of Nagasaki, describes not only the terrible experience of the detonation which haunts him daily and the reverberating impact of the radiation on his psyche and well being, but also what he believes are deadly trans-generational ripples. In his words: “The effects go on across generations to the children and grandchildren of survivors, carrying on the cruelty of using these weapons. I have four daughters, and my oldest daughter has a type of disease that is similar to leukemia. My second daughter is suffering from breast cancer.”⁵³ However, the scientific data do not conclusively show trans-generational *medical* harm passed to children who were not in utero at the time of the detonation.

Which does not discount the very real trans-generational *mental* harms caused by nuclear weapons and their radiation ripples into future generations.

calamity in the history of armed conflict were the atomic bomb attacks on the Japanese cities of Hiroshima and Nagasaki in August of 1945.”).

⁴⁹ Maresca & Mitchell, *supra* note 48, at 641. Some might argue that this environmental harm qualifies as a breach of Article 35(3) of Additional Protocol I, which prohibits “methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment”; *see also* Advisory Opinion, 1996 I.C.J. at ¶ 35.

⁵⁰ *See generally* R. P. Turco, O. B. Toon, T. P. Ackerman, J. B. Pollack & Carl Sagan, *Nuclear Winter: Global Consequences of Multiple Nuclear Explosions*, 222 SCIENCE 1283 (1983).

⁵¹ *After the Atomic Bomb*, *supra* note 42, at 507 (interview with Dr. Masao Tomonaga).

⁵² *Id.* at 509.

⁵³ *Id.* at 524 (interview with Mr. Yoshiro Yamawaki). Mr. Yamawaki’s attribution may well be the result of a lingering psychological harm and very real perceived physical harm originating his daughter’s disease. *See infra* notes 54–58. If his first daughter, on the other hand, was alive or in utero at the time of the bombing, her disease could be considered a direct effect of the bombing itself.

Robert Lifton explains that for survivors of Hiroshima and Nagasaki “[t]here is real fear about transmitting radiation effects to subsequent generations, because it is known to be possible.”⁵⁴ This is “even though a systematic increased incidence of birth defects in the next generation has not been demonstrated in control studies.”⁵⁵ Lifton also points out that survivors of the bombs at Hiroshima and Nagasaki suffer severely from what he terms “psychic numbing.”⁵⁶ In Lifton’s words, “[b]ased on all evidence, of Hiroshima and everything else we know, the numbing and listless behavior—no panic but a kind of listless, slow motion as in Hiroshima—would likely be so extreme among that tiny contingent of survivors [of a nuclear bomb] that people would be numb to the point of immobilization.”⁵⁷ Compounding these effects are the stigma and discrimination felt by survivors (indeed, in Japan they have their own special name) who fear deformation and disease will be passed on to their blood lines. This fear destroys deep-seated psychological comfort in “living on in our children and their children,” severing the chain of life.⁵⁸

In sum, at least five “unique characteristics” of nuclear weapons ominously distinguish them from conventional weapons in ways that promise to increase civilian death and suffering. First, quantitatively, the blast power, heat, and energy generated far outstrip that of conventional weapons. Second, radiation released is so powerful that it damages DNA, causing death and severe health defects throughout the lives of survivors as well as their children exposed in utero. Third, nuclear weapons make virtually impossible humanitarian assistance to survivors at the blast scene struggling to survive, leading to more suffering and death. Fourth, damage to the environment may cause not only devastating environmental harm itself but also widespread famine and starvation. And fifth, nuclear weapons cause long-lasting, multi-generational psychological injury to survivors of the blast. All of these factors weigh heavily against the humanitarian goals of the law of war, which is designed chiefly to prevent and reduce civilian death and suffering.

IV. Law

A. *Baselines*

Before jumping into the specifics of international humanitarian and human rights law, some foundations, or baselines, from which to build my argument should be laid out.

A somewhat preliminary baseline is that the law of war goes by a few names; it also may be called the law of armed conflict or international

⁵⁴ Robert Lifton, *Beyond Psychic Numbing: A Call to Awareness*, 52(4) AMER. J. ORTHOPSYCHIATRY 619, 621 (1982).

⁵⁵ *Id.*

⁵⁶ *Id.* at 623.

⁵⁷ *Id.*

⁵⁸ *Id.* at 626.

humanitarian law. The term international humanitarian law will be used throughout the rest of the Article to alliteratively partner it with the related but distinct field of human rights law. While humanitarian law governs the conduct of hostilities, human rights law applies everywhere and to everyone.⁵⁹ Put differently, while armed conflict triggers humanitarian law, human rights law is ever present and ever applicable, regardless of situation—including armed conflict. The concurrent jurisdiction furnished by these two overlapping bodies of law gives rise to the possibility of conflicts of law. Yet, as discussed in more detail below,⁶⁰ the more specific *lex specialis* of humanitarian law tends to inform and complement the governing standards of human rights law during armed conflict, such that human rights law effectively adopts, or is heavily informed by, international humanitarian law for certain wartime rules.⁶¹

Another baseline is that humanitarian and human rights law are quintessentially international law.⁶² To underestimate the importance of this baseline would be a serious and ultimately very confusing mistake. It is true that these laws are often incorporated into domestic law,⁶³ but their source and substance derive not from domestic lawmaking apparatuses but instead from international law.⁶⁴

⁵⁹ Here I take a customary international law view of human rights rather than a strict treaty-based view under which, according to the U.S. position, only states are obliged to uphold human rights abuses within their respective territories or under their effective control. Under customary law, all human beings have certain fundamental rights—including the right not to be arbitrarily deprived of life—that may be enforced against individual defendants, *see infra* Part IV.C. While a traditional view of human rights involved the state qua state’s obligation to individuals, recent developments like the prolific U.S. Alien Tort Statute litigation have made clear, even in the United States, that individual human beings (and perhaps private corporations) can be liable for depriving other human beings of fundamental human rights. These rights are also not limited to a state’s territory but rather apply everywhere, since “there is no jurisdictional limitation to the reach of international human rights law, at least as it applies to nuclear weapons.” Casey-Maslen, *supra* note 34, at 666.

⁶⁰ *See infra* notes 124–127, acknowledging the debate surrounding this topic but adopting the ICJ view in the Advisory Opinion so as to move the Article forward.

⁶¹ I acknowledge that this is a hotly debated point. *See generally* Marko Milanovic, *The Lost Origins of Lex Specialis: Rethinking the Relationship between Human Rights and International Humanitarian Law*, in THEORETICAL BOUNDARIES OF ARMED CONFLICT AND HUMAN RIGHTS 78 (Jens David Ohlin ed., 2014); DARAGH MURRAY ET. AL, PRACTITIONER’S GUIDE TO HUMAN RIGHTS LAW IN ARMED CONFLICT 3 (2016). However, I do not have the space to fully explore it in this Article. As I discuss in Part IV.C, below, because the ICJ adopted the view of *lex specialis* articulated above in its Advisory Opinion, *see* Advisory Opinion, 1996 I.C.J. at ¶ 25, I adopt it here for purposes of moving the discussion forward.

⁶² Advisory Opinion, 1996 I.C.J. at ¶ 75; *see also infra* note 63.

⁶³ LOW MANUAL, *supra* note 18, at 1059–60.

⁶⁴ Kehler, *supra* note 19, at 58 (former Commander of U.S. STRATCOM describing his “responsibility to implement and enforce . . . the president’s direction to ensure [that] plans compl[ie]d with the body of international law generally described as LOAC.”). For more on the United States’ accepting Additional Protocol I to the Geneva Convention as customary international law binding on the United States, see Jeffrey G. Lewis & Scott D. Sagan, *The Nuclear Necessity Principle: Making U.S. Targeting Policy Conform with Ethics & the Laws of*

Next, there are two key types of international law at issue when it comes to how humanitarian and human rights laws are made and operate: treaties and custom. There is treaty law, whereby states ratify an instrument providing for certain humanitarian and human rights protections. And then there is what is called “customary international law.”

Treaty law is probably the easier to comprehend because it can crudely be analogized to a contract: states contract (treaty) with each other to provide certain humanitarian and human rights protections. If a state breaches the contract, other states may similarly breach or take counter-measures against the breaching state to either bring it into compliance or kick it out of the contractual community (treaty regime). Finally, as with a contract, the treaty does not bind states that have not assented to, or, in international legal speak, ratified, the agreement.

Custom is trickier. It is comprised of two elements: (1) state practice; and (2) *opinio juris*—that is, the intent or belief that the practice arises out of a sense of legal obligation. Unlike treaty law, this form of international law is not like a contract. Quite the contrary, its law binds all states regardless of whether they have ratified a treaty. As a binding customary law for all states, and indeed, all actors everywhere, it may be thought of as a universal law that covers the globe. In fact, there are some offenses—including war crimes—that give rise to what is called “universal jurisdiction,” meaning any state in the world has jurisdiction to prosecute the perpetrators.⁶⁵

To satisfy the state-practice component of customary international law, the practice must be consistent and widespread; and although the precise threshold for widespread is as yet unresolved, there must at a minimum be a supermajority of states that agree to and follow the rule consistently.⁶⁶ The *opinio juris* component can be gleaned from official statements and actions demonstrating that states follow the practice out of a sense of legal obligation and not just for purely political or expedient ends. This is sometimes referred to as the “psychological” element of the customary law equation because it purports to get into the mind of the state and communicate its thinking.⁶⁷ While obviously relying in large part on a fictional anthropomorphization of the state (since states tend not to be

War, 145 DAEDALUS 62, 67 (2016); Brian Egan, *International Law, Legal Diplomacy, and the Counter-ISIL Campaign: Some Observations*, 92 INT’L L. STUD. 235, 241–43 (2016).

⁶⁵ See generally Anthony J. Colangelo, *The Legal Limits of Universal Jurisdiction*, 47 VA. J. INT’L L. 149 (2006).

⁶⁶ RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW OF THE UNITED STATES § 102(2) (1987) (“Customary international law results from a general and consistent practice of states followed by them from a sense of legal obligation.”) [hereinafter RESTATEMENT OF U.S. FOREIGN RELATIONS LAW]. While it may be difficult to prove state practice with respect to nuclear weapons for the same reason it is difficult to prove a negative, the absence of their use by states points to a practice of, at minimum, restraint. It should also be noted that treaties themselves may, in certain circumstances, constitute strong evidence of custom because they represent the state practice of entering into the treaty and the *opinio juris* of treating the terms of that treaty as legally binding.

⁶⁷ Anthony A. D’Amato, *Groundwork for International Law*, 108 AM J. INT’L L. 650, 666 (2014).

monolithic in their decision-making), the psychological element nonetheless may be a useful heuristic for understanding what is meant by *opinio juris*.

Now, generally speaking, a state may treaty around the default customary rule in the same way parties may contract around a default common law rule. But there are some norms of customary international law that cannot be circumvented by treaty. These mandatory rules are called *jus cogens*, or peremptory norms of international law.⁶⁸ They are mostly framed in terms of prohibitions: no genocide, no torture, no crimes against humanity, no war crimes.⁶⁹ Thus a state cannot decide, on its own, to opt out of these prohibitions. Nor can it treaty with another state to do the same. It would be as if Hitler and Mussolini entered into an agreement to exterminate ethnic minorities. *Jus cogens* would immediately swoop in to invalidate that treaty from the start. It is necessary to stress again, however, that these *norms* are framed in the nature of prohibitions: no genocide, no war crimes, etc. They have little if anything to say about if and how liability attaches to a violation of the norm—just that there is a violation of international law. This is of crucial importance to the discussion of belligerent reprisals below⁷⁰ because it may synthesize *jus cogens* with other doctrines humanitarian law which authorize otherwise unlawful conduct, at least insofar as liability is concerned.

A final baseline: there is a difference between the law of going to war (*jus ad bellum*) and the humanitarian law of how one conducts war (*jus in bello*).⁷¹ This Article is principally concerned with the latter—how hostilities are conducted—because that is the realm in which an illegal strike order would be handed down. Put another way, even if a nuclear-strike order would start a legally authorized war (*jus ad bellum*), it is a separate question whether the strike order itself is a legal means of conducting the military action (*jus in bello*).

In short, humanitarian and human rights law are distinct but related strands of international law, which may be based in treaty or custom. If the law is customary, then it applies to all states and, Part VI argues, also to non-state actors. Indeed, customary international law covers the entire globe and applies to everyone (that is, after all, the entire point of a truly international law). Although not every state has ratified the most relevant treaties governing humanitarian law—in particular Additional Protocol I to the Geneva Conventions—certain principles of humanitarian and human rights law have passed into custom.⁷² Moreover, some customary law, like prohibitions on war crimes and arbitrary loss of life, have become *jus cogens*⁷³ and are also subject to universal jurisdiction.⁷⁴

⁶⁸ RESTATEMENT OF U.S. FOREIGN RELATIONS LAW, *supra* note 66, § 702.

⁶⁹ *Id.*; see also Advisory Opinion, 1996 I.C.J. at ¶ 83; Evan J. Criddle & Evan Fox-Decent, *A Fiduciary Duty of Jus Cogens*, 34 YALE J. INT'L L. 331 (2009).

⁷⁰ See *infra* Part IV.C.

⁷¹ See generally Robert D. Sloane, *The Cost of Conflation: Preserving the Dualism of Jus ad Bellum and Jus in Bello in the Contemporary Law of War*, 34 YALE J. INT'L L. 47 (2009).

⁷² Advisory Opinion, 1996 I.C.J. at ¶ 41.

⁷³ See *id.* ¶ 83; ICC Statute, *supra* note 17, art. 5(c); RESTATEMENT OF U.S. FOREIGN RELATIONS LAW, *supra* note 66, § 702(c).

Accordingly, the major question for the next section is: “What types of orders to detonate nuclear weapons are manifestly illegal under international humanitarian and human rights law?”

B. Humanitarian Law

Four fundamental principles govern international humanitarian law: distinction between combatants and civilians, proportionality, military necessity, and the prevention of unnecessary suffering. These principles are classed in the *jus in bello* category and any serious violation of humanitarian law is considered a war crime.⁷⁵ The differences between nuclear weapons and conventional weapons alter the analysis of each principle under humanitarian law. The result is that an order to launch a nuclear weapon is legally distinct from an order to launch a conventional weapon. Since the nuclear launch order is legally distinct, or at least produces legally distinct real-world outcomes, it invites a distinct legal analysis that may well yield a different legal outcome. It is an analysis and an outcome with which those responsible for deploying nuclear weapons ought to be intimately familiar because it can mean the difference between a lawful strike and a humanitarian or human rights violation and, consequently, the difference between following a legal nuclear strike order and a duty and right to disobey an illegal one.

Before getting into specifics, the difference between legal standards and legal rules should be emphasized. A legal rule is a hard and fast line, the content and application of which are easy to administer—think: “Do not exceed the speed limit.” Either one exceeds the speed limit or one does not. Legal rules have the

⁷⁴ See Colangelo, *supra* note 65, at 149.

⁷⁵ Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts (Protocol I) art. 85, June 8, 1977, 1125 U.N.T.S. 3 [hereinafter Additional Protocol I], which provides:

3. In addition to the grave breaches defined in Article 11, the following acts shall be regarded as grave breaches of this Protocol, when committed wilfully, in violation of the relevant provisions of this Protocol, and causing death or serious injury to body or health:

- (a) Making the civilian population or individual civilians the object of attack;
- (b) Launching an indiscriminate attack affecting the civilian population or civilian objects in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a) (iii);
- (c) Launching an attack against works or installations containing dangerous forces in the knowledge that such attack will cause excessive loss of life, injury to civilians or damage to civilian objects, as defined in Article 57, paragraph 2 (a) (iii);
- (d) Making non-defended localities and demilitarized zones the object of attack;
- (e) Making a person the object of attack in the knowledge that he is *hors de combat*;
- (f) The perfidious use, in violation of Article 37, of the distinctive emblem of the red cross, red crescent or red lion and sun or of other protective signs recognized by the Conventions or this Protocol.

advantage of *ex ante* clarity and administrative efficiency, but they often give rise to after-the-fact exceptions when challenged. A legal standard, by contrast, is a purposefully flexible and context-specific guiding principle, the content and application of which are more situational—think: “Drive reasonably.” Both the rule and the standard would prohibit driving recklessly but the standard may permit, say, going above the speed limit to get someone in urgent need to the hospital, while the rule unambiguously prohibits it. Much of humanitarian law is essentially standard based. That is, while the principles may sometimes sound like rules in a vacuum, their application in real life is contextual. Thus, what constitutes a “proportional” attack under humanitarian law will depend on the precise situation on the ground, the military advantage expected, the probability and degree of expected civilian deaths, and—crucially—the type of weapon used.⁷⁶

As largely a collection of standards, humanitarian law mostly lacks the situational clarity that rules enjoy. Rather, as noted, application of humanitarian law standards is highly contextual. As such, there is less certainty at the moment an order is handed down that the order would be illegal under the laws of war. Accordingly, holding an individual to a strict legal-versus-illegal line in the sand would be both unfair and unrealistic given the pressures and need to obey orders generally in situations of armed conflict, lest the entire edifice of military effectiveness disintegrate. Rather, as already noted,⁷⁷ the needle moves in favor of a presumption of an order’s legality, such that to refuse the order it must be “manifestly illegal,” not merely of arguable legality.⁷⁸ The manifestly illegal standard not only creates an affirmative defense to the charge of disobeying orders in military proceedings;⁷⁹ it also insulates defendants from borderline or even sensationalist allegations of war crimes since in any armed conflict there is a high probability of civilian death, some of which may be permissible under international law.

1. Distinction

The principle of distinction or protection of civilians not taking part in hostilities is in many ways the wellspring of all humanitarian law principles. A famous formulation is found in Additional Protocol I of the Geneva Conventions (which embodies customary law⁸⁰):

⁷⁶ See, e.g., *id.*, art. 57(2)(a)(ii) (“With respect to attacks, the following precautions shall be taken: those who plan or decide upon an attack shall . . . take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects.”).

⁷⁷ See *supra* Part II.D.

⁷⁸ See *id.*

⁷⁹ See, e.g., JOINT SERV. COMM. ON MIL. JUST., MANUAL FOR COURTS-MARTIAL UNITED STATES Rule 916(d) (2016).

⁸⁰ See Advisory Opinion, 1996 I.C.J. at ¶¶ 41, 75.

In order to ensure respect for and protection of the civilian population and civilian objects, the Parties to the conflict shall at all times distinguish between the civilian objects and military objectives and accordingly shall direct their operations only against military objectives.⁸¹

As their names suggest, military personnel and military objects contribute to military action and objectives. The destruction, capture, or neutralization of such action and objectives must be designed to offer a direct military advantage and must not target civilian populations.⁸² To adhere to the principle of distinction, military forces must refrain from using means and methods that strike without distinction near a civilian population. Moreover, the methods or means of attack must protect against effects that cannot be limited as required by international humanitarian law,⁸³ a point to which we will return below.⁸⁴ This is often referred to as the prohibition on indiscriminate attacks⁸⁵—a humanitarian law that attends the bedrock distinction principle.

Nuclear weapons have the potential to annihilate this bedrock distinction principle. If civilians are within the radius of the immense blast yield, they will be incinerated along with military personnel and objectives.⁸⁶ Unlike conventional weapons, which can more accurately target military personnel and objectives, nuclear weapons indiscriminately pulverize anything in their detonation zone,

⁸¹ Additional Protocol I, *supra* note 75, art. 48. Similarly, Article 51(2) provides: “The civilian population as such, as well as individual civilians, shall not be the object of attack. Acts or threats of violence the primary purpose of which is to spread terror among the civilian population are prohibited.” And J.I. Henckaerts and L. Doswald-Beck explain:

The parties to the conflict must at all times distinguish between civilians and combatants. Attacks may only be directed against combatants. Attacks must not be directed against civilians The parties to the conflict must at all times distinguish between civilian objects and military objectives. Attacks must not be directed against civilian objects.

J.I. HENCKAERTS & DOSWALD-BECK, CUSTOMARY INTERNATIONAL LAW OF WAR 3 (2005).

⁸² HENCKAERTS & DOSWALD-BECK, *supra* note 81, at 25–26, 29.

⁸³ Maresca & Mitchell, *supra* note 47, at 629; Additional Protocol I, *supra* note 75, art. 57(2)(a)(ii).

⁸⁴ See *infra* Part IV.B.2 (addressing the proportionality principle).

⁸⁵ See Additional Protocol I, *supra* note 75, art. 51(4):

4. Indiscriminate attacks are prohibited. Indiscriminate attacks are:
 - (a) those which are not directed at a specific military objective;
 - (b) those which employ a method or means of combat which cannot be directed at a specific military objective; or
 - (c) those which employ a method or means of combat the effects of which cannot be limited as required by this Protocol; and consequently, in each such case, are of a nature to strike military objectives and civilians or civilian objects without distinction.

⁸⁶ Strictly speaking, there is a difference between the blast zone and the thermal heat zone. They will overlap but it is the latter that will incinerate people, as opposed to the blast effects, primary and secondary. At the core people will simply evaporate.

which promises to be far larger than that of any conventional weapon. Furthermore, the ionizing radiation emanates well beyond the blast yield, killing and harming innocent civilians (as well as their unborn children). The breadth of effects caused by a nuclear blast means that it would be difficult to say it was “directed” against the military objective around which civilians are located, especially in contradistinction to conventional weapons. In brief, a nuclear blast in any area with a civilian population would almost by definition manifestly violate the cardinal principle of distinction where a conventional weapon option is available, and would thus constitute a war crime.

Here an analogy can be made to biological weapons, which the international community has outlawed.⁸⁷ To borrow a phrase used by the ICJ in the context of nuclear weapons, biological weapons also cannot be contained in space or time. Like the indiscriminate and unpredictable consequences geographically and temporally of biological weapons on civilian populations, the repercussions of nuclear weapons are extraordinarily unpredictable and have the potential to affect people far into the future and, some would argue, even future generations.⁸⁸ Thus, where effective weapons—like conventional weapons—*can* be contained in space and time and are not used in favor of weapons which cannot—like nuclear weapons—use of nuclear weapons would be manifestly illegal under humanitarian law.

2. Proportionality

The principle of proportionality appears in a number of places in Additional Protocol I to the Geneva Conventions. For instance, Article 51(5)(b) prohibits: “[A]n attack which may be expected to cause incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”⁸⁹ Article 57(2)(a)(iii) and (b) effectively repeat this language.⁹⁰ And, according to Article 57(2)(a)(ii):

[W]ith respect to attacks, the following precautions shall be taken: those who plan or decide upon an attack shall: take all feasible precautions in the choice of means and methods of attack with a view to avoiding, and in any event to minimizing, incidental loss of civilian life, injury to civilians and damage to civilian objects.⁹¹

⁸⁷ Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, June 17, 1925, 26 U.S.T. 571, 94 L.N.T.S. 65; Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, Apr. 10, 1972, 26 U.S.T. 583, 1015 U.N.T.S. 163.

⁸⁸ Tilman A. Ruff, *The Humanitarian Impact and Implications of Nuclear Test Explosions in the Pacific Region*, 97 INT’L REV. RED CROSS 775 (2015); *see also supra* note 53.

⁸⁹ Additional Protocol I, *supra* note 75, art. 51(5)(b).

⁹⁰ *Id.* art. 57(2)(a)(iii), 57(2)(b).

⁹¹ *Id.* art. 57(2)(a)(ii).

In other words, an attack—even an attack that is anticipated to achieve a concrete and direct military advantage—cannot disproportionately kill or injure civilians. Rather, both the anticipated military advantage and the loss of civilian life must be calculated prior to the attack. In this sense, and as the language makes plain, there is a foreseeability criterion built into the proportionality standard.⁹² Thus, like other standards, the test for proportionality considers what is reasonable under the circumstances.

As opposed to a conventional weapon attack, a strategic nuclear attack near a civilian population is exceedingly likely to be disproportionate. Conventional weapons, and especially “smart” weapons, can target discrete military objectives even within civilian populated areas. Yet when it comes to nuclear weapons, the number of civilians killed and injured will be exponentially magnified by the larger blast yield and radiation; again, with the latter inflicting death and disease throughout the lifetime of survivors of the initial blast—surely a foreseeable consequence given the experience and extensive studies done regarding the survivors of Hiroshima and Nagasaki. Consequently, there is a high probability that any nuclear attack near a civilian population would be clearly disproportionate and, hence, manifestly illegal, if a conventional weapon alternative is available to achieve the same military objectives. Again, the analogy to biological weapons is instructive: like nuclear weapons, these types of weapons cause far more harm spatially and temporally than conventional weapons, rendering them disproportionate. Indeed, biological weapons were banned for this very reason.⁹³

3. Military Necessity

A leading treatise on international criminal law describes the principle of military necessity by stating that “no act of violence can be used that does not contribute to overcoming the enemy, whereas any act that helps overcome the enemy is permissible unless other *jus in bello* principles prohibit it.”⁹⁴ Similarly, the U.S. Department of Defense Law of War Manual includes the language, “[m]ilitary necessity does not justify actions that are prohibited by the law of war,”⁹⁵ and the British Joint Service Manual of The Law of Armed Conflict defines military necessity as a principle that permits “those measures which are

⁹² There may be a retroactivity problem if, at the stage of planning, the strike looks legal but unforeseeable consequences due to the shifting of circumstances renders the strike illegal when executed. In such a situation, “what is reasonable under the circumstances” should mean what is reasonable under the circumstances during the time the strike was planned; not an *ex post* evaluation of the legality in light of changed circumstances.

⁹³ *Supra* note 87; Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, June 17, 1925, 26 U.S.T. 571, 94 L.N.T.S. 65; Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons and on their Destruction, Apr. 10, 1972, 26 U.S.T. 583, 1015 U.N.T.S. 163.

⁹⁴ DAVID LUBAN, JULIE R. O’SULLIVAN & DAVID P. STEWART, INTERNATIONAL AND TRANSNATIONAL CRIMINAL LAW 1040–41 (2010).

⁹⁵ LOW MANUAL, *supra* note 18, ¶ 2.2.2.1.

indispensable for securing the ends of the war, and which are lawful according to the modern law and usages of war.”⁹⁶ Just war theorists call this the “necessity principle.” Namely, the requirement to refuse using especially catastrophic weapons when “they are not necessary to achieve legitimate military objectives and thereby minimize collateral damages to civilians.”⁹⁷

Necessity is the source of some confusion in international humanitarian law. For example, it is “often misunderstood to mean that regardless of the law, warriors can do whatever it takes to win.”⁹⁸ But in fact other *jus in bello* principles constrain necessity, often by way of incorporation, weaving a sort of web of interconnected laws of war designed to reduce civilian death and harm. In this connection, Jeffrey G. Lewis and Scott Sagan propose that when it comes to necessity, states should refrain from using nuclear weapons when they are not necessary to achieve legitimate military objectives, thus minimizing civilian death and suffering.⁹⁹

Because we know that nuclear weapons are quantitatively and qualitatively different from all conventional weapons, this limitation makes sense. When one considers the extensive blast power and coverage, the pervasive radioactivity, and the prolonged suffering, as well as the severe environmental harms spawned by nuclear weapons, it becomes almost impossible to conclude that they would result in less civilian harm than conventional weapons near a civilian population. Thus distinct principles of the humanitarian law of necessity (which authorizes an attack to help overcome the enemy that is not contrary to other *jus in bello* principles) and proportionality (which requires a proportionate attack) exhibit a synergistic relationship supporting one another to prevent civilian death and harm to the most realistic extent possible.¹⁰⁰

Indeed, in a famous statement by the ICJ in the *Nuclear Weapons Advisory Opinion*, the Court observed: “The threat or use of nuclear weapons would generally be contrary to the rules of international law applicable in armed conflict, and in particular rules of humanitarian law.”¹⁰¹ Critical to this reasoning was the humanitarian law of necessity. The Court explained that one of the preeminent rules requires that an “armed attack” must be “necessary,” a rule that interacted with the proportionality requirement and that had been “well established in customary international law.”¹⁰² As Lewis and Sagan point out, the

⁹⁶ BRITISH JOINT SERVICE, PUBLICATION 383 THE JOINT SERVICE MANUAL OF THE LAW OF ARMED CONFLICT 22, ¶ 2.2.2 (2004) (quoting General Orders No. 100: Instructions for the Government of Armies of the United States in the Field (Apr. 24, 1863), reprinted in 2 FRANCIS LIEBER, CONTRIBUTIONS TO POLITICAL SCIENCE 245, 247–74 (1881)).

⁹⁷ Lewis & Sagan, *supra* note 64, at 64; see Additional Protocol I, *supra* note 75, art. 57(2)(a)(ii).

⁹⁸ LUBAN ET. AL, *supra* note 94, at 1041.

⁹⁹ See Lewis & Sagan, *supra* note 64, at 64.

¹⁰⁰ As a proposition, especially with regard to the weapon used, this is more of a normative rather than a descriptive statement.

¹⁰¹ Advisory Opinion, 1996 I.C.J. at ¶ 105.

¹⁰² *Id.* ¶ 41.

concept of military necessity was not just whether nuclear weapons were a military necessity to knock out a certain target, but also whether “the means themselves were necessary to the target and thus permissible.”¹⁰³ Hence, holistically viewed, both military necessity and the means of achieving those necessities merge into an analysis ultimately designed to reduce civilian casualties and harm.¹⁰⁴ A case can therefore be made that where conventional weapons would achieve the same military objective as a nuclear weapon, but with less civilian death and suffering, the nuclear strike is manifestly illegal under necessity principles.

4. Prevention of Unnecessary Suffering and Superfluous Injury

Like the principle of distinction, prevention of unnecessary suffering and superfluous injury also appears in Additional Protocol I as a Basic rule. The rule provides: “It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.”¹⁰⁵ International humanitarian law recognizes that both death and suffering of combatants and civilians will occur. What is impermissible is causing unnecessary suffering.

Although this rule is designed chiefly to protect combatants,¹⁰⁶ in modern day usage it tends to be applied to civilians as well.¹⁰⁷ Thus the long-term effects of cancer and other diseases and harms throughout the lifetimes of both civilians and military survivors must be taken into account and must inform the contextual inquiry of whether the nuclear strike will cause unnecessary suffering and superfluous injury. Given these considerations, it would be a rare situation in which a nuclear option (as opposed to a conventional one) would *not* cause superfluous injury and unnecessary suffering. Accordingly, in the vast majority of situations in which a nuclear weapon is used over a conventional weapon, the nuclear option would be manifestly illegal.¹⁰⁸

5. Belligerent Reprisals

One potential wrinkle in this Article’s argument is the controversial doctrine of belligerent reprisals. These are “acts in breach of the law of a rule of armed conflict directed by one belligerent party against the other with a view to inducing the latter party to stop violating that or another rule of international

¹⁰³ Lewis & Sagan, *supra* note 64, at 69.

¹⁰⁴ See also William H. Taft IV, *Self-Defense and the Oil Platforms Decision*, 29 YALE J. INT’L L. 295, 304 (2004) (“The condition of ‘necessity’ . . . requires that no reasonable alternative means of redress are available.”).

¹⁰⁵ Additional Protocol I, *supra* note 75, art. 35(2).

¹⁰⁶ See Maresca & Mitchell, *supra* note 48, at 637. Protection of civilians fits better under the category of proportionality, however.

¹⁰⁷ *Id.*

¹⁰⁸ Again, biological weapons provide a good analogy: like nuclear weapons, their scope and consequences are far larger and longer lasting than conventional weapons, causing larger degrees of suffering far into the future.

humanitarian law.”¹⁰⁹ In other words, the doctrine authorizes a state to violate a rule of international humanitarian law as a means of halting another state’s violation of international humanitarian law. As such, it permits an otherwise unlawful act by one state in order to bring another state into compliance with the law. The ICJ gave only an oblique nod to the doctrine in its *Nuclear Weapons Advisory Opinion*, noting that reprisals are prohibited against the enemy’s environment,¹¹⁰ and are subject to standards of proportionality.¹¹¹

Here one must distinguish between proportionality in ordinary international humanitarian law and the exceptional situation of proportionality in belligerent reprisals. The proportionality standard in ordinary international humanitarian law is proportionality between expected civilian casualties and military advantage.¹¹² Under the principle of belligerent reprisals, however, the reprisal must be proportionate to the breaching state’s original violation of international law.¹¹³ The reprisal does not have to be *identical* to the original breach (something that could, theoretically, plant the seed of a new customary norm), but it must be proportionate. In other words, if *State A* breaches *Rule X* of international law, *State B* need not also breach *Rule X* to constitute a legitimate reprisal. Rather, *State B* can breach *Rule Y* so long as breaching *Rule Y* is proportionate to breaching *Rule X*. Moreover, once the initial violation has stopped, so too must the belligerent reprisal.¹¹⁴

A belligerent reprisal must meet a number of other criteria for the otherwise unlawful act to be justifiable under international humanitarian law. It must, for example, be intended to coerce the initially breaching party back into compliance (as opposed to, say, punishing that party).¹¹⁵ Further, it must be necessary. Like proportionality, in the context of belligerent reprisals the principle of necessity takes on another meaning. Unlike necessity in ordinary international law, which authorizes an attack to help overcome the enemy, necessity in the context of belligerent reprisals means that the reprisal is a sort of last-resort option after peaceful measures of persuasion have failed,¹¹⁶ or what is sometimes called

¹⁰⁹ Fritz Kalshoven, *Belligerent Reprisals Revisited*, 21 NETH. Y.B. OF INT’L L. 43, 44 (1990).

¹¹⁰ See Advisory Opinion, 1996 I.C.J. at ¶ 31.

¹¹¹ See *id.* ¶ 46.

¹¹² See *supra* Part IV.B.2.

¹¹³ See Stuart Casey-Maslen, *The Use of Nuclear Weapons as a Reprisal Under International Humanitarian Law*, in NUCLEAR WEAPONS UNDER INTERNATIONAL LAW 171, 178 (Gro Nystuen, Stuart Casey-Maslen & Annie Golden Bersagel eds., 2014).

¹¹⁴ See Louis Maresca & Eleanor Mitchell, *The Human Costs and Legal Consequences of Nuclear Weapons Under International Law*, 97 INT’L REV. RED CROSS 621, 643 (2015).

¹¹⁵ See Paula B. McCarron & Cynthia A. Holt, *A Faustian Bargain? Nuclear Weapons, Negative Security Assurances, and Belligerent Reprisal*, 25 FLETCHER F. WORLD AFF. 203, 222 (2001); Theodore Richard, *Nuclear Weapons Targeting: The Evolution of Law and U.S. Policy*, 224 MIL. L. REV. 862, 921 n.364 (2016).

¹¹⁶ Almost by definition, these measures, which include diplomatic and economic sanctions, for example, as well as belligerent reprisals themselves, must be decided upon at the highest level of government, see, e.g., Casey-Maslen, *supra* note 113, at 177, a trait that comports with the overall theme that the most critical military decisions are made high up in the chain of command.

the principle of subsidiarity.¹¹⁷ Naturally, in some contexts, as in the launch of a weapon of mass destruction against a state, virtually no alternative means of inducing compliance are possible prior to the belligerent reprisal—a scenario discussed below.

There is also the problem of escalation. Namely, one unlawful breach will lead to another unlawful breach, which in turn will lead to another unlawful breach, and so on. Belligerent reprisal doctrine tries to avoid this outcome by placing precincts on the originally breaching state by preventing what might be thought of as counter-belligerent reprisals¹¹⁸—say, *State A* violates the law, *State B* undertakes a belligerent reprisal, *State A* may not then undertake a counter-belligerent reprisal. Nonetheless, real-world warfare may not obey such constraints,¹¹⁹ leading to the dreaded “parade of horrors” and, in large part, to the controversy surrounding the doctrine. Other criteria insist that the initial breach be a serious violation of international law; that the reprisal must be in response to an initial breach (there is no such thing as a pre-emptive belligerent reprisal); and that the reprisal cannot be undertaken against certain targets.¹²⁰ It is this last criterion that causes the most concern when it comes to nuclear weapons and civilian death and suffering.

Although there is an observable trend in humanitarian law to protect civilian life outright in all situations, including with respect to belligerent reprisals, Casey-Maslen concludes after careful study that custom is underdeveloped in the belligerent reprisal area and, as a result, “customary law has not yet outlawed belligerent reprisals against civilians in enemy territory.”¹²¹ This leads to a vexing scenario for this Article’s thesis: Suppose *State A* launches an illegal strike against both a military and a civilian population in *State B*, violating essentially all or most principles of humanitarian law. To the extent an illegal conventional weapon strike by *State B* complies with the belligerent reprisal criteria, and is as effective as a nuclear strike in bringing *State A* into compliance with the law, it should be used. However, if conventional weapons cannot achieve the goals of belligerent reprisals and induce the other state into compliance with the law, an otherwise illegal nuclear strike may be warranted.¹²²

¹¹⁷ Casey-Maslen, *supra* note 113, at 176–77.

¹¹⁸ Maresca & Mitchell, *supra* note 48, at 643.

¹¹⁹ Richard, *supra* note 115, at 975 (recounting “history’s caution that reprisals tend to escalate conflicts rather than bring parties back into conformity with the law”).

¹²⁰ Maresca & Mitchell, *supra* note 48, at 176–84; *see also* Advisory Opinion, 1996 I.C.J. at ¶ 31.

¹²¹ Casey-Maslen, *supra* note 113, at 190.

¹²² If in response to a conventional weapon strike, a nuclear strike may also contravene a “no first use” policy, whereby a state promises that it will not be the first to use nuclear weapons in a conflict. *See* Dominick Tierney, *Refusing to Nuke First: Why Rejecting Nuclear Preemption Reflects Strength, Not Weakness*, ATLANTIC (Sept. 14, 2016) <https://www.theatlantic.com/international/archive/2016/09/nuclear-obama-north-korea-pakistan/499676/> [https://perma.cc/Q9JF-VGWG] (explaining the doctrine of no first use).

Note that this scenario may contemplate a manifestly illegal use of nuclear weapons by the reprising state. Under proportionality requirements it is hard (but not impossible¹²³) to imagine a belligerent reprisal involving nuclear weapons being used in response to anything other than a prior unlawful attack similarly employing nuclear or other weapons of mass destruction, rendering the nuclear belligerent reprisal situation (one hopes) unlikely or at least rare in the current geopolitical environment.

What does all this mean for the Article's argument? In one sense, it remains undisturbed. Where conventional weapons can achieve the same objectives as nuclear weapons, conventional weapons should be used. But in another sense, the doctrine of belligerent reprisals is exceptional in that it may authorize what is otherwise a manifestly illegal nuclear strike in certain circumstances; namely, the use of nuclear weapons despite their unique characteristics.

At this point one might ask: But if a manifestly illegal nuclear strike targeting civilians with nuclear weapons leads to war crimes, how does that square with the doctrine of *jus cogens*, or peremptory norms of international law, which trump everything else—including, presumably, the doctrine of belligerent reprisals? Would the *jus cogens* norm prohibiting war crimes not create liability for all who planned and executed a reprisal *authorized by international humanitarian law*?

Possibly not. Recall that *jus cogens* norms only prohibit certain conduct that violates international law; they say little to nothing about liability resulting from that violation. If the doctrine of belligerent reprisals is to be taken seriously under humanitarian law as justifying otherwise unlawful conduct, it may be treated as a species of affirmative defense to liability for the violation of international humanitarian law. Here the violation of the *jus cogens* norm is disaggregated from the accountability mechanism of enforcing international law. Unlike *jus cogens*, international humanitarian law does have accountability mechanisms, and rather robust ones at that. This is where the defense of belligerent reprisals comes in. The war crimes endure as violations of *jus cogens*, but under international humanitarian law, no liability attaches.

C. Human Rights Law

In addition to humanitarian law (the law of war), international human rights law (the law that protects human rights everywhere the world over) has something to say about whether a nuclear strike is legal. Questions exist as to

¹²³ Imagine a very large, militarily powerful state that threatens the sovereign existence of a small one without using nuclear weapons. The defenders of the small state might feel that only the nuclear option would be a sufficient reprisal, triggering a complex, but unfortunately endemic, proportionality question: proportionate to what? If the small state ceases to exist but the large state endures despite the nuclear attack, it could be rather difficult to conclude that the small state's reprisal was disproportionate.

whether and how human rights law overlaps with humanitarian law during times of armed conflict.¹²⁴ Such overlap would theoretically create concurrent jurisdiction: both laws govern the same conduct, leading to a potential conflict of laws. The ICJ's view in the *Nuclear Weapons Advisory Opinion* resolved this potential conflict by essentially incorporating the standards of humanitarian law into the standards of human rights law, effectively reconciling any conflict such that while both laws apply, a single standard governs—namely, that of humanitarian law.¹²⁵

The technique used to arrive at this solution commonly goes by its Latin name, *lex specialis*. *Lex specialis* simply means that the more specific law governs over the more general.¹²⁶ According to the ICJ, because international humanitarian law governs the more specific situation of armed conflict, it wins.¹²⁷ This is not to say that it pushes human rights law out of the way entirely. Rather, human rights law also applies. But instead of prescribing its own separate standard, it adopts or is informed by the *lex specialis* of humanitarian law. Although the Court has more recently moved away somewhat from the *lex specialis* concept to a more complementary approach,¹²⁸ there is no reason to believe that it has changed its opinion from its statement in the *Advisory Opinion* that “whether a particular loss of life, through the use of a certain weapon in warfare, is to be considered an arbitrary deprivation of life contrary to Article 6 of the [International] Covenant [of Civil and Political Rights], can only be decided by reference to the law applicable in armed conflict and not deduced from the terms of the Covenant itself.”¹²⁹

What does this mean for the duty to reject a nuclear strike order? First, any war crime that results in civilian deaths violates not only humanitarian law but also human rights law—in particular, the right against the arbitrary deprivation of life.¹³⁰ Second, given what we know about the potential destructive power of nuclear weapons and their far-reaching, long-term effects, it would not be

¹²⁴ See *infra* note 127.

¹²⁵ See *id.*

¹²⁶ See Natasha Balendra, *Defining Armed Conflict*, 29 CARDOZO L. REV. 2461, 2464 (2008).

¹²⁷ See generally *supra* note 61; Marko Milanovic, *The Lost Origins of Lex Specialis: Rethinking the Relationship between Human Rights and International Humanitarian Law*, in THEORETICAL BOUNDARIES OF ARMED CONFLICT AND HUMAN RIGHTS (Jens David Ohlin ed., 2014); DARAGH MURRAY ET. AL, PRACTITIONER'S GUIDE TO HUMAN RIGHTS LAW IN ARMED CONFLICT 3 (2016).

¹²⁸ Legal Consequences of Construction of Wall in Occupied Palestinian Territory, Advisory Opinion, 2004 I.C.J. Rep. 106 (July 9); Armed Activities on Territory of Congo (Dem. Rep. Congo v. Uganda), Judgment, 2005 I.C.J. Rep. 168 (Dec. 19).

¹²⁹ Advisory Opinion, 1996 I.C.J. at ¶ 25.

¹³⁰ *Id.* (“The Court observes that the protection of the International Covenant of Civil and Political Rights does not cease in times of war, except by operation of Article 4 of the Covenant whereby certain provisions may be derogated from in a time of national emergency. Respect for the right to life is not, however, such a provision. In principle, the right not arbitrarily to be deprived of one's life applies also in hostilities. The test of what is an arbitrary deprivation of life, however, then falls to be determined by the applicable *lex specialis*, namely, the law applicable in armed conflict which is designed to regulate the conduct of hostilities.”).

inconceivable for *some* court to find that their use constitutes an arbitrary deprivation of life. For these violations too are subject to universal jurisdiction.¹³¹ Which leads to the third point: human rights law has far more robust and effective accountability mechanisms than humanitarian law for obeying manifestly illegal orders. There are, of course, regional human rights regimes that guarantee redress in the form of investigation and, if warranted, prosecution.¹³² But more and more, national courts are stepping in to fill the accountability void for serious violations of international law in civil rather than criminal suits. And presumably the signatories to the new Nuclear Weapons Ban treaty¹³³ will widen this accountability in terms of committed jurisdictions.

To take one example, the Alien Tort Statute in the United States grants U.S. district courts “original jurisdiction of any civil action by an alien for a tort only, committed in violation of the law of nations.”¹³⁴ These torts include violations of the law of nations like war crimes and arbitrary loss of life.¹³⁵ Although the U.S. Supreme Court cut back mightily on the scope of this statute by restricting it to torts that “touch and concern” U.S. territory,¹³⁶ presumably a nuclear strike ordered from or against the United States would easily meet that criterion. Again, given what we know about the pervasive effects of nuclear blasts, an individual suit or even an enormous class action seeking to enforce human rights under the statute seems entirely plausible.

V. Chain of Command

The next issue relates to the chain of command and control when it comes to ordering a nuclear strike. This issue is central to the Article’s argument because in order to impose a duty and a right to refuse to execute the order, a reasonable person must have sufficient information to conclude that the order is manifestly illegal. Put another way, the law would not bestow a right, and assuredly not a duty to which liability attaches, unless the individual in question had the requisite facts to make an informed legal judgment.

For instance, suppose the legislature passes a secret law. The law is on the books but nobody knows about it because it is secret. Basic rule-of-law principles would disqualify the law’s application as fundamentally unfair because any individual to whom the law would apply would have had no notice of the law’s existence, let alone its substantive provisions. In somewhat similar fashion, a crewmember on a nuclear submarine who simply receives strike coordinates ought not to be held liable if he does not, or reasonably should not, know the

¹³¹ For an analysis of offenses subject to universal jurisdiction, see Colangelo, *supra* note 65, at 149.

¹³² See Casey-Maslen, *supra* note 34, at 669–70.

¹³³ Klimas, *supra* note 2.

¹³⁴ 28 U.S.C. 1350 (2006).

¹³⁵ See, e.g., *Kiobel v. Royal Dutch Petroleum Co.*, 456 F. Supp. 2d 457, 460 (S.D.N.Y. 2006), *aff’d in part, rev’d in part*, 621 F.3d 111 (2d Cir. 2010), *aff’d* 569 U.S. 108 (2013).

¹³⁶ *Kiobel v. Royal Dutch Petro. Co.*, 569 U.S. 108, 125 (2013).

situation surrounding the strike, what it is targeting, and the probability of manifestly illegal loss of civilian life and attendant war crimes.¹³⁷ While the secret law is fundamentally unfair since there is no notice of the law, the ignorant crewmember scenario is fundamentally unfair because he has insufficient knowledge of the facts. Despite the difference in ignorance between law and facts, the same basic principle applies.

In turn, we must discern within the chain of command and control who has what information when ordering the strike to determine who has the duty and the right to reject an illegal strike order. I shall use the chain of command in the United States for illustrative purposes because it is both the one with which I am most familiar and about which I can gather the most information. I hope that this Article may stimulate similar examinations of the nuclear command hierarchies of the other eight nuclear weapons states as well as NATO.

Further, the legal argument presented here strongly confirms that the chain of command all the way down and across, including all support functions and pre-strike planning, receives and provides personnel with sufficient knowledge and information to judge and reject an illegal order. For the duty to evaluate and reject illegal orders resides not only in high-up positions that craft the options but also in those who ultimately execute them.¹³⁸ Although it occurs in practice, it is actually an abdication of duty to keep those in the last line of the launch sequence in the dark about the humanitarian laws of targeting distinction and discrimination, proportionality, military necessity and other legal principles; as well as about factual information regarding the unique features of nuclear weapons and the strike's intended target and options of conventional weapon use instead.¹³⁹ Only

¹³⁷ This is generally the case. *See* Kehler, *supra* note 19, at 55 (“In many (perhaps most) cases, nuclear crews will not know the specifics of the target they are being ordered to strike.”). So long as a gray area exists in which some strikes may be legal and there is not a comprehensive ban on nuclear weapons, a low-level crewmember may not be able to tell whether the order he is given is manifestly illegal if he is not given sufficient knowledge surrounding the order.

¹³⁸ *Id.* (explaining that “[m]ilitary members are bound . . . to follow orders provided they are legal and have come from competent authority. They are equally bound to question (and ultimately refuse) illegal orders or orders that do not come from a competent authority. Further, they are trained that they must apply the principles of law while executing those illegal orders. Ensuring that the military members who would actually deliver nuclear weapons can verify that nuclear control orders are both legal and have come from competent authority is an important responsibility of commanders at all levels.”); *see also* Charles J. Dunlap, Jr., *Taming Shiva: Applying International Law to Nuclear Operations*, AIR FORCE L. REV., 157, 162 (1997); *accord* email from Major Harold Herring to Anthony Colangelo (Aug. 29, 2017, 15:19 CDT) (“In retrospect, it seems to me our deterrence would be more credible if those charged with the awesome responsibility of launching nukes would, as human beings with consciences, had the information to remove any doubt now instead of wrestling with the issue when an order came down.”).

¹³⁹ Kehler, *supra* note 19, at 55.

with this knowledge of the law and the facts about a particular strike can the low-level crewmember fulfill his duty to reject an order as manifestly illegal.¹⁴⁰

A. *The President*

A natural starting place in the chain of command is the person with the sole power to order the launch of a nuclear weapon: the president.¹⁴¹ Although not technically subject to the superior-orders defense, the president is the one who ultimately gives the order (and thus can be liable for it) so therefore the position is included in this discussion. It is theoretically possible that the president could simply pick up the phone and give an order to a low-level crewmember to launch a nuclear weapon, though this is not how the decision occurs in practice.¹⁴² Nonetheless, past presidents *have* gone so far as to preauthorize the use of nuclear weapons for top military commanders under specified, emergency conditions.¹⁴³

The release of nuclear weapons is also governed by what is referred to as the “two-man rule” (though as we will see, it is a rule that does not bind the president) in order to prevent accidental or malicious launches by a single individual.¹⁴⁴ At the highest level, this rule asks that the president jointly issue launch orders with the Secretary of Defense and continues down the chain of command with commanding officers and executive officers working in tandem, and missile operators agreeing on launch order validity.¹⁴⁵ However, this check on

¹⁴⁰ As Kevin John Heller explains, for example, the Nuremberg tribunals required at least some information on the part of commanders that the proposed action either was, or should have been, known to be illegal in order to generate the duty to disobey the order, although the *mens rea* element vacillated between a knowledge and a negligence standard. See KEVIN JON HELLER, *THE NUREMBERG MILITARY TRIBUNALS AND THE ORIGINS OF INTERNATIONAL CRIMINAL LAW* 266–69 (2011). A lack of knowledge on the part of uninformed crewmembers who are, say, simply given strike coordinates appears not to meet either of those *mens rea* standards given (1) the gray area in which a nuclear strike may be viewed as illegal (or may not) combined with, (2) this Article’s argument that nuclear weapons may be used where conventional weapons would fail, and (3) the manifestly illegal standard not just an illegal standard. Which is not to say that keeping the crewmembers in the dark ought to be the way the chain of command should function. Accord Mark Oisel, *Obeying Orders: Atrocity, Military Discipline, and the Law of War*, 86 CAL. L. REV. 939, 944 (1988) (suggesting that “new knowledge about the bases of cohesion among troops and about the sources of war crimes suggests that military law should, at key points, abandon its traditional insistence on bright-line disciplinary rules in favor of general standards of circumstantial reasonableness. This approach would encourage the exercise of deliberative judgment where only rote order following has hitherto been sought”).

¹⁴¹ Kehler, *supra* note 19, at 55.

¹⁴² See *infra* Parts V.B and C.

¹⁴³ See William Burr, *First Declassification of Eisenhower’s Instructions to Commanders Predelegating Nuclear Weapons Use, 1959-1960*, NAT’L SEC. ARCHIVE (May 18, 2001), <http://nsarchive.gwu.edu/NSAEBB/NSAEBB45/> [<https://perma.cc/G28X-647B>] (examples of such specified, emergency conditions include a sudden Soviet attack on major U.S. forces in Europe, or a Soviet launch on U.S. territory when the president could not be reached).

¹⁴⁴ U.S. Air Force, Instruction 91-104, Nuclear Surety Tamper Control and Detection Programs (2013), <https://fas.org/irp/doddir/usaf/afi91-104.pdf> [<https://perma.cc/3FSX-Z92W>].

¹⁴⁵ JASON FRITZ, HACKING NUCLEAR COMMAND AND CONTROL 16 (2009), http://www.icnnd.org/Documents/Jason_Fritz_Hacking_NC2.pdf [<https://perma.cc/GC8A-34X4>].

the president's authority may be illusory, because there is nothing the Secretary of Defense could do to stop such a presidential strike order, as military officers ordinarily will likely launch nuclear missiles from a valid, presidential command.¹⁴⁶ Incidentally, the Secretary of Defense has never refused to concur with a presidential order to launch nuclear weapons (which is not surprising given that it has only happened twice, and both times during World War II); hence the strength of this check on the president's power is, at this moment, unknown. The point therefore remains that the president has the sole power to directly call the crewmember and issue a command. In such a situation, only the president would likely be exposed to liability for a manifestly illegal order, unless of course the president fills in the crewmember with sufficient detail about the strike such that he or she should know whether it is manifestly illegal under humanitarian and human rights law.

Thus, just as with the international law analysis, analysis of who has the relevant information and when they have it is a contextual inquiry dependent upon the specific situation surrounding the specific strike order.¹⁴⁷ Provision of such information to all individuals down the chain of command should occur, but may not be practical for, say, technical or operational security reasons. Yet one thing is certain: because the president enjoys exclusive authority to issue the order, any duty and accompanying liability for a manifestly illegal strike runs straight up the chain of command to the very top.

B. STRATCOM and Related Bodies

Again, however, a direct order from the president to a crewmember is not how a nuclear strike order would likely operate in practice. Rather, STRATCOM and related bodies like the combatant commands (CCMDs), along with the civilian chain of command, develop options for the president should he contemplate any order ranging from a nuclear strike to those made in emergency or crisis situations.¹⁴⁸ Thus the primary decision to strike and the strike's broad objectives always rest in the president's hands, while his military and civilian chain of command craft options for achieving those objectives. These options may include the nuclear option, about which the president receives detailed information.¹⁴⁹ This process of crafting options comprises the bread and butter of the duty and right to recognize and reject a manifestly illegal order. The fact that those in the chain of command do not actually "pull the trigger" does not relieve them of liability, as the *High Command* case from the Nuremberg tribunal makes

¹⁴⁶ BRUCE G. BLAIR, STRATEGIC COMMAND AND CONTROL 112 (1985).

¹⁴⁷ Telephone Interview with Philip Coyle, Senior Sci. Fellow at the Ctr. for Arms Control and Non-Proliferation; and Assoc. Dir. for Nat'l Sec. and Int'l Affairs in the White House Office of Sci. and Tech. Policy (Apr. 27, 2017).

¹⁴⁸ Kehler, *supra* note 19, at 57–58.

¹⁴⁹ *60 Minutes: The New Cold War—60 Minutes gets a rare look inside U.S. Strategic Command and discovers the extraordinary measures the military takes to make sure only the president can launch a nuclear attack*, David Martin Correspondent (CBS News television broadcast Sept. 18, 2016), <http://www.cbsnews.com/news/60-minutes-new-cold-war-nuclear-weapons-david-martin/>.

clear.¹⁵⁰ As noted above,¹⁵¹ because the inquiry is so contextual, it is possible that anyone down and across the chain of command—including those who develop the targeting options and packages, those who review them for their legality, and particularly well-informed crewmembers—would also have this duty and right.¹⁵²

C. *Multistage Vetting*

Fortunately for the United States, the chain of command seriously strives to incorporate the proper international humanitarian law (and thus human rights law) into the options presented to the president.¹⁵³ Kehler describes a five-stage process in developing options, each of which is designed not only to meet the president's objectives but also to fastidiously comply with international law. The stages comprise option development, target selection, weapon application, legal advice and review, and other effects.¹⁵⁴

While each stage considers the legal implications of the strike, humanitarian law most informs the “target selection” and “weapon application” stages.¹⁵⁵ Moreover, and crucially to this Article's argument, at the “other effects” stage “[p]lanners also consider other nuclear weapon effects beyond blasts (such as fire; electromagnetic pulse; radiation) in their modeling analysis.”¹⁵⁶ Finally, embedded in and finalizing the process are lawyers tasked with ensuring the strike complies with humanitarian law.¹⁵⁷

D. *Immunities*

But what if a strike is likely to be deemed manifestly illegal by a competent judicial body, whether domestic or international? Would it make any real difference at all, other than symbolic, since the president and those high up the chain of command—precisely those who most likely would be charged with the duty to reject the order—might be cloaked in immunities, especially vis-à-vis

¹⁵⁰ HELLER, *supra* note 140, at 254–59.

¹⁵¹ Coyle interview, *supra* note 147.

¹⁵² See Additional Protocol I, *supra* note 75, art. 57(2)(a). As is probably evident at this point, the “strike” in this Article's title encompasses not just pressing the button to launch the weapon, but also all of the planning and decision-making leading up to that moment. That is, it encompasses orders to use nuclear weapons.

¹⁵³ Indeed, this was one of the major motivations for a comprehensive overhaul of STRATCOM's internal workings beginning in 2012. Kehler, *supra* note 19 at 56, 58. Up until that point, “nuclear plans . . . were still largely based on guiding principles formed in the late 1980s and early 1990s.” *Id.* at 56. A number of problems with these earlier principles were “spiraling weapon requirements during the Cold War and a continuation of ‘Cold War thinking’ beyond it (especially as attention was diverted to conventional combat operations).” *Id.* at 57. Instead of a comprehensive and coherent policy streamlined to meet modern tactical needs, the pre-2012 STRATCOM protocols seemed more of an incremental cobbling together of ad hoc steps as the global situation changed. It was by no means static, but it was cumbersome and retained outdated Cold War vestiges.

¹⁵⁴ *Id.* at 59.

¹⁵⁵ *Id.* at 58–59.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

those judicial bodies most likely to hold them accountable, like foreign and international tribunals?

Two initial rejoinders: first, as the ICJ has noted, immunity would not apply before an international tribunal with jurisdictional competence;¹⁵⁸ second, it is unclear how far down the chain of command immunity would extend. Certainly heads of state and officials like foreign ministers who represent the state on the international stage enjoy the privilege.¹⁵⁹ But beyond that, the law is unclear. The whole reason heads of state and foreign ministers enjoy immunity is that the state would be unable to effectively represent itself in its dealings with other states if these individuals were stuck in foreign states' docks. Conversely high-ranking members of STRATCOM and other planning bodies likely fall outside the scope of immunity. Needless to say, the farther down the chain one goes, the less immunity is likely to apply. Overall, only heads of state and perhaps other extremely high-ranking officials would likely be immune from suit before foreign tribunals.

Immunities before domestic state courts come in various flavors. Foreign sovereign immunity, or foreign state immunity, immunizes from suit foreign sovereigns qua sovereigns.¹⁶⁰ Thus, foreign sovereign immunity immunizes Italy—the sovereign state—from suit in U.S. courts. In the United States this form of immunity is currently governed by statute, the Foreign Sovereign Immunities Act of 1976.¹⁶¹ Foreign official immunity or, where applicable, head-of-state immunity,¹⁶² shields from suit particular high-ranking officials of foreign states, such as heads of state and foreign ministers.¹⁶³ Thus, foreign official or head-of-state immunity immunizes the Italian president and, presumably, prime minister from suit in U.S. courts.

A further distinction exists between immunity that attaches because of a particular status, such as being head of state or other high ranking official, and immunity that attaches because of the nature of the particular conduct underlying a claim, such as conduct performed as part of the actor's official duties. These immunities are referred to, respectively, as status-based immunity and conduct-based immunity.¹⁶⁴ Status-based immunity is basically an absolute protection for certain high-ranking officials (like heads of state) against all proceedings in other

¹⁵⁸ Concerning the Arrest Warrant of 11 April 2000 (Dem. Rep. Congo v. Belg.), Judgment, 2002 I.C.J. Rep. 3, ¶ 61 (Feb. 3).

¹⁵⁹ See Anthony J. Colangelo, *Jurisdiction, Immunity, Legality, and Jus Cogens*, 14 CHI. J. INT'L L. 53, 57 (2013).

¹⁶⁰ HAZEL FOX & PHILIPPA WEBB, *THE LAW OF STATE IMMUNITY* 1 (3d ed. 2013).

¹⁶¹ Foreign Sovereign Immunities Act, Pub. L. No. 94-583, 90 Stat. 2891 (1976) (codified as amended in various sections of U.S.C. Title 28).

¹⁶² *Samantar v. Yousuf*, 560 U.S. 305, 324 (2010).

¹⁶³ *Id.* at 321 n.15.

¹⁶⁴ Chimène I. Keitner, *Foreign Official Immunity and the "Baseline" Problem*, 80 FORDHAM L. REV. 605, 605 (2011).

states' courts.¹⁶⁵ That is, it blocks all foreign proceedings against these officials, irrespective of whether the proceedings relate to the officials' public or private acts or whether the acts occurred during or before the officials' tenure in office.¹⁶⁶ However, because the immunity attaches only to the officials' status as an office holder, once tenure in office ceases so too does the status-based immunity.¹⁶⁷

At this point, the only immunity potentially available to former officials is conduct-based immunity. This form of immunity is both broader and narrower than status-based immunity. It is broader in the sense that it arguably extends to anyone acting on behalf of the state, not just high-level officials, and it also continues to protect former officials after they have left office. But it is narrower because, as its name suggests, it applies only in respect to official conduct.¹⁶⁸ A key question in both U.S. and international law is whether this conduct-based immunity attaches in respect to conduct that constitutes serious violations of international law and, more specifically, *jus cogens* violations like war crimes and crimes against humanity.

The reason why *status-based* immunity does not yield to *jus cogens* is that courts have deemed it "jurisdictional."¹⁶⁹ That is to say, it simply deprives the court of jurisdiction to hear the case while the officeholder enjoys the privilege of the office. However, once the officeholder leaves office, the immunity lapses because the office no longer blocks the court's jurisdiction.¹⁷⁰

Conduct-based immunity is somewhat more complicated. Courts have yet to definitively say that it is entirely jurisdictional; thus it may constitute a substantive defense—in which case it would come into direct conflict with, and necessarily yield to, the preemptory norm.¹⁷¹ And since a *jus cogens* violation cannot qualify as a legitimate official act there exists the possibility of suit, whether criminal or civil, where a high-ranking official issues or fails to reject a manifestly illegal order. In other words, the substantive defense of immunity will be no barrier to the enforcement of *jus cogens*, which by definition override all

¹⁶⁵ See Dapo Akande, *International Law Immunities and the International Criminal Court*, 98 AM. J. INT'L L. 407, 410 (2004).

¹⁶⁶ *Id.*; *Yousuf v. Samantar*, 699 F.3d 763, 769 (4th Cir. 2012). *But see* Ingrid Wuerth, *Pinochet's Legacy Reassessed*, 106 AM. J. INT'L L. 731, 740–41 (2012) (explaining that "[h]istorically, *ratione personae* immunity has been close to absolute. Today, the issue is somewhat more complicated because some states view status immunity as a function of state immunity itself; accordingly, heads of state (like states themselves) are perhaps not entitled to immunity from civil proceedings for certain private acts").

¹⁶⁷ Akande, *supra* note 165, at 410.

¹⁶⁸ *Id.* at 412–13; Chimène I. Keitner, *Officially Immune? A Response to Bradley and Goldsmith*, 36 YALE J. INT'L L. ONLINE *1, *9 (2010).

¹⁶⁹ See generally Colangelo, *supra* note 159.

¹⁷⁰ Akande, *supra* note 165, at 410.

¹⁷¹ See, e.g., *Yousuf*, 699 F.3d at 777 ("We conclude that, under international and domestic law, officials from other countries are not entitled to foreign official immunity for *jus cogens* violations, even if the acts were performed in the defendant's official capacity."); Colangelo, *supra* note 159, at 76–90.

contrary norms. However, as noted, the law on this topic is in flux. Moreover, according to its own internal processes, a state may waive immunity as to its own current or former officials before foreign courts.¹⁷²

In sum, immunities are not the substantial bar to suit they may first appear to be. They do not apply before international tribunals with competent jurisdiction; they do not apply to individuals who do not represent the state on the international plane; and, even for high-ranking officials who do represent the state on the international plane, suit is possible if immunity is waived or, after the official leaves office, the immunity is deemed substantive and conflicts with, and thus yields to, *jus cogens*.

VI. Non-State Actors

It may be tempting to conclude that none of what has been said so far about the duty to disobey illegal nuclear strike orders applies to terrorists or other non-state actors. Certainly, a strict reading of conventional law and, in particular, Additional Protocol I to the Geneva Conventions, covers only “states parties” to the treaties. But as Part IV explained, the law against war crimes is not simply treaty-based. Rather, it has passed into customary international law. Moreover, it is now considered peremptory international law subject to universal jurisdiction. This means that it applies universally to everyone, everywhere.¹⁷³ In fact, as crimes of universal jurisdiction, any state in the world can prosecute irrespective of whether the state has any connection to the offense.¹⁷⁴

Here it is not just the norm that is customary law, but also the liability that attaches to that norm—and it attaches not just to states but also to individuals. At least since Nuremberg, international and domestic jurisprudence have been clear that individuals may be held liable for serious violations of international law. And because the relevant international law includes a universally applicable customary law enforceable by all states, non-state actors cannot escape its net.

VII. Conclusion

The beginning of this Article posed the question of whether the duty to disobey illegal nuclear strike orders merely constituted an affirmative defense in military proceedings or whether it stood for something more for the international legal system as a whole. The answer should be plain: Executing a nuclear strike order that personnel know or should know is manifestly illegal will likely result in

¹⁷² See FOX & WEBB, *supra* note 160, at 30–32, 105; Mamani v Berzain, 654 F.3d 1148, 1151 n.4 (11th Cir. 2011) (stating that “[w]e accept that the present government of Bolivia has waived any immunity that defendants might otherwise enjoy”); United States v. Noriega, 117 F.3d 1206, 1212 (11th Cir. 1997) (citing *In re Doe*, 860 F.2d 40, 44–46 (2d Cir. 1988)); *In re Grand Jury Proceedings, John Doe # 700*, 817 F.2d 1108, 1110–11 (4th Cir. 1987).

¹⁷³ Presumably it would also apply as a conventional matter to nationals of states, which are parties to the relevant treaties.

¹⁷⁴ See Colangelo, *supra* note 65, at 149.

liability for potentially anyone in the world for some of the most serious offenses under international law, like war crimes and arbitrary loss of life. This duty constitutes a powerful legal norm with far-reaching implications for humanitarian law and practice, diminishing in some scenarios the lawful possible use of nuclear weapons to the vanishing point. It also constitutes a powerful counter-norm that argues against the use of nuclear weapons as a matter of policy and strategic decision-making. The overall import of the combination of this norm and counter-norm is to marginalize nuclear weapons, giving them no meaningful place—under international law or within the international legal system generally—among the lawful options available to a commander considering an attack near a civilian population.