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An International Tribunal for the Use of Nuclear Weapons

Anthony J. Colangelo^a and Peter Hayes^b

^aSMU Dedman School of Law, Nautilus Institute, Dallas, TX, USA; ^bCentre for International Security Studies, Nautilus Institute University of Sydney, Berkeley, CA, USA

ABSTRACT

Although offenses against international law have been proscribed at a certain level of generality, nobody hitherto has examined closely the scientific and ecological damages that would be imposed by nuclear strikes in relation to resulting possible law-of-war violations. To correct that information deficit and institutional shortfall, the first Part of this Article constructs a hortatory proposal for a tribunal for the use of nuclear weapons under international law. The second Part of the Article shows how such a tribunal statute would have a real-world effect on those charged with launching nuclear strikes and determining the legality of the strike orders. For the first time, through a series of interviews and electronic communications, we have gathered empirical and anecdotal information regarding the actual processes of launch instructions to lower level crewmembers and, in particular, those who refused the order – or “refuseniks”. What emerges from these accounts is the startling reality that low-level crewmembers had little or no guidance on the legality of the strike under the laws of war but were told simply to trust their leadership. A tribunal statute geared specifically to the use of nuclear weapons would provide needed guidance and constitute solid legal grounds upon which to stand should those lower down in the chain of command find the order to launch a nuclear strike manifestly illegal under international law.

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Introduction

International law makes crystal clear that states¹ and individuals² are accountable for their actions and, moreover, that states may establish international institutions and governance structures designed to hold accountable in fact those who violate the law.³ Yet a massive institutional shortfall and information deficit exists in the accountability of states and individuals when it comes to nuclear threats and strikes.

This two-part Article seeks to correct that shortfall and information deficit. Although offenses against international law have been proscribed at a certain level of generality, nobody to date has dug deeply into the doctrinal, scientific and ecological weeds of

CONTACT Anthony J. Colangelo ✉ colangelo@mail.smu.edu Law, SMU Dedman School of Law, Nautilus Institute
¹*Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries*, [2001] Y.B. Int'l L. Comm'n 26, U.N. Doc A/CN.4/SER.A/2001/Add.1 (Part 2) at art. 1 (hereinafter “Draft Articles”).

²Rome Statute of the International Criminal Court art. 25, 17 July 1998, 2187 U.N.T.S. 105 (hereinafter “ICC Statute”).

³*Id.* at art. 1; *Agreement for the Prosecution and Punishment of the Major War Criminals of the European Axis, Charter of the International Military Tribunal* art. 1, 8 August 1945, 59 Stat. 1544, 1544.

what a nuclear strike in particular would actually look like regarding the vast humanitarian and environmental damage as it relates to law-of-war violations the strike might generate. We not only fill this gap by elaborating at a more specific level extant crimes as they relate to the use of nuclear weapons within the ambit of existing international law, but also seek to add new offenses like ecocide to the list of internationally proscribed offenses as they relate to the use of nuclear weapons. We then describe how a tribunal statute might influence those in the chain of command charged with determining the legality or illegality of a nuclear strike.

The Article contains both normative and descriptive components. Part I begins by describing the urgent need for an international accountability mechanism specifically tailored to nuclear weapons and the promises of collective action instruments like Security Council Resolution 984 (Resolution 984)⁴ and the incipient Treaty for the Prohibition on Nuclear Weapons (TPNW).⁵ These instruments contain pioneering provisions we call “universality provisions”, indicating universal jurisdiction by all states over certain crimes relating to the use of nuclear weapons. The provisions provide that states parties must coax non-state parties to join the instruments “with the goal of universal adherence” (art. 12). And they explicitly acknowledge the *sui generis* externalities posed by the threat and use of nuclear weapons, the effects of which “transcend national borders” and imperil humankind through a variety of catastrophic means (para. 4).

The Article then imagines an innovative tribunal, or International Tribunal for the Use of Nuclear Weapons (ITNW), to fill yawning gaps related to nuclear threats and first-use strikes, or collectively “nuclear aggression”, as well as subsequent war crimes, crimes against humanity and crimes against the environment – i.e., ecocide. The tribunal statute, the Article argues, should contain more chiseled definitions of crimes in what we will call a “nuclear weapons clause”. This clause may be added to existing international offense definitions. In this respect, we lean largely on the definitions laid out in the Rome Statute for the International Criminal Court (ICC).⁶ Drawing from the Article’s forerunner, *The Duty to Disobey Illegal Nuclear Strike Orders* (Colangelo 2018, 84), and specifically the quantitatively and qualitatively unique nature of nuclear weapons, the clause would provide:

Where conventional weapons can be used to achieve the same military objective as nuclear weapons in proximity to civilians, and nuclear weapons are used instead, that use or threat of use constitute offenses laid out in this article.⁷

In the course of this discussion, the Article explains how the clause would affect law-of-war calculi in practice.

Part II then explains how this tribunal can also equip those down the chain of command charged with launching nuclear weapons with both necessary and clearer information about the strike so as to determine its legality. To be sure, the passing along of this information is a legal obligation formally imposed on high-ups in the chain of

⁴S.C. Res. 984 (11 April 1995).

⁵Treaty on the Prohibition of Nuclear Weapons art. 12, 7 July 2017, available at https://treaties.un.org/doc/Treaties/2017/07/20170707%2003-42%20PM/Ch_XXVI_9.pdf (hereinafter “TPNW”).

⁶See ICC Statute, *supra* note 2 at arts. 5–10.

⁷One could similarly argue that where a certain type of nuclear strike strategy would produce less civilian death and suffering than another type of nuclear strike strategy, but would achieve the same military objective, the former must be favored. For an example of this type of thinking, see Rosenbaum (2011, 239). (recounting Admiral Burke’s view that a submarine-based missile defense strategy would produce less civilian death and suffering than a land-based missile defense strategy).

command (Kehler 2016, 55) – yet one that is too often heeded in theory but in not practice.⁸ Hence the tribunal will serve as both a deterrent and solid legal grounds to stand on for persons within the nuclear chain of command because they will know about the consequences of following an illegal strike order. At present, such personnel usually are not told and thus do not know what an illegal strike order is (Kehler 2016).

That is, troublingly speaking, many individuals in nuclear command hierarchies are not provided with the necessary information to determine if certain strikes comply with international law. Rather, they are told to trust their leadership and its review of the legality of orders, and they have nowhere to go for advice, rulings, or sanctuary if they elect to disobey the order based on a reasonable presumption that a nuclear strike constitutes a manifestly illegal act of aggression or exceeds the law regarding war crimes, crimes against humanity and ecocide.⁹

To make the case in the second Part of the Article we employ empirical and anecdotal precedents collected from individuals through interviews and electronic communications who, in the past, have rejected nuclear strike orders. We evaluate these individuals' treatment under domestic and international law to cast insight on accountability structures as well as the continuing relevance of the duty to disobey illegal nuclear strike orders today. This empirical and anecdotal evidence throws into sharp relief what it means to refuse to carry out illegal orders up to the present day and the need for a tribunal statute to provide grounds to stand on should an order be passed down that manifestly violates the law.

* * *

To be clear from the outset, the Article is primarily a normative project – but one we hope may stimulate thinking regarding real-world responses to the renascent rhetoric and actions suggesting that a nuclear strike or threat of strike may be a growing possibility. Yet legally speaking, the normative proposal is not necessarily a farfetched pie in the sky. International law permits all states to exercise universal jurisdiction over serious crimes of international law like those proscribed by the ICC statute (Colangelo 2006, 149). And what one state may do on its own, multiple states may do together. Thus, the collective action of states parties to the TPNW may well create the type of tribunal this Article imagines. For its existence may serve as a clarifying agent for the law, a deterrent agent for those who seek to break the law and, in its most mature form, a punitive agent for those who in fact do break the law and a compensatory agent for those who suffer from that international law violation.

Yet the objection immediately will be made that since there have been no nuclear strikes since World War II, what purpose would a tribunal serve in terms of actual prosecutions? There are at least three responses. One answer, of course, is that the *threat* or use of nuclear weapons is prohibited, and the tribunal would have occasion to flesh out the contours of what does and does not constitute a threat. Another answer is

⁸"In many (perhaps most) cases, nuclear crews will not know the specifics of the target they are being ordered to strike" (Kehler 2016, 55). British nuclear submarine commanders, for example, appear to not know the target coordinates for their nuclear missiles, yet they would be accountable for such strikes if they are manifestly illegal (UK Public Administration and Affairs Committee, 2019).

⁹According to both international and domestic law, for there to be a violation "the order must be 'manifestly unlawful' or constitute 'clearly illegal orders to commit violations'" of international law (Colangelo 2018, 91).

that an international tribunal – like the ICJ – may issue advisory opinions should states contemplate the use of nuclear weapons but want to know the legality of that use beforehand. A third and more fundamental answer is that it is better to have an adjudicative body set up prospectively rather than retrospectively for all sorts of reasons, primary among them being notice of the applicable law and the forum in which one may be held accountable. To be sure, the major (and not unpersuasive) objection the Nazis made at Nuremberg was that the tribunal and the law being applied to them were retroactive.¹⁰ The Nuremberg tribunal ended up having to fudge on this point by holding that anyone would know the acts the Nazis engaged in were criminal,¹¹ but from a positivistic view – the reigning jurisprudential lens through which we view law today as a human construct – this holding was highly problematic. The *ex ante* establishment of an adjudicatory institution with clearly promulgated rules effectively erases that objection.

Part I: A Hortatory Proposal

The Need for an Institutional Accountability Mechanism

Existing international accountability mechanisms are hobbled in various ways. As to state responsibility, the International Court of Justice's jurisdiction depends on states' consent that the Court hears the case.¹² As to individual responsibility, the ICC has limited jurisdiction: its jurisdiction extends only over acts occurring in a state party's territory or by a national of a state party; and not all states are parties to the ICC, especially major nuclear powers and states most likely to be victims of a nuclear strike.¹³ The Court may only reach beyond these precincts if the case is referred by the United Nations Security Council – something that is unlikely if not outright impossible since certain permanent members of the Council will invariably veto the Court's jurisdiction given their allergy to the court someday asserting jurisdiction over their own nationals should the permanent members themselves pursue the use of nuclear weapons at present or in the future.¹⁴ Perhaps the last bastion of hope resides in the decentralized enforcement of international law by states through the controversial doctrine of universal jurisdiction, or the principle that every state has jurisdiction over certain especially heinous offenses against international law.¹⁵ But this too has its pitfalls or at least shortcomings since it often fails to provide the harmonized definitional and deterrent heft of a truly international accountability mechanism.

Such definitional and deterrent heft in the form of an international tribunal statute may not only influence states but also may help resolve serious dilemmas for

¹⁰United States v. Hermann Goering, 22 Trial of the Major War Criminals Before the International Military Tribunal 411, 444 (1948).

¹¹*Id.*

¹²Statute of the International Court of Justice art. 32, 26 June 1945, 59 Stat. 1055, 596 U.N.T.S. 261.

¹³ICC Statute, *supra* note 2, at art. 12.

¹⁴*Nemo iudex in parte sua* – one cannot be the judge of a case in which he has an interest. *Nemo iudex in parte sua*, DUHAIME'S LAW DICTIONARY available at <http://www.duhaime.org/LegalDictionary/N/NemoJudexInParteSua.aspx>. For a recent and concrete example see U.S. National Security Advisor John Bolton's remarks denouncing the ICC due to the Court considering prosecuting U.S. servicemen over alleged detainee abuse in Afghanistan. BBC, *John Bolton threatens ICC with US sanctions*, (18 September 2018)

¹⁵'Universal jurisdiction instead is based entirely on the commission of certain 'universal crimes' ... [which] all states have jurisdiction to prosecute' (Colangelo 2006, 150–51).

individuals ordered to launch a nuclear strike by providing clear legal guidance on what constitutes nuclear aggression, war crimes, crimes against humanity and ecocide. In particular, those lower in the command chain who may or may not have full information regarding a nuclear strike will have stronger legal grounds to resist the order unless given specific information regarding the strike. The overarching effect would thus be not only to overcome wide gaps and close loopholes in existing legal accountability structures but also to have a potent deterrent effect on the illegal use of nuclear weapons by decision makers and individuals in nuclear command hierarchies based on clear, harmonized definitions. For these individuals have a duty under the law to resist “manifestly illegal” orders¹⁶ – and orders to commit crimes such as aggression,¹⁷ war crimes, crimes against humanity, and, the Article argues, ecocide, would qualify.

Like Nuremberg, we seek to ground the existence of just such a tribunal in the all-encompassing customary law of universal jurisdiction alluded to above; but also to centralize and codify it in a tribunal statute that may effectively and clearly lay out offense definitions instead of relying on individual (and perhaps idiosyncratic) exercises of universal jurisdiction by states.

The Promises of Resolution 984 and the TPNW

There is a growing body of international law relating to the use of nuclear weapons. U. N. Security Council Resolution 984 condemns the aggressive use or threat of use of nuclear weapons against non-nuclear weapon states by nuclear weapons states; promises, at the request of a victim, technical, medical, scientific or humanitarian assistance, and affirms readiness to implement measures needed in the event of an act of aggression; compensates non-nuclear states for damages resulting from “loss, damage or injury sustained as a result of the aggression”; and, further promises assistance to the victim state.¹⁸

The TPNW similarly and eponymously contains a number of provisions banning the use of nuclear weapons. Article I prohibits the development and transfer or receipt of nuclear weapons, the use or threat of use of nuclear weapons, and “allow[ing] any stationing, installation or deployment of nuclear weapons”. Further, Article 5 provides for national implementation of legislation, and Article 6 requires environmental remediation as a result of activities “related to the testing or use of nuclear weapons”.

Finally, Article 12 contains a “universality provision” – an innovative provision that states parties have an obligation to seek universal adherence to the treaty. Specifically, “Each State Party shall encourage States not party to the [...] Treaty [to enter into the Treaty], with the goal of universal adherence” by all states. It thus explicitly reaches out beyond the states parties to the treaty in an attempt to coax compliance with the treaty by all states uniquely and powerfully indicating a species of universal jurisdiction indicated by the treaty. Indeed, the treaty’s introduction acknowledges the externalities

¹⁶“Manifestly illegal” orders would include, *inter alia*, an order to fire upon the shipwrecked, kill defenseless persons who have submitted to physical control, and kill innocent civilians (Colangelo 2018, 92).

¹⁷Like other humanitarian offenses – i.e., war crimes, aggression also has a “manifestly illegal” requirement. Amendments to the Rome Statute of the International Criminal Court on the Crime of Aggression, para. 2, 6 November 2010, 2922 U.N.T.S. 9.

¹⁸S.C. Res. 948, para. 6 (11 April 1995).

caused by the use of nuclear weapons, providing that the “catastrophic consequences of nuclear weapons . . . transcend national borders, pose grave implications for human survival, the environment, socioeconomic development, the global economy, food security, and the health of future of current and future generations” (art. 1). A tribunal with jurisdiction over all actors in a nuclear chain of command would constitute a persuasive way to make these promises a reality. All of this comports with Resolution 984 since it seeks universal adherence to the Treaty on the Non-Proliferation of Nuclear Weapons (art. 12) just like the TPNW.

At this point the reader might object that the instruments themselves do not formally establish universal jurisdiction. That is to say, they apply only to states parties. But that is not our contention. It is true that as a matter of *positive* law these instruments apply only to states parties. But universal jurisdiction is a matter of *customary*, not positive, international law (there is no such thing as universal jurisdiction by treaty). And the instruments’ universality provisions provide the very best evidence we have of the dual components of customary international law: state practice and *opinio juris*. To reject this view of how universal jurisdiction is formed is to reject universal jurisdiction over virtually all universal jurisdiction offenses today.

Offenses within the Subject Matter Jurisdiction of the Tribunal

This section lays out the proposed offenses within the subject matter jurisdiction of the tribunal: aggression, war crimes, crimes against humanity and ecocide. It defines these crimes by drawing in part from the established definitions in the ICC statute and other international instruments, like the U.N. Charter, and adds the Nuclear Weapons Clause. It also justifies that addition in light of the unique nature of nuclear weapons and explains how that addition would work in practice. The unique characteristics of nuclear weapons were succinctly put in the *Duty to Disobey Illegal Nuclear Strike Orders*, and are reproduced below:

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. (Colangelo 2018, 101)

Aggression

At the present moment, perhaps the most immediate violation of international law occupying the world’s population when it comes to the use of nuclear weapons is the crime of aggression. As with other offenses, here we borrow the newly activated definition of the crime as set forth in the treaty for the ICC as a starting point,¹⁹ and

¹⁹Amendments to the Rome Statute of the International Criminal Court on the Crime of Aggression, para. 2, 6 November 2010, 2922 U.N.T.S. 9.

key provisions of the United Nations Charter. And in this regard, perhaps of most immediate importance regarding the definition of the crime is the ICC prohibition on the planning and preparation of a nuclear strike²⁰ as well as the U.N. Charter's – incorporated by reference into the ICC statute²¹ – prohibition on the “the *threat* or use of force against the territorial integrity or political independence of any state”.²²

The ICC statute defines aggression as “the planning, preparation, initiation or execution by a person in a position effectively to exercise control over or to direct the political military action of a State, of an act of aggression which, by its character, gravity, and scale *constitutes a manifest violation of the Charter of the United Nations*”.²³ An act of aggression, in turn, is defined by the ICC statute as “the use of armed force by a State against the sovereignty, territorial integrity or political independence of another State, or in any other manner inconsistent with the Charter of the United Nations”.²⁴ Among crimes of aggression are “[b]ombardment ... against ... territory” and “use of any weapons ... against ... territory”.²⁵ This definition plainly includes the use of nuclear weapons, especially by a first-strike state, as well as the “planning [and] preparation” of that strike and “the threat of use of force against the territorial integrity or political independence of any state”.²⁶

This latter aspect of the definition has not received targeted attention by ICC jurisprudence due to the recent activation of the crime, but the plain language indicates that planning and preparation constitute a separable offense due to the disjunctive definition: again, it prohibits “the planning, preparation, initiation *or* execution” of an illegal act of aggression.²⁷ Hence those all the way up the chain of command who have a hand in determining the legality of an aggressive nuclear strike explicitly can be held liable under international law.²⁸ In the United States, this would include not only STRATCOM and related bodies like combatant commands (CCMDs), along with the civilian chain of command, which develop options for the president should he contemplate any order ranging from a nuclear strike to those made in emergency situations, but also the president himself – the only person capable of “initiat[ing] a nuclear strike” (Kehler 2016, 55). It would similarly include the entire chain of command under other countries' planning and preparation mechanisms.

Moreover, according to the plain language of the U.N. Charter, the mere *threat* of use of nuclear weapons also constitutes a separable offense – again, Article 2(4) states that “the threat *or* use of force against the territorial integrity or political independence of any state” constitutes a violation of the Charter. This is consonant with the

²⁰*Id.*

²¹*Id.* at art. 8 bis 2. (“For the purpose of paragraph 1, ‘act of aggression’ means the use of armed force by a state against the sovereignty, territorial integrity or political independence of another State, *or in any other manner inconsistent with the Charter of the United Nations*”) (emphasis added).

²²Charter of the United Nations art. 2(4) (emphasis added).

²³Amendments to the Rome Statute of the International Criminal Court on the Crime of Aggression, 6 November 2010, 2922 U.N.T.S. 9. at para. 2.

²⁴*Id.*

²⁵*Id.*

²⁶See Charter of the United Nations art. 2(4); Amendments to the Rome Statute of the International Criminal Court on the Crime of Aggression, art. 8 bis. 2, 6 November 2010, 2922 U.N.T.S. 9.

²⁷Amendments to the Rome Statute of the International Criminal Court on the Crime of Aggression, art. 8, 6 November 2010, 2922 U.N.T.S. 9 (emphasis added).

²⁸According to international law since Nuremberg, those up the chain of command would be liable – but aggression sets that out expressly. See Colangelo (2018, 115–16).

International Court of Justice's Advisory Opinion on the Legality of the Threat or Use of Nuclear Weapons (Advisory Opinion), which states:

Whether [a] 'threat' [is] contrary to Article 2, paragraph 4 depends upon whether the particular use of force envisaged would be directed against the territorial integrity or political independence of a State, or against the [p]urposes of the United Nations [or] ... it would necessarily violate the principles of necessity and proportionality.²⁹

Thus the ICJ treats threats as a separable offense from the actual use of force, and it ties the manner of the threat into humanitarian law – or the law of how war is conducted – into law of war principles of necessity and proportionality, to be discussed below in more detail.³⁰ For present purposes, it is enough to say that necessity and proportionality exhibit a synergistic relationship such that if a threat is disproportionate it is militarily unnecessary.

This synergy factors directly into the Nuclear Weapons Clause:

Where conventional weapons can be used to achieve the same military objective as nuclear weapons in proximity to civilians, and nuclear weapons are used instead, that use and threat of use constitute offenses laid out in this article.

The Clause thus invites comparative analysis of nuclear versus conventional weapons throughout the chain of command at each point of planning and preparation of the attack, developing options and packages, and threatening the use of nuclear weapons to ensure the contemplated strike is proportionate and necessary.

Furthermore, while it is true that either use of weaponry could constitute aggression, state practice has shown that use of conventional weaponry against the territorial integrity of other nations does not always yield actionable claims of aggression. This is especially so in the field of humanitarian intervention. As Harold Koh explains, "state practice offers prominent [...] examples of *de facto* humanitarian intervention: India–Bangladesh, Tanzania–Uganda, Vietnam–Cambodia (Khmer Rouge), the United States and the United Kingdom creating no-fly zones over Iraq to protect the Kurds and the Shias, and of course, NATO's famous Kosovo episode of the late Twentieth Century" (Koh 2017, 288).³¹

As to the latter extremely prominent example, the bombing of Kosovo to halt an ongoing genocide can be justified under another provision of the U.N. Charter, namely the very first provision: Article 1, which obligates states to "promot[e] and encourag[e] respect for human rights" (art. 1(3)). For this reason, the Independent International Commission on Kosovo

²⁹Advisory Opinion, 1996 I.C.J. at paras. 48, 75.

³⁰See *infra*, Part IV.B.ii-iii.

³¹Professor Koh has advocated for a particular test to determine the legality of an instance of humanitarian intervention: first, the intervention must be prompted by a "humanitarian crisis creat[ing] consequences significantly disruptive of international order" (Koh 2019, 137). Second, the intervening nations must seek U.N. approval, and find it "not available because of persistent veto" (Koh 2019, 132). Third, and most important for the purposes of this Article, only "limited force" that is "necessary and *proportionate* to address the imminent threat" would be permitted under Koh's test (emphasis added) (Koh 2019, 132). (Koh goes on to give a variety of other elements that must be met for an intervention to be legal under developing international law, however, for the purposes of this Article, the requirement of proportionality is of singular importance). In the nuclear context, this proposed test cannot be satisfied. As will be made clear below (see, e.g. Part I.B.ii, *infra*), given the unique short-term and long-term destructive capabilities of nuclear weapons, a strike from a nuclear weapon would never be proportionate. See Colangelo 2018, 91) (describing the unique destructive capabilities of nuclear weapons.) At least under the Koh test, then, the use of nuclear weapons in humanitarian intervention clearly runs afoul of the Nuclear Weapons Clause; because other, more conventional, means can be used to prevent ongoing humanitarian crises, the use of nuclear weapons is not proportionate and constitutes an offense under international law.

called the intervention “illegal but legitimate” and “justified” (Independent International Commission on Kosovo 2000, 4). To take a more recent example, “[w]hen all the world seems already to have intervened in Syria, it is a fiction to assert an absolutist norm against intervention as a prevailing governing norm” (Koh 2019, 137).

Where the Nuclear Weapons Clause comes into play is in the relative destructive and indiscriminate nature of the weapons used. Because, as the next section explains, nuclear weapons are far more likely to be indiscriminate, disproportionate, militarily unnecessary, and to cause unnecessary suffering and superfluous injury under the law of war, their use would exceed the potentially limited allowance international law makes for humanitarian intervention, which includes – necessarily – a proportionality requirement (if the rationale for intervention is the protection of human life but one form of intervention would cause more loss of life and suffering than another form of intervention, the former intervention is *ultra vires*).

Indeed, nuclear weapons are far more likely to *cause* a humanitarian crisis than to alleviate one due to their massive and unpredictable destructive nature stemming from the immense blast yield, release of ionizing radiation, environmental catastrophe caused, and prevention of humanitarian assistance at the blast scene. Should members of the chain of command fail to engage the comparative analysis insisted upon by the Nuclear Weapons Clause as regards the more limited destructive power of conventional weapons, such personnel could be liable for aggression or threats thereof, and could not justifiably hide behind the rationale of humanitarian intervention.

War Crimes

Two different but related bodies of law cover the legality of a nuclear strike. 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*) (Sloane 2009, 47). While the crime of aggression may fall into both the *jus ad bellum* and *jus in bello* categories, the law covering war crimes is principally concerned with *jus in bello* – how hostilities are conducted – because that is the realm in which an illegal strike order would be handed down. As Colangelo (2018)³² fairly set forth, war crimes include a number of principles that, if violated, constitute crimes against international humanitarian law. The case was first made there that if conventional weapons can be used to achieve the same military objectives as nuclear weapons, and the nuclear option is used instead of the conventional option, the result would be war crimes due to the unique destructive power of nuclear weapons. (Colangelo 2018). We thus lean on that analysis here.

According to the ICC Statute, war crimes constitute a long list of acts that violate the laws of war (art. 8(2)). Permeating this list are certain core principles as set forth in the Geneva Conventions and customary international law, namely: distinction, proportionality, necessity, and the prevention of unnecessary suffering and superfluous injury. These principles constitute the meat of this section.³³

³²“Four fundamental principles govern international humanitarian law: distinction between combatants and civilians, proportionality, military necessity, and the prevention of unnecessary suffering [A]ny serious violation of [these principles] is considered a war crime” (Colangelo 2018, 101).

³³More discrete crimes do not fall within the Article’s purview, for example, “Unlawful deportation or transfer or unlawful confinement”, *Id.* at art. 8(2)(vii). Rather, we are concerned with broader crimes like “[i]ntentionally launching an attack in the knowledge that such attack will cause incidental loss of life or injury to civilians or damage to civilian objects or widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated”, *Id.* at art. 8(2)(b)(iv).

(i) Distinction

First is the principle of distinction or protection of civilians not taking part in hostilities, which is in many ways the wellspring of all humanitarian law principles. An accepted formulation is found in Additional Protocol I of the Geneva Conventions, which embody customary international law³⁴

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.³⁵

Because nuclear weapons have a greater blast yield and release massive amounts of ionizing radiation, target discrimination becomes exponentially harder than when a conventional weapon is used.

(ii) Proportionality

Next is the principle of proportionality, which appears in a number of places in Additional Protocol I to the Geneva Conventions. 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”. Article 57(2)(a)(iii) and (b) effectively repeat this language. 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.

Thus an attack – even an attack that is anticipated to achieve a concrete and direct military advantage – cannot disproportionately kill or injure civilians. Instead, 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.³⁶ Because nuclear weapons are far more catastrophic and produce vast unforeseen consequences on civilian life, the environment, food supply, etc., conventional weapons promise to be more protective of civilian life.

³⁴See Advisory Opinion, 1996 I.C.J. at paras. 41, 75:.

³⁵Protocol Additional to the Geneva Convention of 12 August 1949, and Relating to the Protection of Victims of International Armed Conflicts art. 48, 8 June 1977, 1125 U.N.T.S. 17,512 (hereinafter “Additional Protocol I”). 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”. *Id.* at art. 51(2). And Henckaerts and Doswald-Beck (2005) explain:

³⁶There 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.

(iii) Necessity

The principle of necessity holds 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” (Luban, O’Sullivan, and Stewart 2010, 1040–41). Thus, there must be a military necessity motivating the nuclear strike, but any strike must obey other *jus in bello* principles like distinction and proportionality. In turn, there is a certain synergy among the various principles to form a law of war web ensuring that actions taken protect civilian life to the most realistic extent possible – a synergy that incorporates other principles such as distinction and proportionality. Because use of nuclear weapons as compared to conventional weapons violates these other law of war principles, their use also violates the necessity principle.

(iv) Prevention on Unnecessary Suffering and Superfluous Injury

According to the Geneva Conventions, the prevention of unnecessary suffering and superfluous injury provides: “It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering” (Additional Protocol I, art. 35 (2)). This is not an all-out prohibition on causing death or injuries, both of which international humanitarian law recognizes will occur in armed conflict. Rather, it is a prohibition on causing unnecessary death and injuries through the choice and use of materials and methods of military action. If the choice includes nuclear as opposed to conventional weapons that can achieve the same military objective, the ionizing radiation released by nuclear weapons not only would cause far more suffering and injury but also would make virtually impossible humanitarian assistance to those at the blast scene.

In sum, Colangelo (2018) fairly set forth the argument that anytime a nuclear strike is used in proximity to a civilian population instead of a conventional strike, the nuclear strike would virtually always cause more death and suffering, resulting in war crimes.

Crimes Against Humanity

The ICC statute defines crimes against humanity as any of a variety of crimes including, *inter alia*, murder, extermination and “other inhumane acts ... causing great suffering”³⁷ when committed “as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack”. This definition encompasses three major requirements: First, it requires the commission of a predicate crime such as murder or extermination. Second, it requires the commission of the predicate crime in furtherance of a widespread or systematic attack. Finally, the actor must have knowledge that his act or acts form part of the widespread or systematic attack.

³⁷The statute further provides that enslavement, deportation, torture, imprisonment, rape, sexual slavery, forced prostitution, apartheid, and persecution are predicate crimes for a charge of crimes against humanity. The three listed above, murder, extermination, and inhumane acts causing great suffering are of principle interest in the discussion of nuclear weapons, and therefore of principle interest in this Article. ICC Statute, *supra* note 2 at art. 7.

The first requirement is plainly satisfied by the use of nuclear weapons; the use of a nuclear weapon against another state will necessarily entail “inhumane acts . . . causing great suffering”, murder and (perhaps) extermination (art. 7).

The second requirement requests further definitional specificity of the terms “widespread” and “systematic”. Importantly, these terms are disjunctive: the statute requires only that a crime against humanity be widespread *or* systematic – it is not necessary that a predicate crime be both.³⁸ ICC precedent in turn makes clear that “‘widespread’ averts to the large-scale nature of the attack and to the number of targeted persons”.³⁹ An attack is systematic when it is planned, organized and is part of a “‘pattern of crimes’ reflected in the non-accidental repetition of similar criminal conduct on a regular basis”.⁴⁰

A nuclear strike in proximity to a civilian center, by its very nature, would be widespread for the purposes of the ICC Statute. As discussed above, the destructive force of nuclear weapons is massive, capable of causing huge numbers of civilian deaths in a single instant. This widespread quality is sufficient to bring the use of nuclear weapons within the ambit of crimes against humanity. The systematic requirements are trickier, and may or may not be met by the use of a nuclear strike. A single nuclear strike would necessarily be planned and organized (with the hopefully improbable exception, perhaps, of an accidental nuclear strike). However, the requirement that an attack be part of an intentionally repeated pattern of similar crimes may be problematic in the nuclear context, at least in the abstract. A single state actor committing a single nuclear strike cannot fairly be said to be part of such a pattern. As such, when a state commits only a single nuclear crime, it may not be “systematic”. This observation should be tempered by reality, however. The likelihood of retributive strikes, should one state actor launch a nuclear assault on another, is immense. A retributive strike or series of strikes may be sufficient to establish the requisite pattern.⁴¹ Moreover, it is unlikely that a state, having made the grave decision to employ nuclear weapons in the first place, would limit itself to using one single weapon. However, even if it were the case that a given nuclear strike were inarguably non-systematic, this would not take the strike outside the definition of crimes against humanity. Recall that such a crime must only be *either* widespread *or* systematic.

Finally, the knowledge requirement is satisfied when an actor has knowledge that his or her action contributes to the widespread or systematic attack.⁴² The actors’ motive is not relevant; all that is necessary is that the actor knew that his or her action formed part of the attack.⁴³ Again, this echoes a theme established in Colangelo (Colangelo 2018)⁴⁴ The actor in the nuclear chain-of-command cannot insulate himself from responsibility merely because he was “following orders”. In other words, without any

³⁸*Id.*; See also Prosecutor v. Katanga, ICC-01/04-01/07-3436-Anxl, Judgment pursuant to art. 74 of the Statute, para. 1123 (7 March 2014).

³⁹Prosecutor v. Katanga, ICC-01/04-01/07-3436-Anxl, Judgment pursuant to art. 74 of the Statute, para. 1123 (7 March 2014).

⁴⁰*Id.*

⁴¹It is unclear from existing authority whether the pattern of crimes must all be committed by the same actor, or if it is sufficient for an actor to act as a part of an existing pattern involving multiple crimes committed by different actors.

⁴²Prosecutor v. Katanga, ICC-01/04-01/07-3436-Anxl, Judgment pursuant to art. 74 of the Statute, para. 1123 (7 March 2014).

⁴³*Id.* at para. 1125.

⁴⁴International law rejects the defense that an actor was merely following orders in the commission of an offense:.

regard for *why* a strike order was followed, if a nuclear strike order *is* followed, this final requirement has been satisfied.

In turn, any nuclear strike near a civilian population would, where conventional weapons could be used instead, likely fall within the definition of crimes against humanity established by the ICC statute and its decisional progeny. If the same military objective could be obtained by the use of conventional weapons, that may not be the case because conventional weapons are capable of far more targeted application, especially in the age of precision-guided munitions or “smart bombs” (Infeld 1992, 109–110).

Ecocide

In the words of the Advisory Opinion,⁴⁵ the Court “recognizes that the environment is under daily threat and that the use of nuclear weapons could constitute a catastrophe for the environment” (para. 29). Moreover, the ICJ has observed “the existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other states or of areas beyond national control is now part of the corpus of international law relating to the environment” (para. 29). Under international humanitarian law “[r]espect for the environment is one of the elements that go to assessing whether an action is in conformity with principles of necessity and proportionality” (para. 29). Furthermore, “Articles 35, paragraph 3, and 55 of Additional Protocol I [of the Geneva Conventions] provide additional protection for the environment” and “[t]aken together, these prohibitions embody a general obligation to protect the natural environment against widespread, long-term and severe environmental damage” (para. 31).

Key is “the prohibition of methods and means of warfare which are intended, or may be expected, to cause such damage ...” (para. 31). Ultimately, “while the existing international law relating to the protection and safeguarding of the environment does not specifically prohibit the use of nuclear weapons, it indicates important environmental factors that are properly to be taken into account in the context of the implementation of principles and rules of the law applicable in armed conflict” (para. 33). The ICC statute, for example, prohibits: “Intentionally launching an attack in the knowledge that such attack will cause ... widespread, long-term and severe damage to the natural environment which would be clearly excessive in relation to the concrete and direct overall military advantage anticipated” (art. 8(b)(iv)).

Yet failure to include ecocide itself in the ICC statute left a major and, some might say, studied hole as regards nuclear weapons. In the words of rapporteur Christian Tomuschat,

One cannot escape the impression that nuclear arms played a decisive role in the minds of many of those who opted for the final text which now has been emasculated to such an extent that its conditions of applicability will almost never be met even after humankind would have gone through disasters of the most atrocious kind as a consequence of conscious action by persons who were completely aware of the fatal consequences their decisions would entail (Tomuschat 1996, 243).

Needless to say, the present proposal seeks to fill the hole. Although the specific prohibition on ecocide may still be “soft law” regarding the corpus of international

⁴⁵ Advisory Opinion, 1996 I.C.J. Rep. 226, ¶ 21 (July 8) (hereinafter “Advisory Opinion”).

law, there is a trend in favor of legally prohibiting the crime (Higgins 2012). For present and hortatory purposes, we adopt the offense definition laid out in Polly Higgins' Model Law, which provides:

Ecocide crime is:

- (1) acts or omissions committed recklessly in times of peace or conflict by any senior person within the course of State, corporate or any other entity's activity which cause, contribute to, or may be expected to cause or contribute to serious ecological, climate or cultural loss or damage to or destruction of ecosystem(s) of a given territory(ies), such that peaceful enjoyment by the inhabitants has been or will be severely diminished.
- (2) To establish seriousness, impact(s) must be widespread, long-term or severe.
- (3) For the purposes of paragraph 1:
 - (a) "climate loss or damage to or destruction of" means impact(s) of one or more of the following occurrences, unrestricted by State or jurisdictional boundaries: (i) rising sea-levels, (ii) hurricanes, typhoons or cyclones, (iii) earthquakes, (iv) other climate occurrences;
 - (b) "ecosystems" means a biological community of interdependent inhabitants and their physical environment;
 - (c) "territory(ies)" means one or more of the following habitats, unrestricted by State or jurisdictional boundaries: (i) terrestrial, (ii) fresh-water, marine or high seas, (iii) atmosphere, (iv) other natural habitats;
 - (d) "peaceful enjoyment" means peace, health and cultural integrity;
 - (e) "inhabitants" means indigenous occupants and/or settled communities of a territory consisting of one or more of the following: (i) humans, (ii) animals, fish, birds or insects, (iii) plant species, (iv) other living organisms.
- (4) For the purposes of paragraph 1: the Paris Agreement of 4 November 2016 shall be considered to be established premise for prior knowledge by State, corporate or any other entity's senior person, or any other person of superior responsibility.

Elements of Ecological, Climate and Cultural Ecocide

- (1) The perpetrator's acts or omissions caused, contributed to, or may be expected to cause or contribute to serious ecological, climate or cultural loss or damage to, or destruction of ecosystem(s) of a given territory(ies).
- (2) The perpetrator's activity has or will severely diminish peaceful enjoyment by the inhabitants.
- (3) The perpetrator's acts or omissions were reckless where the perpetrator had knowledge or ought to have had knowledge of the likelihood of ecological, climate or cultural harm.
- (4) The perpetrator was a senior person within the course of State, corporate or any other entity's activity in times of peace or conflict. (Higgins n.d.)

Again, nuclear weapons are devastating to the environment – their use may cause depletion in the ozone layer, farming and food production, thereby resulting in famine (Maresca and Mitchell 2015, 625)⁴⁶ spanning large geographic and trans-border spaces (Higgins 2015, 62).⁴⁷ This is due in large part to the dispersal of dirt and dust, contamination of water supplies by radioactive residuals, and deterioration of both plant and animal life, posing a real and widespread risk of starvation for many millions of people. 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 (Sagan et al. 1983, 1283). A clause providing for the use of conventional as opposed to nuclear weapons to achieve the same military objective promises not only to protect the environment but also to create liability for ecocide for those who choose the nuclear option.

Damages

Finally, we propose that an ITNW may order damages or reparations resulting from the harms – especially environmental harms – that flow from the use of nuclear weapons. The relevant international law providing for reparations comes not so much from the ICC but from the jurisprudence of the ICJ and, most powerfully, from the Draft Articles on State Responsibility. According to article 36, paragraph 2 of the ICJ statute, states parties recognize the Court's jurisdiction over "The existence of any fact which, if established, would constitute a breach of an international obligation; [and] (d) The nature or extent of the reparation to be made for the breach of an international obligation".⁴⁸

Syllogistically, the first thing to do is tie the individual action that violates international law to the state so as to hold the state liable for damages. The Draft Articles on State Responsibility do just that. As the Draft Articles observe, "[w]here crimes against international law are committed by State officials, it will often be the case that the State itself is responsible for the acts in question or for failure to prevent or punish them" (art. 58(3)). To be sure, "[i]n certain cases, in particular aggression, the State will by definition be involved" (art. 58(3)). And "the State's responsibility is engaged by conduct incompatible with its international obligations, irrespective of the level of administration or government at which the conduct occurs" (Commentary (§ 5)). Article 4 provides: "The conduct of any state organ shall be considered an act of that State under international law ... [a]n organ includes any person or entity which has that status in accordance with the internal law of the State". Thus, no "distinction is made at the level of principle between the acts of 'superior' and 'subordinate' officials, provided they are acting in their official capacity ... [and] conduct carried out by [lower-level] officials in their official

⁴⁶"Of course, the two incidents which caused the greatest environmental calamity in the history of armed conflict were the atomic bomb attacks on the Japanese cities of Hiroshima and Nagasaki in August of 1945" (Schmitt 2000, 266–67).

⁴⁷"The capacity of ecocide to be trans-boundary and multi-jurisdictional necessitates legislation of international scope" (Higgins 2015, 62). "The destruction of large areas of the environment and ecosystems can be caused directly or indirectly by various activities, such as nuclear testing ... " (63).

⁴⁸Statute of the International Court of Justice art. 36, para. 2, 26 June 1945, 59 Stat. 1055, 596 U.N.T.S. 261.

capacity is nonetheless attributable to the State ...” (art. 4(7)). Similarly, Article 8 specifies that:

The conduct of a person or a group of persons shall be considered an act of State under international law if the person or group of persons is in fact acting on the instructions of, or under the direction or control of, that State in carrying out the conduct.

Moreover, “[n]or does any distinction exist between the ‘civil’ and ‘criminal’ responsibility as is the case in internal legal systems” (art. 12(5)). Taking these principles as a point of departure, the Draft Articles effectively outline the State’s responsibility for reparations under international law by the acts of individuals – including low-level crewmembers who may or may not have sufficient information to launch a nuclear strike.

We next move onto whether reparations are warranted and the form they may take. According to Article 31, “[t]he responsible State is under an obligation to make full reparation for the injury caused by the internationally wrongful act. Injury includes any damage, whether material or moral, caused by the internationally wrongful act of the state”. Importantly, an injury may be “any direct loss, damage including environmental damage and the depletion of natural resources”.⁴⁹ Nor is the injury limited in scope to a single state; it may extend to multiple states⁵⁰ and/or the international community as a whole.⁵¹ Examples include “a nuclear-free zone treaty, or any other treaty where each party’s performance is effectively conditioned upon and requires the performance of each of the others” (art. 42(23)) and, as will be discussed, violations of peremptory norms of international law, called *jus cogens*.

As to multiple states being injured by the same internationally wrongful act, the Draft Articles specifically point to “the Nuclear Tests cases, [in which] Australia and New Zealand each claimed to be injured in various ways by the French conduct of atmospheric nuclear tests at Mururoa Atoll” (art. 46(3)).

As to the form the reparations may take, “[f]ull reparation for the injury caused by the internationally wrongful act shall take the form of restitution, compensation and satisfaction, either singly or in combination, ...”(art. 34). Generally speaking, the measure of reparations is to restore the *status quo ante* (art. 35(a)), but there may be circumstances where “re-establishment of the situation which existed before the breach may not be sufficient for full reparation because the wrongful act has caused additional material damage” (art. 34(10)). Significantly for the proposal of this Article, “an international court or tribunal can, by determining the legal position with binding force for the parties, award what amounts to restitution under another form” (art. 35(5)). And “‘restitution’ ... has a broad meaning, encompassing any action that needs to be undertaken by the responsible State to restore the situation resulting from its internationally wrongful act” (art. 35(5)).

Damages may also be remedied by compensation to the injured state or states, including injuries flowing from environmental damage. Comment 14 to Article

⁴⁹*Id.* at art. 31(10) (quoting S.C. Res. 687, para. 16 (3 April 1991)). Somewhat similarly, in the context of compensation, damage may include the “costs incurred in responding to [environmental damage, like] like pollution damage”. *Id.* at art. 36(8).

⁵⁰*Id.* at Part Three: The Implementation of the International Responsibility of a State: Chapter I: Invocation of the Responsibility of a State (2) (“more than one State may be injured by an internationally wrongful act and be entitled to invoke responsibility as an injured State”) *Id.* at art. 46 (Where several States are injured by the same internationally wrongful act, each injured State may separately invoke the responsibility of the State which has committed the internationally wrongful act”).

⁵¹*Id.* at art. 33 (“The obligations of the responsible State set out in this Part may be owed to another State, to several States or to the international community as a whole, depending in particular on the character and content of the international obligation and on the circumstances of the breach”).

36(14) specifies “environmental damage and the depletion of natural resources”. Article 36(15) is devoted entirely to environmental damages, stating:

In cases where compensation has been awarded or agreed following an internationally wrongful act that causes or threatens environmental damage, payments have been directed to reimbursing the injured State for expenses reasonably incurred in preventing or remedying the pollution, or to providing compensation for a reduction in the value of polluted property. However, environmental damage will often extend beyond that which can be readily quantified in terms of clean-up costs or property devaluation. Damage to such environmental values (biodiversity, amenity, etc., – sometimes referred to as ‘non-use values’) is, as a matter of principle, no less real and compensable than damage to property, though it may be difficult to quantify.

Nuclear weapons, of course, may affect non-nuclear states’ individual citizens as well, not just the environment.⁵² As with environmental harms, these damages are often the subject of adjudicative decision-making and judgments (art. 36(18), (20)).

After laying out these general principles relating to damages, the Draft Articles directly address *jus cogens* violations, including war crimes⁵³ and, in particular, the crime of aggression (art. 26(5)). As the Draft Articles explain, *all* states have an interest in the suppression of violations of *jus cogens*.⁵⁴ Indeed, “for the purposes of State responsibility, certain obligations are owed to the international community as a whole, and that by reason of the ‘importance of the rights involved’ all States have a legal interest in their protection”.⁵⁵ “Among these [*jus cogens*] prohibitions, it is generally agreed that the prohibition of aggression is to be regarded as peremptory” (art. 40(4)).

The history of reparations for offenses against international law is well established and robust. Prior agreements between warring nations after hostilities have ended setting the baseline for state practice and *opinio juris* – the two components of customary law⁵⁶ – providing for reparations resulting from war crimes and acts of aggression. For example, after World War II, “reparations . . . became a principal object of Allied diplomacy” and “placed the obligation to provide restitution to victims of Nazi persecution on the new West German government”.⁵⁷ By 2000, more than 100 billion deutschmarks were paid out.⁵⁸ Further, to compensate those with insurance-related claims Germany entered into an agreement with the United States to create a fund of 10 billion deutschmarks to compensate those “who suffered at the hands of German companies during the National Socialist era”.⁵⁹ This fund was then supplemented with

⁵²*Id.* at 36(16) (“a good deal of guidance is available as to appropriate compensation standards and methods of valuation, especially as concerns personal injury. . . . It is well established that a State may seek compensation in respect of personal injuries suffered by its officials or nationals, over and above any direct injury it may itself have suffered in relation to the same event”).

⁵³*Id.* at Chapter III, Serious Breaches of Obligations Under Peremptory Norms of General International Law (6) (explaining that “[t]he Rome Statute of the International Criminal Court likewise establishes jurisdiction over the ‘most serious crimes of concern to the international community as a whole.’”). As noted above, war crimes fall within the jurisdiction of the ICC.

⁵⁴*Id.* at Chapter III, Serious Breaches of Obligations Under Peremptory Norms of General International Law (2).

⁵⁵*Id.*; See also *Id.* at (7) (“serious breaches of obligations arising under peremptory norms of general international law can attract additional consequences, not only for the responsible State but for all other States [and] all States are entitled to invoke responsibility for breaches of obligations to the international community as a whole”).

⁵⁶*Opinio juris* refers to the psychological element that the state is following the practice out of a sense of legal obligation.

⁵⁷*Am. Ins. Ass’n v. Garamendi*, 539 U.S. 396 at 403–04 (2003).

⁵⁸*Id.* at 404.

⁵⁹Agreement Concerning the Foundation “Remembrance, Responsibility and the Future”, 39 INT’L LEGAL MATERIALS 1298 (2000).

550 million deutschmarks for additional insurance-related claims and for a “humanitarian fund” ... [that] agreed to work with the German Insurance Association and [...] German insurers”.⁶⁰ This agreement with Germany served as a model for Austria and France and is the basis for similar agreements with Austria, France, and agreements the United States is pursuing with other countries.⁶¹ Following both World Wars, it was acknowledged that the losing states should pay reparations, and against the majority of states reparations were exacted.⁶² Although this is the history, we would propose that aggressor states pay reparations to non-aggressor states as a general rule, albeit one that may be difficult to enforce as a practical matter in some cases.

Part II: Effects on Individual Personnel

We now transition from the normative to the descriptive. For the first time, through a series of interviews and electronic communications, we have gathered empirical and anecdotal information regarding the actual processes of launch instructions to lower level crewmembers and, in particular, those who refused the order – or “refuseniks”. What emerges from these accounts is the startling reality that low-level crewmembers had little or no guidance on the legality of the strike under the laws of war but were told simply to trust their leadership. A tribunal statute geared specifically to the use of nuclear weapons would provide needed guidance and constitute solid legal grounds upon which to stand should those lower down in the chain of command find the order manifestly illegal under international law. It is a foundational building block of the rule of law that law must be available and intelligible for it to be followed. In other words, the less I know the law and the less I am able to decipher and apply it to my behavior, the less I can comply with the law. (Hall 1960, 59).⁶³ And it follows that a law that cannot be obeyed is no law at all. (Colangelo 2012, 71–72). Here it is not just the law that must be ascertainable but also knowledge of the conditions for its application. The actor must have available both law and facts for law to operate.

By amalgamating various sources of international law, including international and national court statutes and opinions, Security Council Resolutions, and treaties, it is the authors’ hope to weave together an accessible and decipherable international law regarding the use or threat of use of nuclear weapons. This international law may not

⁶⁰*Garamendi*, 539 U.S. at 407.

⁶¹*Id.* at 408.

⁶²See, e.g. Treaty of Peace With Italy art. 74 (10 February 1947) 49 U.N.T.S. 3, 335. Agreement on German External Debts, (27 February 1953), 333 U.N.T.S. 4. For further information on Central Power and Axis Power debts following the World Wars, see Treaty of Peace with Finland art. 23 (10 February 1947), 48 U.N.T.S. 240; Treaty of Peace with Bulgaria art. 21 (10 February 1947), 41 U.N.T.S. 64; Treaty of Peace with Romania art. 22 (10 February 1947), 42 U.N.T.S. 3; Treaty of Peace with Hungary art. 23 (10 February 1947), 41 U.N.T.S. 186.

⁶³Notably, “secret laws” seem to contravene the principle of legality. Using one commentator’s definition, secret laws are those “legal authorities which require compliance that are classified or otherwise withheld from the public” (Rudesill 2016, 249). In plain terms, a secret law is a law that must be obeyed but is not generally known or ascertainable. “Meta-secrecy”, where the very existence of the law is unknown (as opposed to a law that is secret in content but known to exist) poses a grave threat to the perceived legitimacy of a governmental regime (Kutz *n.d.*). The nuclear command hierarchy imposes exactly such a system: The military law requires obedience without the knowledge required to know if obedience would be unlawful. While the law requiring obedience itself is not secret, the underlying requisite knowledge often is. These concerns are alleviated through the existence of a tribunal to address nuclear crimes by making the knowledge necessary both ascertainable and, ideally, actually known to actors in the nuclear chain of command.

only have a strong deterrent effect on those charged with launching a manifestly illegal nuclear strike but also will supply those lower in the command chain who may or may not have full information regarding a nuclear strike with legal grounds to resist the order unless given specific information regarding the strike.

As to deterrence, an international tribunal of the kind described above would not only be available to prosecute nuclear war crimes, before or after actual nuclear use, thereby bringing some form of restitution to the survivors, if any. It would also send a deliberate message to nuclear commanders and in all nuclear weapons states (and to non-state actors aspiring to obtain and/or use nuclear weapons) that they will be held accountable for nuclear war crimes, thereby inducing an additional reason to act prudently, to avoid nuclear wars, and to not take risks using nuclear weapons to project threat.

Now, one might argue that compared with the direct costs arising from nuclear war to the values held dear by national nuclear commanders – their own lives, those of their kin and communities, their governments, even their entire nation, possibly humanity itself – that the marginal dissuasion against nuclear use due to possible apprehension and prosecution by an international tribunal would be insignificant or somehow epiphenomenal. This might be the case for large or all-out nuclear wars, but it seems less likely that being held accountable would play no role at all in protracted or limited nuclear wars, and it is these that many strategic thinkers feel are the pathway to all-out or general nuclear war.

Next, below the level of the national nuclear command are many ranks of civilian and military personnel who also must act on strike orders, and without whom no nuclear weapons could be fired and used.⁶⁴ Whether such personnel might balk at following nuclear fire orders in an actual crisis or war is also worth examining, not least because these individuals have no less an ethical duty and legal obligation to not follow manifestly illegal nuclear fire orders than their commanders. What is good for the commander who issues a fire order is logically good for the foot soldier who must act on the order and actually deliver the weapon, including all the supporting actions along the way to make delivery possible such as target identification, communications, custodial security, refueling, damage assessment, etc., whether civilian or military. Each and every one of these individuals has a right to not commit a nuclear war crime, and each has a legal obligation to not do so. These are not their only obligation; they are also obliged to defend their countries and to maintain their domestic laws and military traditions that also bear on their actions. But Nuremberg established that individuals at all levels, not just the high commanders, were accountable, and that following orders was no defense if the individual knew that his actions would lead to war crimes, crimes against humanity, crimes of aggression, or genocide. Indeed, as Kevin Heller reminded the authors, “foot soldiers [and civilians] are the only ones who are even *arguably* entitled to the defense of superior orders” (Kevin Heller, email to author, July 1, Heller 2017). As Heller notes, according to the Nuremberg tribunal a defendant would be held responsible for issuing an illegal order if (1) the order was issued by a superior to a subordinate; (2) the defendant bore some responsibility for

⁶⁴Kevin Heller notes that the Nuremberg tribunals “had little difficulty extending command responsibility to civilians who exercised effective control over subordinates” (Heller 2017, 265). There are many civilians involved in preparing, ordering, and implementing nuclear strike orders, at least in the US nuclear weapons enterprise.

the order and (3) the defendant knew or should have known that the order was illegal. (Heller 2017, 254).

The simple act of transmitting an order was deemed illegal in two situations: First, where an order was facially illegal – that is, the law enacted by the order was always illegal and void—an act of transmission was deemed of the same criminality as issuing the order. Second, where an order was not facially illegal but could be applied in a criminal manner, officers who failed to safeguard the application of the order against criminality were deemed to have criminal liability (257). Further, the tribunal had no qualms with applying command responsibilities to civilian actors when those actors had control over military subordinates (265). This, in particular, is of interest in the United States. Civilian actors in positions of control in the nuclear chain of command, such as those who might advise the president or be privy to pending nuclear strike orders, could be held accountable under this precedent. The same logic applies in all states engaged in nuclear aggression.

Actual cases of individuals who have refused to act on nuclear fire orders are of particular interest in this regard in clarifying the role that an international tribunal might have for all personnel, not just senior commanders. We review three such instances below to ascertain what role if any international law played in their decisions to not follow nuclear fire orders, and their consideration of ethical, procedural and other pragmatic concerns that motivated their actions.⁶⁵

Case 1: Mace Missile Unit, Okinawa 1962

The first instance took place on 28 October 1962 in Okinawa at the height of the Cuban Missile Crisis and was recounted only recently by John Bordne. At the time, he was an Air Force airman with the 498th Tactical Missile Group stationed at a US base in

⁶⁵These cases all involve Americans. They are likely not the only such cases within the US military concerning nuclear fire orders, but they are the only ones we know of that are documented publicly. The cases of US Defense Secretary Schlesinger, and recently, Mattis, having inserted themselves informally into the nuclear strike command hierarchy out of concern as to the rationality of presidential decision-making are salient, but different because the US Defense Secretary is not directly involved in acting on nuclear strike orders and therefore, cannot disobey them (Kutler 2014; Gronlund 2018; Blair and Wolfstahl 2018; Wellerstein 2017). There may well have been “nuclear refuseniks” in other countries who refused to obey nuclear fire orders. The only example the authors know of is that of Captain Vasili Archipov, a Soviet nuclear submariner who reportedly blocked an order to fire nuclear-armed torpedoes at a US surface warship during the Cuban Missile Crisis. It would be interesting to examine this case to see what role legal concerns played in the decisions made in this incident, but we did not attempt to do so here (Burr and Blanton 2002). Note also that UK submarine commanders appear to be in exactly this invidious position with regard to action on nuclear fire orders without knowing the target coordinates. In a March 26, 2019 hearing of the UK Public Administration and Constitutional Affairs Committee, Lord West of Spithead stated with regard to UK Trident submarine commanding officers (CO): “For example, wiping out a whole city is very understandably completely illegal under international law and normally there are certain bases to do these things. Because of this flexible sub-strategic response, what that in theory allows is use of a nuclear weapon. Rather than your total response to us being wiped out, a single nuclear weapon for a specific reason. Where that is targeted the submarine CO will not know, because none of our warheads at the moment are targeted. They are untargeted. What happens is when the codes come through, if it is a flexible response, he will have a single missile and one warhead that will be targeted somewhere. He will not know what it is and yet in international law as the man who says “go” he will be responsible for this. Do you see what I am getting at? That needs to be clarified, I believe, and it needs to be removed from him. I think that is important”. In Public Administration and Constitutional Affairs Committee, “The Role of Parliament in the UK Constitution: Authorising the Use of Military Force - oral evidence”, 20 May 2019, consulted May 31, 2019, at: <https://www.parliament.uk/business/committees/committees-a-z/commons-select/public-administration-and-constitutional-affairs-committee/inquiries/parliament-2017/authorising-use-military-force-inquiry-17-19/publications/>.

Okinawa, Japan, in charge of a Mace nuclear-armed missile unit that targeted the former Soviet Union and China.

Although his account is contested (Tritten 2015) and may prove difficult to document definitively due to the time that has elapsed, the incident as reported is of great interest. In this case, Bordne's Mace nuclear missile unit was ordered to fire its weapons at the former Soviet Union and China (Tovish 2015). Bordne found this order to be disconcerting not just because it entailed firing nuclear weapons, but because the authenticated fire order was contextually inconsistent – the unit was not on the highest state of alert (Defcon 1) but only on high alert (Defcon 2). After receiving the order to fire a second time, appended strangely to a weather report, he explains:

The lack of resolution to the conflicting orders despite the reissuance of the launch code was very disturbing. I noticed a lack of urgency in the voice when the code was retransmitted which seemed to negate the above concerns. This observation was also noticed by all others in the launch control room as well. This prompted the launch officer to request an upgrade to DEFCON 1 or the issuance of the cancellation code. The cancellation code was hastily transmitted, with urgency, along with a request for all launch sites to give status reports.

Asked what motivated the refusal to simply launch the missiles, Bordne asserts that he was attempting to act sensibly and had been directed to do so by his superior:

Our launch officer told us that we had to be right about our decision. We basically had three options.

- (1) If we were wrong and we did not launch missiles when we should have, and survived the retaliation strike, we would be tried for treason and probably shot.
- (2) If we were wrong and we launched missiles when we should not have, and survived the retaliation, we would be tried for treason and probably shot.
- (3) Get it right and nothing would be said.

One and two above was motivation for us choosing. Number three was our only option. (John Bordne, email to author, 14 August 2017)

In this instance – which took place within only a few hours of a separate incident involving a Soviet submarine in the Atlantic that reportedly came close to firing a nuclear-torpedo at a US surface warship – the individuals involved in the Mace unit including Bordne knew that their targets were cities in the former Soviet Union, China, North Korea and Vietnam. It is clear that if orders had come consistent with a higher alert level, and not aimed at non-belligerent states, that they likely would have followed orders and fired their nuclear weapons at these cities, irrespective of the questions of military necessity, proportionality, or protecting civilians. As Bordne states bluntly, “Legality was of no concern” (John Bordne, email to author, 14 August 2017). Rather than protest, those involved simply chose to remain silent – until five decades later.

Case 2: Atomic Demolition Mine Combat Engineer, 1968 Korea

In the second case, this time in Korea in 1968, a US combat engineer named Michael Roach found himself responsible for using a US atomic demolition mine (ADM) in one of two ways (Michael Roach, interview transcript, New York, December 1987; Michael Roach, email to author, 29 September 2017). At the outset of his tour of duty, insists Roach, “I was a loyal army crewmember and fully ready to carry out any mission assigned to our ADM unit, even ones that involved the death of tens of thousands of ROK civilians. Our access to strategic military intelligence, military planning and targeting was very limited” (Michael Roach, email to author, 29 September 2017).

However, Roach found himself increasingly unconvinced that the plan to use ADMs crafted in the late fifties made military sense in the late sixties due to the urban growth around his designated use site, the city of Uijongbu plus the absurdity of blowing up Seoul with nuclear weapons to save its population. He explains the planned use:

The necessity of Americans using tactical ADM's was developed from analysis of the North Korean (NK) armored attack that started the Korean War at the beginning of the 1950's. The NK forces employed overwhelming quantities of armor units to advance down the “bowling alley” (that is, the valley running North-South for 50 miles directly from the DMZ to Seoul with no natural obstacles along the way). Within days, NK forces reached Seoul and rapidly advanced southward until they occupied almost the entire territory of the ROK.

To prevent the repeat of such an attack after the ceasefire of the “Korean Conflict”, U.S. military planners decided to use tactical ADM's to stop NK armor forces before they reached Seoul. Actually, there were two plans. One was the U.N.-ROK plan that envisioned placing ADM's at three chokepoints on the major entrances to Seoul about 20 miles outside of the city center. To block a main NK armor advance down the bowling alley, a device(s) was to be detonated near the city of Uijongbu area in the center of an urban area of approximately 100,000 residents located about 10 miles directly north of Seoul. The bowling alley was the most vulnerable approach to Seoul. Alternatively, NK armor forces could flank around on the west along the littoral coast or through the mountain passes northeast of Seoul. With ADM's detonated at these three entrances, a ring of atomic defense could be established that could immediately halt NK armor advances by blast effect and slow down further military (especially infantry) movements because of radiated defile battle zones. This strategy was necessary because the ROK did not have the quantitative military forces to counter such a massive attack from NK. The atomic ring would give them time to reinforce Seoul and delay any further advances.

The American military forces had a different plan. Although the atomic ring strategy could buy a short amount of time, it would probably not definitively stop a NK armor advance. They believed that a stronger defensive position was to blow up the major bridges in Seoul that spanned the Han River and take up defensive positions on the south shore of the Han and fight from there using the natural barrier of the large river. The Han is very wide as it passes Seoul so that it would be very difficult for NK forces to construct temporary bridges to cross the river. The American plan focused particularly on destroying the footings of all the bridges with ADM's to prevent any rapid reconstruction of permanent bridges.

These two plans were not necessarily mutually exclusive since the ring strategy could be employed first and then the bridge and footings strategy used as a backup. Our ADM platoon had prospective target sites in both plans. (Michael Roach, email to author, 29 September 2017)

With time on the job and training and exercises, he began to find serious flaws in the war plan for using ADMs in Korea:

In my job in the ADM platoon, I reviewed all of our targets so that our unit was familiar with what we would have to accomplish depending upon which target assignment we received. In reviewing the target profiles, a couple of items of “impracticability” bothered me. The plans were probably written in the mid-1950’s, but by the late 1960’s when I served in the ROK, the assembly sites and other geographic features were entirely different. Where the old plans described open rice paddy areas for military use, by the time I served 15 years later most of these rural plots had been overwhelmed by vast and dense areas of urbanization spreading out from Seoul, especially northward towards Uijongbu. Traffic congestion on poor roads in this urban area slowed vehicle movement to a crawl most of the time. Therefore, ground transportation of atomic devices would have been impossible during a military outbreak. We had helicopters available for our delivery use but this air route was not a really a reliable delivery means because of potential enemy engagements of any operational aircraft in the combat zone. (Michael Roach, email to author, 29 September 2017)

Roach notes that he knew the precise targets of his ADM, and became acutely aware of the large number of civilian casualties and enormous damage to innocent humans that would result from him implementing the war plan, both at the site of use and downwind:

In our training, we never were alerted to the intended effects of a detonation other than military objectives of ensuring proper detonation. Collateral damage was included in target folders but this information was not accessible to most ADM crewmembers. In contrast, I read every target folder we had and tried to understand the broader picture of what we were involved in. I had a difficult time looking ordinary Koreans in the eye, when I knew that their fate was in our hands and that they had no glimmer of what was in store for them if atomic war plans were ever engaged. In the Uijongbu area with 100,000 residents, an atomic detonation could have easily killed or injured most of the Koreans that I saw every day.

On reflection about the effects of detonating multiple atomic bombs in the ROK, I also saw that the radiation plumes would carry over to Japan and then onward to California. I realized that our ADM unit was the last link in the chain of command. We were the soldiers that actually “pulled the trigger” on unleashing nuclear blast, thermal energy and residual radiation. (Michael Roach, email to author, 29 September 2017)

The fact that Roach knew the locations of the targets is similar to the Okinawan case in that Bordne also knew that cities were targeted, which ones, and the likely consequences of such an attack, in contrast to the ignorance of submarine and land-based missile personnel today who likely would not know the targeted location of their weapon when they fire it (unlike the bomber crews who likely would). But Roach’s case differs from Bordne’s in that the intimacy of his knowledge of the populations at risk from attacking his designated targets affected him profoundly over a long period of time as the ludicrous nature of the war plan became increasingly evident – in contrast to the very short time frame of the Bordne incident. As he stated:

On the Han River, they used this cryptic military jargon: “due to heavy population, expect severe damage”. Damage ranged from low, low to moderate, moderate to high. It was only when you sat down and said, Christ, Seoul is 8 million people, what does it mean to set off a device, or multiple devices, south of the city. We were not talking tens of thousands killed or wounded, we were talking hundreds of thousands of civilians. And because

refugees would have been in the streets, casualties would have been even higher than states in the [target] file. (Michael Roach, interview, 1987)

This human reality made Roach rethink the realism and military authenticity of the plan to use ADMs:

I thought of the city and all the Koreans around me not knowing about the control other people have over their lives. They were oblivious to the whole issue. Later it forced me to evaluate at a military level, is this sound military planning? At 19 years old, I was a real functionalist. I would ask: are these weapons and these plans going to carry out what they say? I found them to be out of date, hypocritical, or corrupt. They never played for real. (Michael Roach, interview transcript, New York, December 1987)

Consequently, Roach began to commit the cardinal sin in a military hierarchy, which is to question the validity and the soundness of his role and orders. He asked himself:

In Vietnam, the same kind of thinking ended up killing a lot of troops. I couldn't tell if it was the aristocracy of command, or that they knew what was really going on. But I asked: am I going to be the one who pulls the trigger and kills $\frac{1}{4}$ of a million people. Whatever the political objectives, I knew this was fucked. (Michael Roach, interview transcript, New York, December 1987)

Then he began to push back and up the command chain:

I started out as a squad member. Then I became the clerk. I handled intelligence files, security, crypto work. I was bored and switched to an intelligence position at the battalion level. That's where I got into trouble. The procedure in the oplans was that if a part doesn't work, you put a request through G3 to alter it. I sent in piles. They never did anything. I was too stupid to let it go. One morning I went into the office of the colonel of the ADM unit with officers from the battalion as witnesses, and said that I had made 20 points where the oplans were out of date, and there had been no response. In retrospect, what I was saying was accusing the colonel of incompetence. He threatened me with court martial, reassigning me to Vietnam where I would have been a combat engineer defusing booby traps, for insubordination, they tried to revoke my security clearance. At the court martial, due to the security clearance, the same people who were accusing me would have tried me. The only person with clearance who could defend me was the AG [Adjutant General] in Seoul who also would have been prosecuting. I had the captain mediate. I left the job, went to another base (I was already out of the ADM unit by that time) and agreed to see a shrink. (Michael Roach, interview transcript, New York, December 1987)

Clearly, Roach's evolution from willing ADM "suicide bomber" to outright skeptic and critic within the command hierarchy was driven by a combination of distress at the unprofessional, even shambolic nature of the training and planned use of ADMs from a military perspective along with the potentially catastrophic civilian damages from actually using ADMs according to the war plan.

Roach admits that at the time he did not have a high-level view of the tradeoffs involved in using nuclear weapons in Korea but that it was starkly clear that the war plan was non-sensical, transgressed basic laws and norms of war, and was driven by procedure and training intended to obtain unthinking compliance from those charged with delivering the nuclear weapons, almost certainly at the cost of their own lives. In large part, it was the carelessness that was presented in the war plan, the fact that the

war plan was a sham, and not the weapons or nuclear missions per se, that outraged Roach. He concluded that:

The sole concern was training to manipulate a technical device. I didn't know enough at the time to evaluate if nuking Seoul was worth the political objective. That's also why there was no political indoctrination. All the military command wants is humans to interface with technology without questioning, to complete a complex series of instructions in a rigidly defined manner. The focus of attention was exclusively on that. They even made it overly complex. We had to put the devices into insulated barrels. The lid had to be tightened to just this torque. They would overawe people just barely out of their teens with pseudo-technical procedure. There were never any political questions, or even questions about your own personal safety if you detonated one of these weapons. You were inspected every 8 weeks with a lot of officers. When CINCPAC [Commander in Chief, US Pacific Command at the time] came around, you'd get 15 majors, colonels, herds of brass. So there was a great emphasis on the importance of a limited range of technical procedures. No-one would question this. This is the way it's done. (Michael Roach, interview transcript, New York, December 1987)

Five decades later, Roach notes that from the viewpoint of modern international law, planned use of tactical nuclear weapons like ADMs in Korea at the time he was serving in Korea likely met at least the necessity criterion of legality "because of the deficiency of ROK conventional forces in turning back a North Korean attack and the low-yield of ADM's demonstrates only an incremental and time-compacted increase in destruction relative to conventional mass fire attacks" (Michael Roach, email to author, 29 September 2017). By the same token, he suggests, the cremation of about 50 Japanese cities by U.S. incendiary bombing during World War II killed far more Japanese civilians than nuclear weapons did at Hiroshima and Nagasaki. Thus, Roach was not opposed to the use of nuclear weapons per se. Rather, he objected to participating knowingly in poorly planned and badly executed attacks based on obsolete facts and implemented in a pro forma, bureaucratic manner that if enacted, would have led to catastrophic results. Unlike Bordne, he paid the price for his opposition by not staying silent.

Today, he suggests, ADMs would not be needed because the built-up nature of the attack corridors south of the DMZ makes it relatively easy to block the rapid advance of armored troops without resort to nuclear weapons. Conversely, an argument might be made that massive use of tactical nuclear weapons might be militarily justified to suppress artillery and rocket barrage of civilians in Seoul and strategic weapons might be militarily justified to destroy the DPRK's military command in Pyongyang, albeit at a high cost in civilian lives – thereby posing a tradeoff between saving civilian lives in the ROK versus those in the DPRK. Thus, the targeting calculus has shifted; but the underlying issues have not.

Case 3: Major Hering Challenges the Legitimacy of Presidential Command, 1975

Unlike the first two cases that were not public at the time they occurred, the third case was highly public. It took place in 1975 when Major Harold Hering, a decorated US Air Force major and helicopter pilot, directly confronted his nuclear commanders on the need to know about the sanity of a nuclear strike order. Wrote Hering:

I had just returned from a volunteer assignment as a Rescue Helicopter Unit Commander in support of combat operations in Southeast Asia when I volunteered for Missile Duty. I had a promotion to Lt Colonel pending on my birthday, Feb 1st, 1974, and was destined to be one of two Squadron Commanders of the 90th Missile Wing, F.E. Warren AFB, WY, when I was removed from Missile Training at Vandenburg AFB, CA, about 6 days before graduation. (Harold Hering, email to author, 29 August 2017)

Yet on 12 January 1975, *The New York Times* reported that Hering had been discharged from the Air Force because he insisted that he was morally obligated to be assured that a nuclear missile launch order was valid before acting on it (New York Times 1975). In this instance, therefore, the individual's concern was not primarily ethical or procedural, but essentially *legal* – and that lack of necessary information about control and command and the legality of strikes led him, in turn, to doubt the legality of his orders.

According to his lawyer in the Air Force hearing, “He has asked what checks and balances there are to assure that a launch order could not be affected by the President gone berserk, or by some foreign penetration of the command system”; and, “what safeguards are in existence at the highest level of government to protect against an unlawful launch” (New York Times 1975).⁶⁶

The Air Force denied Hering's request on the grounds that the fallibility of the nuclear command system was above his “need to know” at the combat crew level, and then its Review Board declared him to be unreliable, and recommended he be removed from active duty due to failure to discharge and having a “defective” attitude towards his duties. (Harold Hering, email to author, 29 August 2017).

As noted above, unlike the earlier cases, Hering's concern was distinctly not motivated by ethical concerns. According to General Russell Dougherty, the head of the USAF at the time who personally monitored the case, he was entirely willing to fire nuclear weapons at designated targets:

The major's hesitation initiated extensive hearings and administrative procedures. Later he professed that he really would turn keys and that his hesitation had been misunderstood. I examined the record thoroughly and discovered that, for a fact, he had repeated several times in the record that he would turn keys [to fire missiles in the silos], but that in each instance his affirmative assertion was followed immediately by a personal, subjective qualification. Yes, he would turn keys upon receipt of an authentic order from proper authority: if he thought the order was legal; if he thought that the circumstances necessitated an ICBM launch; if he was convinced that it was a rational, moral necessity; and so on. Every affirmative answer was qualified by a subjective condition. (Dougherty 1987, 414)

That “subjective condition”, according to Hering, amounted to seeking “basic information about checks and balances at the NCA (National Command Authority) level for conscience formation for me and all Missile Launch Officers to preclude my possible unknowing involvement in an unauthorized or illegal order resulting in mass casualties to innocent people” (Harold Hering, email to author, 29 August 2017).

⁶⁶Corruption of the nuclear strike order system by a foreign power was also a concern in the 1962 Okinawa incident. States Bordne: “Concerns of KGB activity similar to the events in Germany which took 24 MACE B missiles out was discussed. Also, the possibility [that] a pre-emptive strike by Russia and the warheads were already on the downward trajectory, or a brief conventional war began which quickly became nuclear, [were] of grave concern. The escalation of the war between China and India was a brief concern along with other worldly events by suspected KGB personnel” (John Bordne, email to author, 14 August 2017).

Hering could have asked the same question about orders to fire conventional or other weapons. But nuclear weapons are different. First, they are many orders of magnitude more destructive than conventional weapons, may be delivered in less than an hour from halfway around the planet, and have instantaneous and uniquely damaging effects including from radiation that is multi-generational. Second, in the US nuclear command system, only one person ultimately evaluates the necessity, proportionality and other distinctive civilian damages from nuclear use and judges whether or not to fire the weapons – the president.

The American way of nuclear command is not unique. Other nuclear weapons states also attribute absolute decision-making to a single leader. North Korea, for example, has vested the same power in the person of Kim Jong Un (Mansourov 2014). In the US case, it was precisely the inherent nature of nuclear threat, involving political, philosophical and moral choices that are not military in nature, and the risk that a nuclear-armed enemy might “decapitate” the US leadership while it was trying to decide how to respond, that drove the United States to elevate the locus of nuclear fire ordering to the US president, with a direct line of command to the US Joint Chiefs and then to the operational forces, without regard to his political and military advisors, Congress, or the judiciary (Wellerstein 2017).⁶⁷ Whereas all other nuclear weapons decisions and handling were subject to the two-person rule in the US military, the president’s use authority was based on one-person rule.

Dougherty made sure that Hering was drummed out of the Air Force altogether to ensure the absolute nature of compliance with nuclear fire orders. This determination came from the top, that is, from General Dougherty himself, and was intended to send a message to the entire nuclear force:

My decision, as the responsible commander, taken without malice or disrespect, was that this officer was not qualified for missile duty in SAC and, in fact, should not be retained in the Air Force. The US military has no place for officers, noncommissioned officers, or other enlisted persons who apply their own subjective conditions to the decision to act on a valid order from proper authority. I thought the United States required, and had a right to expect, a disciplined response to authority, not a personal debate ... This should not be construed as denying anyone in the military the right to entertain a personal opinion or view on any matter, but if that personal view comes in conflict with execution of a proper order, it must give. (Dougherty 1987, 414)

Thus, Hering never got an answer from the US Air Force to his fundamental question: How could he know that a nuclear fire order was not somehow affected by corruption, foreign influence, or mental disorders?

In reality, this question was impossible to answer, which is why the decision had been punted to the president in the first place. Indeed, Hering’s challenge led Rod Rosenbaum to investigate the issue in 1978. Rosenbaum’s journalistic engagement with the command and control of US nuclear weapons forces, each of which had its own narrow organizational logic, cultural integrity and internally consistent technical rationality, led him to conclude that the enterprise itself was the embodiment of group insanity (Rosenbaum 1978, 85–105). The authentication of a nuclear fire order, he

⁶⁷Listen also to Wellerstein’s interview with Hering in “Nukes”, *Radiolab*, 7 April 2017, at: <https://www.wnycstudios.org/story/nukes>.

found, related only to the identity of the person issuing the order, not that person's sanity or mental capacity, and it followed that no matter who was in this position, the logical flaws, strategic contradictions and irresolvable paradoxes created by the very nature of nuclear war rendered presidential nuclear decision-making irrational and emotional, no matter how sane or rational the incumbent of the day. It followed that there is no way to respond to Hering's question about the sanity of a fire order.

Rosenbaum revisited the Hering case in 2011 and then examined the same issue in different contexts involving Israel, Pakistan, post-Cold War U.S.-Russian relations, and came to the same conclusion. Nuclear holocaust, even of the pre-emptive kind intended to limit damage, let alone all-out spasmodic and a-strategic retaliation for nuclear attack, could never be justified, and the entire structure of nuclear weapons decision-making is irrevocably flawed by the essential nature of the proposed action, from top to bottom (Rosenbaum 2011, 260).

Given that no one can provide credible assurance that the order is consistent with international law against committing war crimes, the individuals charged with firing nuclear weapons have limited options.

The first is to follow Rosenbaum's advice, with which he concludes his book:

If you're in a position to launch, whoever you are, now or in the future, if you're in a position to send the targeting codes, if it's up to you, whoever you are, my plea is: Nothing justifies following orders for genocide. Don't send those codes, don't twist those keys. (Rosenbaum 2011, 260)

The second is, as former US Strategic Commander General Kehler puts it, to trust the command. Strategic Command, he declares, strives hard to develop nuclear targets and employment options that are, as he puts it delicately, "mindful" of the laws of armed conflict (Kehler 2016, 59). He advocates using training and personal assurance at every level of the command to "create trust and confidence in these crew members that legal issues have been addressed and resolved in advance on their behalf by policy-makers, commanders, and planners and that the highest legal standards have been enforced, from target selection to an employment command by the president" (56).

Michael Smidt, staff judge advocate at US Strategic Command until July 2017, expands on the argument that the Commander always knows best:

Bomber crews, missile crews etc., need to know that every target they may be asked to engage is being reviewed by legal advisors – not only because that should give them some [peace] of mind from a legal jeopardy standpoint, but from a moral one as well. They can feel confident if they are asked to do the unthinkable, that others are closely evaluating the legality of those targets. Of course they know this does not mean they have no responsibility to evaluate the legality of the orders given to them, but you could certainly ask your questions of pilots every time they are involved in dropping conventional munitions as well. Nuclear or conventional, crews must consider the law of armed conflict, including during the execution of their mission. Things can change on the ground from the planning stages, or more intelligence can come to light. Should a pilot being asked to drop conventional weapons illegally say "no?" Sure. Nuclear weapons? Sure. However, before a pilot on a nuclear mission should decide that what he or she is being asked to do is manifestly unlawful, the pilot would have to conclude that their understanding of the facts and or the law is somehow more accurate and well-reasoned than the President, commanders and lawyers that gave a thumbs up to the mission. (Michael Smidt, email to author, 9 September 2017)

Smidt admits that it is possible that a crew member might have a better understanding of the consequences and legal validity of the fire order, albeit unlikely.

At this low, operational level, without the benefit of advice, intelligence information, details of the target, the individual supposedly should accept a nuclear fire order without question. In essence, the system operates on trust. Or, as one missileer explained to Rosenbaum in 1977:

Once you start thinking about all that your head starts going in circles. You got to change the subject. There's a point where you gotta stop asking questions and go to work. You've got to have faith that you're doing the right thing. It all comes down to professionalism. (Rosenbaum 2011, 61)

The essential problem with a faith-based acceptance of the legitimacy of nuclear fire orders is that individuals are in fact legally and morally responsible for their actions, and neither these individuals nor adversaries of a nuclear weapons state can rely on mere trust in such matters. Indeed, US indoctrination of nuclear weapons personnel includes exposure to the effects of nuclear strikes to make sure that they are well informed about the effects of nuclear explosions and to determine if they are psychologically robust enough to fire the weapons. However, this very education means that no nuclear-certified individual in the US nuclear weapons enterprise can claim ignorance of the likely effects of the weapons as a defense after they are used. As Hering stated:

We were told that the Launch Officer had 'more firepower under his direct control than all generals in all wars in the history of warfare.' I was told that I didn't have a "need to know" only to learn later that there were no checks at the Presidential level. (Harold Hering, email to author, 29 August 2017)

Hering's simple point – so troubling to the US Air Force – was having been told in the nuclear personnel induction process of his awesome capability to inflict megadeath once put on duty in a silo, how could he possibly not have a need to know?

Although the precise targets of US nuclear weapons are not public, past targeting information, the disjuncture between declaratory rhetoric, the reality of targeting overkill in US nuclear strategy for most of its history (Miller 2016, location 87 *et passim*),⁶⁸ the recognition by multiple recently retired US nuclear commanders that nuclear forces are unusable, the reality that once started, nuclear wars cannot be limited from escalating to all-out war, and the sheer numbers of nuclear forces that may be unleashed in a nuclear attack, are all grounds for an individual to argue that his or her refusal to fire a nuclear weapon is a legal obligation in almost any conceivable nuclear war; and that it is incumbent for nuclear commanders to provide concrete, detailed and persuasive evidence to the contrary.

Acting on individual initiative, and demanding nuclear fire orders that are not just "mindful" of but demonstrably comply with international law is, as Harold Hering

⁶⁸As Miller noted, "SAC leadership itself did not understand its own warplan: "As their eyes first widened at evidence they were clearly seeing for the first time and then narrowed at the realization that OSD had penetrated so deeply into their process, it struck me that this meeting could have been titled, 'Gentlemen, meet your war plan.'" (Miller 2016 at location 358). Miller suggested this overkill originated thusly: "At some point, presumably in the 1970s, the war planners at the JSTPS (without informing the Joint Staff or OSD, much less the White House staff) had decided to define a 'city' in such a manner that had the President ordered a strike that included the cities withhold, all of those cities would nevertheless have been obliterated" (at location 225). Rosenberg, however, suggests the roots are more fundamental (Rosenberg 1983, 3–71; Richards 2016, 862–978).

argued, the essence of humanity and of constitutional obligation to not contravene the laws of war. As he put it, “I have to say I feel I do have a need to know because I am a human being” (Rosenbaum 2011, 33).⁶⁹

Armed with only his humanity, Hering adhered to legal principle and was cashiered from the US Air Force. However, Hering always held open the possibility that his commanders could provide him with information on checks and balances in the national nuclear command that demonstrate a basis for trusting nuclear fire orders and that the orders were sane and defensible and would conform to the law.

The Hering case suggests that the only possible way to overcome the possibility that nuclear fire orders were almost certainly insane, corrupt, or violative of the laws of war would be to push real information about targets, damages and military necessity down the command hierarchy to all individuals involved in delivering nuclear weapons until such time as nuclear weapons are rendered needless by more capable and less damaging conventional weapons, nuclear-prone conflicts are resolved, and nuclear forces are reduced, removed or eliminated from force structures.

Conclusion

At this time, there is no authoritative guidance available to individual nuclear weapons personnel on what they must do to be confident that the use of nuclear weapons conforms to the laws of armed conflict and other international laws that are now applicable to the use of nuclear weapons reviewed in the first Part of this Article. The general rules derived from Nuremberg and other trials since then apply to nuclear weapons (US Department of Defense 2016), but how these apply specifically to the decisions and actions of nuclear weaponeers at all levels in nuclear forces has not been explicated. What, for example, are the boundaries of acting on nuclear fire orders, and where do these activities begin and end? Do they include all those involved in preparing nuclear targets and approving them? What about those who communicate the fire orders to those who deliver the nuclear weapons? Does this accountability include cyber personnel who protect the transmission of such orders against hackers? What level of nuclear threat to a state’s existence might justify deterrence threats, and where do these countervailing threats that constitute mutual nuclear deterrence slip from being legally justified forms of self-defense to nuclear aggression, itself a nuclear war crime?

In past decades, individuals like Bordne and Roach acted primarily from an ethical concern that they not commit war crimes and for other pragmatic and common sense reasons. They were not driven by their accountability under the evolving corpus of international law that constitutes the laws of armed conflict. (Dunlap 1997, 157–81; Richards 2016, 862–978). That is, these individuals prefigured a role for international law in individual nuclear combatant’s decisions to follow orders to use nuclear weapons, but did not establish clear precedents. In neither case were the command hierarchies confronted in

⁶⁹Here Hering’s assertion that his humanity suffices to assert the need to know hearkens back to the Universal Declaration of Human Rights which states that everyone has the right “to seek, receive and impart information and ideas through any media and regardless of frontiers” (Article 19), that everyone has “duties to the community in which alone the free and full development of his personality is possible” (Article 29), and all humans “are endowed with reason and conscience and should act towards one another in a spirit of brotherhood” (Article 1). G.A. Res 217(A) at arts. 1, 19, 29 (10 December 1948).

a manner that forced a fundamental consideration of the issues at stake. In the Okinawa 1962 missile case, the command system auto-corrected quickly and likely suppressed the incident and nuclear weapons remained in Okinawa until reversion to Japan and local opposition led to their withdrawal in 1972. In the 1968 Korea ADM case, the command system simply ignored Roach's concerns and buried him in an organizational backwater until he left. Absurdist nuclear war plans and deployments continued in Korea until 1992, when US nuclear weapons were withdrawn from the peninsula.

Hering was different, a true nuclear refusenik whose principled stand set a standard that confronted the nuclear command with the dilemma of an individual officer committed to maintaining the US Constitution, and with it, his obligations to comply with international law.⁷⁰ His experience suggests that an international tribunal on nuclear war crimes could reinforce accountability of nuclear weaponeers at all levels and in all countries in a number of ways, and thereby reduce the risk that nuclear weapons might be used.

First, nuclear refuseniks may find some legal and political protection for their actions if an international tribunal (or tribunals if they were set up initially at a regional level) issued legal rulings on what constitutes nuclear war crimes. An international tribunal might provide legal guidance on what constitutes minimum information on targeting, collateral damage, etc., that must be provided to all nuclear weapons personnel in advance of nuclear war operations. In addition, an international tribunal might clarify what types of threats constitute nuclear aggression, and what, if any, do not.

Second, an international tribunal might provide legal justification for non-nuclear weapons states providing sanctuary to those who reject nuclear fire orders on the ground that such orders are most likely manifestly illegal. This sanctuary might encourage nuclear refuseniks to push back against nuclear fire orders or other actions that constitute nuclear aggression.

Third, an international tribunal might send a message that nuclear war criminals at all levels, but especially the political and military leaders who decide to use nuclear weapons and issue orders to do so, will be held accountable. No one can know before a nuclear war whether such an international tribunal would have the reach to arrest and try such nuclear war criminals, but if they are not direct targets, they may well be the most capable states left standing. The prospect that there is nowhere to retreat from a smoking, radiating ruin without facing arrest might bring pause to even the most rabid nuclear commander. And, because nuclear weapons states that are members of the UN Security Council can veto referrals to the ICC for nuclear war crimes, both nuclear and non-nuclear weapons states should favor such a tribunal – because it would close the veto loophole and ensure that all their adversaries would have greater accountability than they do today.

Fourth, an international tribunal that encourages nuclear refuseniks might reinforce the ability of senior military and civilian leaders to disobey illegal nuclear fire orders from those who make such decisions, whether it is a sole commander as in the United States and the DPRK, or a group command decision, as may be the case in China where the Central Military Commission appears to control the nuclear trigger.

⁷⁰We recognize that these three cases are all American, and there are likely similar cases in the other nuclear weapons states that call for similar analysis. Also, we are aware that other cases of false orders being received have occurred in US nuclear command history. Each incident also may have its own extraordinary individual whose stories of refusing to act on such orders have yet to be told. We have no doubt that more such stories will surface with time.

The fact that a senior commander rejects an order as illegal, as General Kehler prefigured could occur, might become a more substantial barrier to circumvention of this disobedience by the top commander if his refusal to transmit the order is known to his subordinates, and the subordinates knew that they are individually accountable for their own decisions if directed by the nuclear commander to fire their weapons and that their highest duty would be to not commit nuclear war crimes, as an expectation of the nuclear command itself – in the same way that killing babies and massacring civilians is also held repulsive to professional military values.

Fifth, the international tribunal might also address the contrary argument that encouraging nuclear weapons personnel to disobey nuclear fire orders reduces the credibility of nuclear deterrence, thereby inviting nuclear threats and attacks, and increasing the risk of inadvertent or purposeful nuclear war. Hering already pointed out that the credibility of legally justified nuclear threats would likely be increased, not decreased, by informing nuclear weapons personnel of the requisite information to determine if their acting on nuclear fire orders is legal.

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. (Harold Hering, email to author, 29 August 2017)

In conclusion, it is noteworthy that the first time that nuclear weapons were used, on the inhabitants of Hiroshima on 6 August 1945, those who delivered the bomb had almost zero comprehension of the act that they were about to commit. Afterward, one of those involved, Claude Eatherly, who piloted the weather plane that cleared the way for the Enola Gay to drop its nuclear bomb on Hiroshima, was crippled mentally by his guilt and post-attack remorse and attempted suicide on more than one occasion (Eatherly and Anders 1961). He was clear that if he had understood what he was about to do, he would have refused.

In reality, not much has changed for those who are charged with firing nuclear weapons today. An international tribunal might not only avoid more Eatherlies; it might help avoid more Hiroshimas, and make Nagasaki the last civilian population to be annihilated with nuclear weapons.

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Notes on Contributors

Anthony J. Colangelo is Gerald J. Ford Research Fellow and Professor of Law, Southern Methodist University Dedman School of Law in Dallas, Senior Associate, Nautilus Institute.

His main research interest include public and private international law, foreign relations law, and conflict of laws.

Peter Hayes is Honorary Professor, Center for International Security Studies, Sydney University, Australia and Director, Nautilus Institute in Berkeley, California. His main research interests are nuclear weapons, climate change and energy security, particularly in Northeast Asia.

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