

**International Criminal Law and the Future of Humanity:  
Toward a Theory of the Crime of Omnicide**

**Abstract:** This paper argues that current international criminal law should be expanded to include *omnicide*, or the intentional destruction of humanity. I claim that omnicide is not a special case of crimes against humanity or genocide, but is distinct from both in a number of important ways. I further argue that establishing a specialized convention on omnicide is urgent given the exponential development of dual-use emerging technologies, which could enable a large number of state and nonstate actors to unilaterally bring about the extinction of humanity. Although I do not intend to outline a complete theory of the crime of omnicide, I do attempt to lay a foundation for future research on this important topic.

## **1. Introduction**

Legal systems have evolved over time in response to novel developments in social organization, economics, technology, military capabilities, global trade, and so on. The present century will very likely witness a series of unprecedentedly radical changes to world conditions, including our global threat environment, thus requiring equally significant additions to both municipal and international laws. In this paper, I focus on the possibility of state and nonstate actors using advanced technologies to bring about a human extinction catastrophe. Although such an outcome may sound fantastical, I offer a number of reasons below for accepting that, due primarily to the proliferation of dual-use emerging technologies, causing human extinction is becoming

increasingly feasible not just for a wider range of state actors, but also for sub-state entities like terrorist groups and even lone individuals who harbor a “death wish” for humanity. Yet current international criminal law, I argue, is severely ill-equipped to handle the possibility of someone causing human extinction—i.e., *omnicide*—which is, I claim, a special case of neither crimes against humanity (CAH) nor genocide. Rather, *omnicide* constitutes a “crime against humanity’s potential” (CAHP), a new legalistic concept that is grounded most compellingly in what I call a “long-termist” perspective. I explore a number of potential implications of this judicial innovation, including the suggestion that the international community adopt an *Omnicide Convention*, and perhaps a broader specialized convention on CAHP, that outlines the nature of such crimes and how the international community ought to respond to instances of planning, preparing, and initiating an omnicidal attack.

This paper will proceed as follows: section 2 describes the basics of CAH and genocide for the purpose of contrasting them with *omnicide*; section 3 examines several important features of *omnicide*; section 4 offers an incipient theory of the crime of *omnicide*; and section 5 concludes the article. It is my modest aim to merely lay the foundation for future scholarly research on this increasingly important topic, rather than to offer a complete theory of what constitutes *omnicide* and why it should be considered an international rather than domestic crime, or a crime at all.

## **2. What Are Crimes Against Humanity and Genocide?**

Let’s begin with a brief survey of CAH and genocide, taking them in order:

2.1 *Crimes against humanity*. Unlike genocide, CAH has never been codified in international criminal law, despite calls for a specialized convention that would “identify the specific contents of CAH in customary international law, particularly in light of the requirements of the principles of legality in international criminal law.”<sup>1</sup> Consequently, the evolution of the legalistic notion of CAH since the Nuremberg trials has not been linear, resulting in subtly different *conceptions*—in Ronald Dworkin’s sense of the term<sup>2</sup>—of CAH that have fomented confusion about the precise nature of the crime. On Cherif Bassiouni’s count, tribunals and judicial decisions have outlined up to “twelve different international definitions of CAH.”<sup>3</sup> For example, the London Charter decreed by the European Advisory Commission and that delineated the rules and procedures of the Nuremberg trials specified CAH as encompassing

murder, extermination, enslavement, deportation, and other inhumane acts<sup>4</sup> committed against any civilian population, before or during the war; or persecutions on political, racial or religious grounds in execution of or in connection with any crime within the jurisdiction of the Tribunal, whether or not in violation of the domestic law of the country where perpetrated.<sup>5</sup>

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<sup>1</sup> M. Cherif Bassiouni, ‘Crimes Against Humanity: The Case for a Specialized Convention’, *Washington University Global Studies Law Review* 9:4 (2010), 575, at 583.

<sup>2</sup> Ronald Dworkin, *Law’s Empire* (Belknap Press, 1986), at 70-71.

<sup>3</sup> Bassiouni, *supra* note 1, at 583.

<sup>4</sup> Such as “medical experimentation, mutilations, severe beatings, food deprivation, sterilizations, violations of corpses, forced undressing, forced witnessing of atrocities against loved ones, and other egregious physical and mental assaults.” David Luban, ‘A Theory of Crimes Against Humanity’, *The Yale Journal of International Law* 29 (2004), 85, at 99.

<sup>5</sup> Charter of the International Military Tribunal, Art. 6(c), Aug. 8, 1945, 59 Stat. 1544, 82 U.N.T.S. 279.

Note here the “nexus” with armed conflict: by stipulation, CAH must have been committed “before or during the war.” This link was later adopted by the International Criminal Tribunal for the former Yugoslavia (ICTY), which the UN Security Council established in 1993. The ICTY Statute is explicit that the tribunal, exercising universal jurisdiction, has “the power to prosecute persons responsible for crimes” like those listed above “when committed in armed conflict.”<sup>6</sup> According to Bassiouni, the war nexus was important to preserve in this case because “the conflict in the former Yugoslavia was considered a conflict of both an international and non-international nature. Therefore, this adjusted definition of crimes against humanity was necessary to afford the tribunal jurisdiction over this crime.”<sup>7</sup>

But this requirement was later dropped in the Draft Code adopted in 1996 by the International Law Commission, which was tasked with outlining a “code of offenses against the peace and security of mankind.” The document specifies acts like murder, extermination, and torture as “crimes against humanity” on the condition that they are committed “in a systematic manner or on a large scale and [are] instigated or directed by a Government or by any organization or group.”<sup>8</sup> In other words, armed conflict is not necessary for CAH—a position also adopted by the 1994 International Criminal Tribunal for Rwanda (ICTR), although Article 3 of the ICTR Statute adds that for an act to constitute a CAH, it must be part of a “systematic or widespread attack against any civilian population on national, political, ethnic, racial, or religious grounds.”<sup>9</sup> This “systematic or widespread” locution was subsequently adopted (with reversed

<sup>6</sup> U.N. Security Council, Updated Statute of the International Criminal Tribunal for the Former Yugoslavia, Art. 4, (Sept. 2009), <http://www.icty.org/x/file/Legal%20Library/Statute/statute.sept09en.pdf>.

<sup>7</sup> See International Crimes Database, Crimes Against Humanity, <http://www.internationalcrimesdatabase.org/Crimes/CrimesAgainstHumanity>, accessed on September 10, 2019.

<sup>8</sup> International Law Commission, ‘Draft Code of Crimes against the Peace and Security of Mankind with Commentaries’, *Yearbook of the International Law Commission* vol. II, Part Two (1996), at 47.

<sup>9</sup> See U.N. Security Council, Statute of the International Criminal Tribunal for Rwanda, art. 2, (Jan. 31, 2010), [http://unictr.unmict.org/sites/unictr.org/files/legal-library/100131\\_Statute\\_en\\_fr\\_0.pdf](http://unictr.unmict.org/sites/unictr.org/files/legal-library/100131_Statute_en_fr_0.pdf).

word order, but preserving the inclusive “or”) by the most canonical definition of CAH to date, that articulated in the Rome Statute that established the International Criminal Court (ICCt) in 1998.<sup>10</sup> Article 7(1) states that “for the purpose of this Statute, ‘crime against humanity’ means any of the following acts when committed as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack.”<sup>11</sup> It then lists these acts:

- (a) Murder;
- (b) Extermination;
- (c) Enslavement;
- (d) Deportation or forcible transfer of population;
- (e) Imprisonment or other severe deprivation of physical liberty in violation of fundamental rules of international law;
- (f) Torture;
- (g) Rape, sexual slavery, enforced prostitution, forced pregnancy, enforced sterilization, or any other form of sexual violence of comparable gravity;
- (h) Persecution against any identifiable group or collectivity on political, racial, national, ethnic, cultural, religious, gender ... or other grounds that are universally recognized as impermissible under international law, in connection with any act referred to in this paragraph or any crime within the jurisdiction of the Court;
- (i) Enforced disappearance of persons;

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<sup>10</sup> See Rome Statute of the International Criminal Court, July 17, 1998, 2187 U.N.T.S. 90 [hereafter “Rome Statute”].

<sup>11</sup> *Ibid.* Note also that “some domestic legislation specifies widespread *and* systematic, but customary international law does not.” See David Nersessian, ‘Comparative Approaches to Punishing Hate: The Intersection of Genocide and Crimes Against Humanity’, *Stanford Journal of International Law* 43 (2007), 221, at 234.

- (j) The crime of apartheid;
- (k) Other inhumane acts of a similar character intentionally causing great suffering, or serious injury to body or to mental or physical health.

It may be useful to dissect this definition into its various anatomical parts. First, there is the “physical” element, or *actus reus*, that must be satisfied for one to be guilty of CAH: the offender must have committed one or more of the crimes listed in (a) to (k). Second, there is the “subjective” or “mental” element, or *mens rea*, expressed by the phrase “with knowledge of the attack.” Whereas the ICTY held that this entails that wrongdoers must have specific intent to contribute to the attack, all subsequent *ad hoc* tribunals have specified this condition being “satisfied if the defendant knew, had reason to know, or took the risk that his or her act was part of the broader attack.”<sup>12</sup> However, the Rome Statute specifies an even more restrictive interpretation of the key word “knowledge.” It asserts that (i) one must act with “intent,” which obtains when (a) one means to engage in the act, and (b) one means for the act to have the consequences it does, and (ii) “knowledge” signifies “awareness that a circumstance exists or a consequence will occur in the ordinary course of events.”<sup>13</sup>

Third, there is the “contextual” element, which consists of a “policy” and “collective” sub-element.<sup>14</sup> On the one hand, Article 7(2)(c) of the Rome Statute stipulates that the policy sub-element requires CAH to be “pursuant to or in furtherance of a state or organizational policy

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<sup>12</sup> Margaret deGuzman, ‘Crimes Against Humanity’, in Bartram Brown (ed.), *Research Handbook on International Criminal Law* (Edward Elgar Publishing Limited 2011), 62-83, at 75.

<sup>13</sup> *Supra* note 10. Hence, deGuzman notes: “A question remains whether, under customary international law, crimes against humanity require actual knowledge that one’s act is part of a widespread or systematic attack or, instead, it is sufficient to have assumed the risk of such a connection.” *Ibid*, at 75.

<sup>14</sup> The nexus with armed conflict would also fall under this banner.

to commit such attack.” As Antonio Cassese puts it, acts of CAH form “part of a policy by a government, a *de facto* political authority, or an organized political group, or [are] tolerated, condoned, or acquiesced in by the aforementioned government, authority, or group.”<sup>15</sup> The strongest version of this view is found in the London Charter, which presupposed that those guilty of CAH were “agents of a state.”<sup>16</sup> However, just as the war nexus was weakened (and eventually dissolved) over time, so too was the importance of proper state actors. For example, the ICTY stated that customary international law, “in relation to crimes against humanity has developed to take into account forces which, although not those of the legitimate government, have *de facto* control over, or are able to move freely within, defined territory.”<sup>17</sup> This was of course because the Serb militias involved in the Bosnian War were unofficially and “only loosely affiliated with the Yugoslav state.”<sup>18</sup> Thus, in lieu of the London Charter’s “state policy” assumption, the ICTY only required “a governmental, organisational, or group policy.”<sup>19</sup> Later, the ICTR weakened this nexus even more by requiring, as mentioned above, merely “a widespread or systematic attack against any civilian population on national, political, ethnic, racial or religious grounds.”<sup>20</sup> This was of course necessitated by the fact that much of the Rwandan genocide was committed by unaffiliated civilians “in areas of the country outside the battle zones of the civil war.”<sup>21</sup> Finally, the Rome Statute “does not specifically include non-state actors within its scope,” although some scholars contend that the ICCt should jurisprudentially interpret CAH as including nonstate

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<sup>15</sup> See Antonio Cassese, *Cassese’s International Criminal Law* (Oxford University Press, Oxford, 2013), at 91.

<sup>16</sup> *Supra* note 4.

<sup>17</sup> *Supra* note 6.

<sup>18</sup> *Supra* note 4.

<sup>19</sup> Quoted in William Schabas, *War Crimes and Human Rights: Essays on the Death Penalty, Justice, and Accountability* (Cameron May, London, 2008).

<sup>20</sup> *Supra* note 9.

<sup>21</sup> *Supra* note 4.

actors, given that, since World War II, nonstate actors “have been the main perpetrators of CAH.”<sup>22</sup>

Yet other scholars continue to emphasize the importance of states in the context of CAH. For example, Richard Vernon argues that CAH are crimes specifically associated with “an abuse of state power involving a systematic inversion of the juridical resources of the state.”<sup>23</sup> Along similar lines, Luban claims that what renders CAH so heinous is that they pervert the central security function of the state. That is to say, humans are “political animals” in the particular sense that we cannot live without the state, where the state’s primary purpose is to offer protection for its citizens. When this asymmetrical configuration is flipped upside-down and the state uses its resources to inflict widespread and systematic harm on civilian populations (within the state’s territorial borders, Vernon himself argues), “ordinary” atrocities like murder, rape, and persecution acquire a special kind of moral intolerability. Thus, as Luban writes, CAH “are the limiting case of politics gone cancerous.”<sup>24</sup> Nonetheless, while the Rome Statute “does not specifically include non-state actors within its scope,” it does seem very likely that instances of catastrophic terrorism, such as the 9/11 attack perpetrated by al-Qaeda, would fall within the Statute’s definition of CAH.<sup>25</sup>

On the other hand, Article 7(1) also outlines the collective sub-element, which echoes previously cited parts of the ICTR Statute. It states that the acts of (a) through (k) must be “part of a widespread or systematic attack.”<sup>26</sup> According to the Trial Chamber of the ICTY, the first

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<sup>22</sup> *Supra* note 1.

<sup>23</sup> Richard Vernon, ‘What Is Crime Against Humanity?’, *Journal of Political Philosophy* 10(3) (2002), 231.

<sup>24</sup> *Supra* note 4.

<sup>25</sup> *Supra* note 1.

<sup>26</sup> Note that, according to Nersessian (2007) “the ICC statute appears to require something close to *both* criteria because it defines an ‘attack’ as a ‘*course of conduct* involving the *multiple commission* of [prohibited acts] ... pursuant to or in furtherance of a State or organizational policy to commit such an attack.”



term—“widespread”—includes crimes resulting from the “cumulative effect of a series of inhuman acts or the singular effect of an inhuman act of extraordinary magnitude”<sup>27</sup> whereas the ICTR Trial Chamber stipulated that it “may be defined as massive, frequent, large-scale action, carried out collectively with considerable seriousness and directed against a multiplicity of victims.”<sup>28</sup> As for the second term—“systematic”—the ICTY claimed that it “requires (i) a political objective or plan, (ii) large-scale or continuous commission of crimes which are linked, (iii) use of significant public or private resources, and (iv) the implication of high-level political and/or military authorities.” The ICTR similarly identified acts as “systematic” when they (i) are thoroughly organized, (ii) follow a regular pattern, (iii) are based on a common policy, and (iv) involve substantial public or private resources.

The crucial point is that the contextual element introduces a *threshold condition* that excludes one-off atrocities, which might be horrific but don’t “shock the conscience of humanity” the way CAH do; indeed, CAH are *shocking* in part because they are systematic or widespread rather than “isolated or sporadic events,” as the Explanatory Memorandum of the Rome Statute puts it. According to Norman Geras, there are at least two reasons for this two-part threshold of scale condition: first, domestic courts are often sufficient for dealing with smaller-scale crimes that would count as CAH if they occurred on a larger scale; and second, even when states are unable to prosecute such crimes, they occur so frequently that “the international community and its recognized courts could not realistically handle every case of individualized or small-scale (even if egregious) rights violations across the planet.”<sup>29</sup>

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<sup>27</sup> Quoted in Daniel Rietiker, *Humanization of Arms Control: Paving the Way for a World Free of Nuclear Weapons* (Routledge, New York, 2018).

<sup>28</sup> Quoted in Vivienne O’Connor and Colette Rausch, *Model Codes for Post-Conflict Criminal Justice, Volume 1* (United States Institute of Peace Press, Washington D.C., 2007).

<sup>29</sup> Norman Geras, *Crimes Against Humanity: Birth of a Concept* (Manchester University Press, Manchester, 2011).

Despite the diversity of judicial and statutory conceptions of CAH since World War II, some scholars argue there is a single, coherent, underlying *concept*<sup>30</sup> from which these conceptions draw. For example, Luban identifies the following five salient features of CAH:

(1) *Crimes against humanity are typically committed against fellow nationals as well as foreigners.* As numerous scholars have noted, humanitarian law failed to anticipate the atrocities of the Nazi Holocaust, which targeted civilians within the sovereign boundaries of the omnipotent state. In other words, prior to 1945, “the category of war crimes against civilian populations included only offenses against *foreign* populations.”<sup>31</sup> CAH aimed to rectify this shortcoming by acknowledging the possibility that states mistreat their own citizens—fellow nationals—in addition to foreign civilian populations.

(2) *Crimes against humanity are international crimes.* This gestures at a paradigm shift that Bruce Mazlish refers to as the “judicial revolution” of the twentieth century, whereby the central concern of international law switched from sovereign states to individual people, who, by dint of possessing human rights and an inalienable dignity, justify the violation of state sovereignty in cases where states are either unwilling or unable to ensure that these rights are not violated.<sup>32</sup> CAH transcend state boundaries and, as such, concern the international community.

(3) *Crimes against humanity are committed by politically organized groups acting under color of policy.* Luban argues that, throughout the evolution of the contextual element

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<sup>30</sup> Again, in Dworkin’s sense. See *supra* note 2.

<sup>31</sup> *Supra* note 4.

<sup>32</sup> Bruce Mazlish, *The Idea of Humanity in a Global Era* (Palgrave Macmillan Transnational History Series, New York, 2009).

from the initial war nexus to the requirement that CAH are “widespread or systematic” attacks, one idea emerges: CAH “are crimes committed through political organization,” whereby guilty individuals knowingly participate in acts that instantiate CAH. As Luban points out, this focuses on the “collective character” of the *perpetrators* rather than the *victims*.<sup>33</sup>

(4) *Crimes against humanity consist of the most severe and abominable acts of violence and persecution.* To quote the Preamble of the Rome Statute, CAH are “unimaginable atrocities that deeply shock the conscience of humanity.” These are the worst “atrocities and humiliations” that humans can inflict upon each other, acts that strike the morally thoughtful as the limiting cases of barbarity.<sup>34</sup> Or, as the intellectual architect of CAH, Sir Hersch Lauterpacht put it, referencing (2) above, the international community has “the right to intercede on behalf of the violated rights of man trampled upon the State in a manner calculated to shock the moral sense of mankind.”<sup>35</sup>

(5) *Crimes against humanity are inflicted on victims based on their membership in a population rather than their individual characteristics.* In other words, CAH are group-based rather than individual crimes. Beginning with the London Charter and continuing through the ICTY, ICTR, and Rome Statute, CAH have been invariably seen as being committed against a “civilian population.” It follows that CAH are crimes against a *population of people* rather than an individual. This implies that those responsible for CAH are targeting individuals because of their membership in some population—they are targets

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<sup>33</sup> *Supra* note 4.

<sup>34</sup> Or, as Luban puts it, acts “that count as crimes against humanity are, in effect, the ones that turn out stomachs.” *Supra* note 4.

<sup>35</sup> Quoted in Philippe Sands, *East West Street: On the Origins of “Genocide” and “Crimes Against Humanity”* (Vintage Books, New York, 2017).

not because of their individual characteristics but because of their group's characteristics. Such victims are "attacked for being (rather than for doing)," an idea so outrageous that, according to Samantha Powers, it partly explains why people often remain indifferent to CAH and genocide. Such crimes are simply "too discomfiting and too foreign to process readily."<sup>36,37</sup>

Other scholars have enumerated similar features, such as Massimo Renzo and Cassese. The latter, for example, emphasizes that CAH are (1) "particularly odious offenses in that they constitute a serious attack on human dignity or a grave humiliation or degradation of one or more persons," (2) not single crimes but must "be an instance of a repetition of similar crimes or be part of a string of such crimes (widespread practice), or that it be the manifestation of a policy or a plan of violence worked out, or inspired by, state authorities or by the leading officials of a *de facto* political authority, or of an organized political group (systematic practice)," and (3) "prohibited and may consequently be punished regardless of whether they are perpetrated in time of war or peace."<sup>38</sup> Cassese further argues, controversially, that under customary international law the victims may be either civilians or enemy combatants, since condition (3) means that "it no longer makes sense to require that such crimes be perpetrated against civilians alone," as military personnel could also be targeted during peacetime.<sup>39</sup>

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<sup>36</sup> Samantha Powers, *A Problem from Hell: America and the Age of Genocide* (HarperCollins, New York, 2003).

<sup>37</sup> Italicized sentences are quoted from *supra* note 4.

<sup>38</sup> Massimo Renzo, 'Crimes Against Humanity and the Limits of International Criminal Law', *Law and Philosophy* 31, 443.

<sup>39</sup> *Supra* note 15.

We will discuss several additional features of CAH in section 3. The aim of the present subsection is to provide a basic foundation on which to build a theory of crimes of omnicide later on. Let's now turn to the issue of genocide.

2.2 *Genocide*. In a 1941 broadcast, Winston Churchill declared that “since the Mongol invasions of Europe in the sixteenth century there has never been methodical, merciless butchery on such a scale or approaching such a scale.” Churchill was referencing the Nazi’s “mass murder” of “Russian patriots who defend their native soil,” which Churchill described as “a crime without a name.”<sup>40</sup> Shortly after, the Jewish-Polish lawyer Raphael Lemkin coined the term “genocide” in his 1944 book *Axis Rule in Occupied Europe*.<sup>41</sup> Whereas CAH is fundamentally about the destruction of individuals—e.g., because of their membership in a group—genocide specifically aims to destroy the groups themselves. As Lemkin puts it, “genocide is directed against a national group as an entity and the attack on individuals is only secondary to the annihilation of the national group to which they belong.”<sup>42</sup> Thus, whereas the “collective character” of CAH pertains to the *perpetrators*, as previously mentioned, the “collective character” of genocide pertains to the *victims*. Genocide thus constitutes “an attack upon human diversity as such”<sup>43</sup>: it aims to reduce cultural variation or variability in the world. As Lemkin writes:

Our whole heritage is a product of the contributions of all nations. We can best understand this when we realize how impoverished our culture would be if the peoples doomed

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<sup>40</sup> Winston Churchill, ‘Broadcast to the World about the Meeting with President Roosevelt’, <http://www.ibiblio.org/pha/policy/1941/410824a.html>.

<sup>41</sup> Raphael Lemkin, *Axis Rule in Occupied Europe: Laws of Occupation, Analysis of Government, Proposals for Redress* (Carnegie Endowment for International Peace, Washington, D.C., 1944).

<sup>42</sup> *Ibid.*

<sup>43</sup> To quote Hanna Arendt, *Eichmann in Jerusalem: A Report on the Banality of Evil* (Viking Press, New York, 1963).

by Germany, such as the Jews, had not been permitted to create the Bible, or to give birth to an Einstein, a Spinoza; if the Poles had not had the opportunity to give to the world a Copernicus, a Chopin, a Curie; the Czechs, a Huss, a Dvorak; the Greeks, a Plato and a Socrates; the Russians, a Tolstoy and a Shostakovich.<sup>44</sup>

Such considerations motivated Lemkin to declare in a letter to President Roosevelt during World War II that genocide constitutes “the crime of crimes.”<sup>45</sup> Hence, whereas Lauterpacht held that the greatest evil is the violation of individual human rights, Lemkin argued that the loss of human diversity through the eradication of particular groups is the worst possible kind of human violence.

The first legal charges of genocide were brought against Nazi officials during the Nuremberg trials of 1945-1946. Count 3 of the indictment accused the defendants of conducting “deliberate and systematic genocide—namely, the extermination of racial and national groups—against the civilian populations of certain occupied territories in order to destroy particular races and classes of people, and national, racial or religious groups, particularly Jews, Poles, Gypsies, and others.”<sup>46</sup> However, there was no specialized convention on genocide at the time, so these charges were subsumed within the category of “war crimes.” Shortly after the Nuremberg trials, the United Nations General Assembly passed a resolution affirming that “the punishment of the crime of genocide is a matter of international concern,” defining “genocide” as

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<sup>44</sup> Raphael Lemkin, ‘Genocide—A Modern Crime’, *Free World* (1945).

<sup>45</sup> Quoted in *supra* note 35.

<sup>46</sup> Quoted in John D. van der Vyver, ‘Prosecution and Punishment of the Crime of Genocide’, *Fordham International Law Journal* 23(2) (1999), 286.

a denial of the right of existence of entire human groups, as homicide is the denial of the right to live of individual human beings; such denial of the right of existence shocks the conscience of mankind, results in great losses to humanity in the form of cultural and other contributions represented by these human groups, and is contrary to moral law and to the spirit and aims of the United Nations.<sup>47</sup>

Two years later, the General Assembly adopted the Genocide Convention, which the international community accepted as a general principle of law in 1951 and whose definition of “genocide” was later included in the Rome Statute. After significant disagreement about whether “political groups” should be included in the convention, the drafters ultimately agreed that “genocide” should refer to “any of the following acts committed with intent to destroy, in whole or in part, a national, ethnical, racial, or religious group.” These acts are:

(a) Killing members of the group; (b) Causing serious bodily or mental harm to members of the group; (c) Deliberately inflicting on the group conditions of life calculated to bring about its physical destruction in whole or in part; (d) Imposing measures intended to prevent births within the group; (e) Forcibly transferring children of the group to another group.<sup>48</sup>

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<sup>47</sup> United Nations General Assembly Resolution, Art 96(1), (1946), [https://www.armenian-genocide.org/Affirmation.227/current\\_category.6/affirmation\\_detail.html](https://www.armenian-genocide.org/Affirmation.227/current_category.6/affirmation_detail.html).

<sup>48</sup> Convention on the Prevention and Punishment of the Crime of Genocide, Art. II (Dec. 9, 1948).

Note that the phrase “with intent to destroy”—that is, a special discriminatory intent—makes genocide more difficult to prosecute than CAH.<sup>49</sup> Recall here that the mental element of CAH makes no mention of motive: if X does an act A that contributes to a widespread and systematic attack on a civilian population, and if X knows that A contributes to such an attack, then X will still be guilty of CAH even if X did A for, say, purely personal reasons.<sup>50</sup> In contrast, to convict X of genocide, prosecutors must prove that X did A with the specific intent, or for the specific purpose, of destroying a nationally, ethnically, racially, or religiously defined group of people partly or entirely. They would also need to show that A instantiates one or more of the acts listed in (a) through (e), i.e., engaging in some act with the aim of destroying a group is insufficient for genocide. The act must involve killing members of the group, causing serious bodily or mental harm to group members, and so on. This covers the *mens rea* and *actus reus* of genocide.

Another important difference between CAH and genocide is that genocide does not include a threshold of scale requirement. In other words, it need not be “widespread or systematic,” nor must it involve a “state or organizational policy.” All that matters are the mental and physical elements, which together are necessary and sufficient to have committed genocide. Hence, X may be guilty of genocide even if X is a solitary individual acting by him or herself who harmed only a single person while attempting to destroy, wholly or partially, a group as defined above.<sup>51</sup> This entails that, contra Philippe Sands, it is *not* the case that all instances of genocide are also instances of CAH (whereas not all instances of CAH are instances of genocide): there are possible small-scale attacks that would count as genocides but fail to satisfy the contextual element of

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<sup>49</sup> Indeed, this is the crucial difference between genocide and “extermination,” as listed in Article 7(1) of the Rome Statute.

<sup>50</sup> See Margaret deGuzman, ‘Crimes Against Humanity’, in Bartram Brown (ed.), *Research Handbook on International Criminal Law* (Edgar Elgar Publishing, Cheltenham, 2011), pp. 62-87.

<sup>51</sup> See *supra* note 4.



CAH.<sup>52</sup> Finally, an important similarity between CAH and genocide is that, just as it is now considered possible to commit a CAH during peacetime, the 1948 Convention does not stipulate a requisite nexus between genocide and armed conflict. Genocides can, and have, occurred in the absence of civil or interstate wars.

Having now outlined some fundamental features of CAH and genocide, let's turn to the question of how omnicide could fit within the framework of contemporary international criminal law.

### **3: Aspects of Omnicide**

To develop the foundations of a theory of the crime of omnicide in section 4, we now turn to some important features of omnicide, using previously established facts about CAH and genocide to guide the discussion.

*3.1 Omnicide Is Much Bigger than CAH or Genocide.* The first use of the term “crimes against humanity” was by George Washington Williams, a historian and journalist who employed it in 1890 to describe the atrocities committed against blacks in the Congo Free State while under the colonial control of Belgium’s King Leopold II. However, the first *charge* of “crimes against humanity”—or rather, “crimes against civilization and humanity”—was made by France, Britain, and Russia in response to the 1915 Armenian genocide, perpetrated by the Ottoman Empire during World War I. Subsequently, the concept, which had its origins in the Martens Clause of the 1899 Second Hague Convention, remained stagnant until the Nuremberg and Tokyo trials, at

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<sup>52</sup> See *supra* note 35.

which point it not only entered international criminal law but was thrust into the public consciousness. Since the 1990s, the ICCt has charged thirty people with CAH, including Muammar Gaddafi, Jean-Pierre Gombo, Joseph Kony, and Germain Katanga, although only Katanga has been found guilty (as an accessory) of CAH by the ICCt for the “assault of Bogoro” in the Democratic Republic of Congo. This massacre unfolded in 2003 and caused at least 200 civilians, 173 of which were younger than 18, being murdered during what the ICCt described as an “indiscriminate killing spree” that involved machetes, spears, arrows, mortars, rocket-propelled grenades, rocket launchers, and firearms.<sup>53</sup>

The point is that CAH emerged in response to atrocities that were, as a matter of fact, *localized* in space and time. This is not to minimize the horror of these atrocities—the Armenian genocide that took 1.5 million lives, the Holocaust that exterminated 6 million Jewish people—but it is meant to place them in a more spatiotemporally deeper and meaningful context. Let us call this context *long-termism*, defining it as a perspective on the human situation that takes seriously the developmental trajectory of our evolutionary lineage on timescales of thousands and millions (and billions) of years.<sup>54</sup> This perspective is, I contend, increasingly relevant to our ethical commitments—and hence to international criminal law—because of the growing capacity for malicious actors, whether state or nonstate, to cause *irreversible* damage to the *whole human population*.<sup>55</sup> (Subsection 3.2 will offer a defense of this claim.) It is only once one adopts a

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<sup>53</sup> International Criminal Court, ‘Statement by Fatou Bensouda, Deputy Prosecutor, During the Press Conference Regarding the Arrest of Germain Katanga’, <https://web.archive.org/web/20071028101530/http://www.icc-cpi.int/press/pressreleases/291.html> (2007).

<sup>54</sup> See Seth Baum, Stuart Armstrong, Timoteus Ekenstedt, Olle Häggström, Robin Hanson, Karin Kuhlemann, Matthijs M. Maas, James D. Miller, Markus Salmela, Anders Sandberg, Kaj Sotala, Phil Torres, Alexey Turchin, and Roman V. Yampolskiy, ‘Long-Term Trajectories of Human Civilization’, *Foresight* 21(1) (2019), 53.

<sup>55</sup> Note that international law has embraced a version of long-termism in the principle of the “common heritage of mankind,” first mentioned in the 1954 “Convention for the Protection of Cultural Property in the Event of Armed Conflict with Regulations for the Execution of the Convention.”

long-termist view that the true enormity of omnicide begins to come into focus. As Nick Bostrom writes in a passage elucidating our innate inability to comprehend the spatiotemporal *bigness*, so to speak, of existential risks:

Our intuitions and coping strategies have been shaped by our long experience with risks such as dangerous animals, hostile individuals or tribes, poisonous foods, automobile accidents, Chernobyl, Bhopal, volcano eruptions, earthquakes, draughts, World War I, World War II, epidemics of influenza, smallpox, black plague, and AIDS ... But tragic as such events are to the people immediately affected, in the big picture of things—from the perspective of humankind as a whole—even the worst of these catastrophes are mere ripples on the surface of the great sea of life. They haven't significantly affected the total amount of human suffering or happiness or determined the long-term fate of our species.<sup>56</sup>

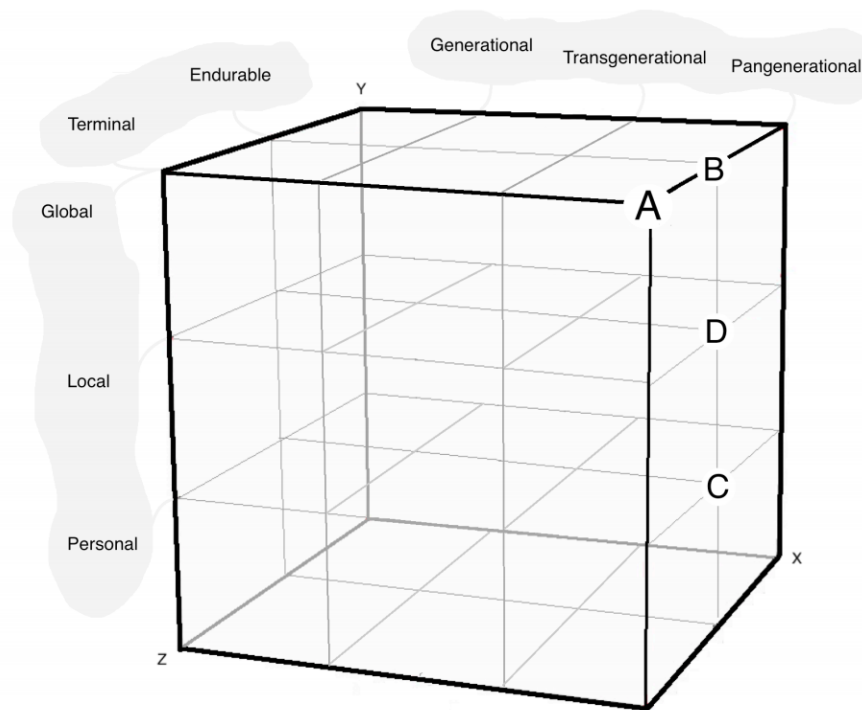
Similar points could be made about genocide. As delineated in section 2, the Genocide Convention specifically defines genocidal acts as those committed with a special intent to destroy a *nationally, ethnically, racially, or religiously* defined group. Such groups constitute subsets of the human population: the Armenians, Jewish people, townspeople of Bogoro, and so on. There is, indeed, no indication that the authors of the Convention imagined a situation in which one or more people aimed to destroy the super-group of all-of-humanity, including themselves. We can

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<sup>56</sup> Nick Bostrom, 'Existential Risks: Analyzing Human Extinction Scenarios and Related Phenomena', *Journal of Evolution and Technology* 9(1).

illustrate these points using the typology of figure 1, which schematizes the following definition of “risk”:

*Risk*: the probability of an undesirable event multiplied by its consequences. A risk’s consequences can then be analyzed into the categories of *severity* and *scope*, where scope consists of the subcategories of *spatial scope* and *temporal scope*.<sup>57</sup>



Since genocide aims to wipe out an entire group of people, it falls within the severity category of “terminal,” meaning that the loss is existential, and the temporal scope category of “pangenerational,” meaning that the loss lasts forever. For example, if the Nazis had won World War II, they might have permanently eliminated the global population of Jewish people. Yet this atrocity

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<sup>57</sup> Author 2019.

would have been “local” in spatial scope, since it would have targeted a particular circumscribed demographic of the global human population, rather than the global human population itself.<sup>58</sup> Once again, this is not to minimize the terribleness of the Holocaust; the point is merely to draw out an important difference between genocide and omnicide. Whereas the former constitutes a local-terminal-pangenerational catastrophe, omnicide constitutes a global-terminal-pangenerational catastrophe by virtue of permanently eliminating humanity as a whole. While there is no scope threshold for genocide and the “widespread and systematic” threshold for CAH, the threshold for omnicide is the eradication of the entire human population, thereby foreclosing what could be a potentially vast future on Earth and beyond, if we become a spacefaring civilization, which seems likely in the long-run.<sup>59</sup>

Exactly how vast could this future be? Let’s dwell on this question for a moment to underline what is at stake. First consider that if (a) humanity survives another 10 million years, and (b) people have an average lifespan of 100 years, there could come to exist some 500 trillion future people,<sup>60</sup> an inscrutably huge number given cognitive biases like “scope neglect”<sup>61</sup> and “psychophysical numbing”<sup>62</sup>—not to mention the aforementioned claim that certain tragedies are “too discomfiting and too foreign to process readily.”<sup>63</sup> Carl Sagan argues that this is important because “if we are required to calibrate extinction in numerical terms, [we should] be sure to in-

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<sup>58</sup> Bostrom classifies “genocide” as a local-terminal catastrophe in his 2002 paper and as a local-crushing catastrophe in his 2013 paper. But these classifications are clearly inadequate, since they fail to capture the fact that genocide aims for pangenerational consequences—the permanent elimination of a group.

<sup>59</sup> Although see author 2018 for details.

<sup>60</sup> Carl Sagan. ‘Nuclear War and Climatic Catastrophe: Some Policy Implications’, *Foreign Affairs* Winter Issue (1983/1984).

<sup>61</sup> See Eliezer Yudkowsky. ‘Cognitive Biases Potentially Affecting Judgment of Global Risks’, in Nick Bostrom and Milan Cirkovic (eds.), *Global Catastrophic Risks* (Oxford University Press, Oxford, 2008).

<sup>62</sup> Paul Slovic. ‘Psychic Numbing and Genocide’, *American Psychological Association* November (2007).

<sup>63</sup> Samantha Powers. *A Problem from Hell: America and the Age of Genocide* (Perennial Books, New York, 2002).

clude the number of people in future generations who would not be born.”<sup>64</sup> Yet research in the field of physical eschatology tells us that the planet will remain habitable for another 1 billion years or so, based on current calculations. This yields an estimate of 50,000,000,000,000,000 potential future biological humans on Earth alone. However, if we successfully spread beyond Earth, Bostrom calculates that there could exist circa  $10^{23}$  biological humans per century in the Virgo Supercluster alone, which occupies a *mere fraction* of the space demarcated by our future light cone.<sup>65</sup> Note further that there are an estimated 10 million such superclusters in the universe. I will leave it to readers to do the math.

Even more, the universe itself could remain habitable for another  $10^{40}$  years, at which point all the protons in the expanding universe will have decayed. This moment in cosmic time constitutes a “milestone [that] marks a definitive end to life as we know it, as no carbon-based life can survive the cosmic catastrophe induced by proton decay.”<sup>66</sup> More speculatively, some physicists have suggested that a technologically advanced civilization could exploit spacetime structures like wormholes and dimensional portals to escape into another, younger, warmer universe. This process that could then be iterated indefinitely—flitting from one universe to another—depending on the existence and structure of the multiverse.<sup>67</sup> The point is simply that the future of humanity could be *unimaginably huge*. As Derek Parfit puts this insight,

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<sup>64</sup> *Supra* note 60.

<sup>65</sup> Nick Bostrom, ‘Astronomical Waste: The Opportunity Cost of Delayed Technological Development’, *Utilitas* 15(3) (2003), 308.

<sup>66</sup> Fred Adams, ‘Long-Term Astrophysical Processes’, in Nick Bostrom and Milan Cirkovic (eds.), *Global Catastrophic Risks* (Oxford University Press, Oxford, 2008), pp. 33-45.

<sup>67</sup> See Michio Kaku, *Parallel Worlds: A Journey Through Creation, Higher Dimensions, and the Future of the Cosmos* (Doubleday, New York, 2004).

civilization began only a few thousand years ago. If we do not destroy mankind, these few thousand years may be only a tiny fraction of the whole of civilized human history. The difference between [nearly all and actually all people dying] may thus be the difference between this tiny fraction and all of the rest of this history. If we compare this possible history to a day, what has occurred so far is only a fraction of a second.<sup>68</sup>

This matters because a human extinction event would irreversibly close the door to exploring this future, a fact that one ought to take seriously when comprehensively assessing the true costs of omnicide. Indeed, this is precisely what motivates Parfit's famous argument, alluded to just above, that the difference between 100 percent and 99 percent of humanity perishing is astronomically greater than the difference between 99 percent of humanity perishing and world peace. While 99 percent of humanity perishing would be unambiguously tragic, it would still leave 76 million people alive to rebuild civilization and continue writing the human story—a story that Edmund Burke colorfully described as “a partnership not only between those who are living, but between those who are living, those who are dead, and those who are to be born.”<sup>69</sup> Such considerations imply that omnicide is qualitatively distinct in scope from both CAH and genocide: it constitutes the ultimate “widespread” attack on human beings and the most devastating erasure of “human diversity” possible, since omnicide targets the entire human population and human diversity presupposes human existence. The extraordinary bigness of omnicide in space and time makes it unlike any other threat humanity has previously had to face or contemplate. It is the end of all new beginnings.

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<sup>68</sup> Derek Parfit, *Reasons and Persons* (Oxford University Press, Oxford, 1984).

<sup>69</sup> See author and co-author, forthcoming.

3.2 *The Greatest Threats Arise from Nonstate Actors.* Since the Neolithic Revolution some 12,000 years ago, groups of people—tribes, city-states, kingdoms, countries, and empires—have invariably possessed a greater potential to cause harm than individuals or small collections of individuals within those groups. For example, the Roman Empire considered as a cohesive entity was more powerful than any Roman citizen, just as Nazi Germany had more resources to leverage against the Jewish people than any single antisemite. (This idea finds expression in Max Weber’s famous characterization of the state as possessing a “*monopoly* of the legitimate use of violence within a given territory.”<sup>70</sup>) But this dynamic is quickly changing: the difference in “violence capacity” between state and nonstate actors is narrowing as a result of the growing power and accessibility of dual-use emerging technologies, which are almost universally being developed at an exponential or superexponential pace, in accordance with the so-called Law of Accelerating Returns, which subsumes more specific trends like Moore’s Law, Huang’s law, the Carlson curve, Dennard scaling, Keck’s law, Kryder’s law, and so on.<sup>71</sup> As the “power and accessibility” locution implies, there are two crucial features of such technologies, namely:

(i) *Omniviolence thesis.* The growing power of emerging technologies means a lower ratio of “killers to killed,” or “K/K ratio,” per incident, a phenomenon that Daniel Deudney neologizes as “omniviolence.”<sup>72</sup> Consider a non-lethal recent case that exemplifies this trend: the 2016 Dyn cyberattack. This distributed denial-of-service (DDoS) attack may have been perpetrated by a *single* “angry gamer.”<sup>73</sup> Yet an extraordinary number of major websites were disrupted: Airbnb,

<sup>70</sup> Max Weber, *Politics as Vocation* (Macat International Ltd., London, 2017).

<sup>71</sup> See author 2018; see also Ray Kurzweil, *The Singularity is Near: When Humans Transcend Biology* (Viking, New York, 2005).

<sup>72</sup> Daniel Deudney, ‘Examining Resource Scarcity: Omniviolence and State Capacity’, *The Brown Journal of World Affairs* 13(2) (2007), 165, and Daniel Deudney, ‘Omniviolence, Arms Control, and Limited Government’, in Jeffrey Tulis and Stephen Mercado (eds.), *Limits of Constitutionalism* (Princeton University Press, Princeton, 2010), pp. 297-316.

<sup>73</sup> Quoted in author 2018.



Amazon, BBC, *The Boston Globe*, CNN, Comcast, FiveThirtyEight, Fox News, *The Guardian*, iHeartRadio, Imgur, National Hockey League, Netflix, *The New York Times*, PayPal, Pinterest, Pixlr, Reddit, SoundCloud, Squarespace, Spotify, Starbucks, Storify, the Swedish Government, Tumblr, Twitter, Verizon Communications, Visa, *Vox Media*, Walgreens, *The Wall Street Journal*, *Wired*, Yelp, and Zillow.<sup>74</sup> This is a non-exhaustive list of the websites affected, which numbered more than 60 in total. Thus, the “affecter-to-affected ratio,” so to speak, of this attack was extremely low: *one person* managed to take down a vast constellation of websites that *hundreds of millions of people* visit and depend upon every day.

The point is that this trend of mass empowerment can be found within virtually every domain of emerging technology, including biotechnology, synthetic biology, nanotechnology, drone technology, and artificial intelligence. Whereas in the past, bioterrorism took the form of poisoning wells with carcasses contaminated with the plague, soon it could take the form of synthesizing a super-pathogen that combines the lethality of rabies, the incurability of Ebola, the contagiousness of the common cold, and the long incubation period of HIV.<sup>75</sup> Whereas in the past, destroying an enemy civilization required a physical attack involving tens or hundreds of thousands of soldiers, today a nuclear electromagnetic pulse (NEMP) could fry the electrical infrastructure of an entire country. Whereas in the past, annihilating Earth’s biosphere was technically impossible, future self-replicating nanobots could potentially disassemble all organic matter around the world, thus resulting in a lifeless, barren planet. *And so on.*

(ii) *Democratization thesis*. This refers to the phenomenon of dual-use emerging technologies becoming increasingly accessible to the *demos*. When combined with (i), it implies that

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<sup>74</sup> See author 2017b.

<sup>75</sup> See author 2017a.

omniviolence is being *distributed* among state and nonstate actors—i.e., the K/K ratio is falling while the number of potential “killers” that instantiate the first “K” is growing.

Historically speaking, the first actor—a state—to acquire the technological ability to unilaterally destroy the world was the United States, sometime around 1948 or 1949, when the United States stockpiled enough nuclear weapons, about 100 in total, to have single-handedly initiated a worldwide nuclear winter. I choose the number “100” here because a 2008 study found that a regional “nuclear exchange involving 100 Hiroshima-size bombs (15 kilotons) on cities in the subtropics” could effectively “lower temperatures regionally and globally for several years, open up new holes in the ozone layer protecting the Earth from harmful radiation, reduce global precipitation by about 10 percent, and trigger massive crop failures.”<sup>76</sup> Thus, bracketing the nontrivial fact that many weapons built since World War II have a far greater explosive yield than 15 kilotons of TNT, we can crudely estimate when countries acquired the capacity to unilaterally cause a global nuclear winter by identifying the years during which their arsenals exceeded 100 nuclear weapons. On this criterion—for perspective, consider that the United State’s “Castle Bravo” weapon was equivalent to 15 megatons of TNT, while the Soviet Union’s “Tsar Bomba” had an extraordinary 58 megaton yield—the Soviet Union joined the club of potential world-destroyers *at least* by 1952, the United Kingdom *at least* by 1962, China *at least* by 1971, France *at least* by 1973, and other countries like Pakistan, India, and Israel perhaps by the 2010s, depending on the make-up of their arsenals.<sup>77</sup> Thus, since World War II, the number of entities with doomsday capabilities has grown from *zero* to *eight*.

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<sup>76</sup> See Joseph Cirincione, ‘The Continuing Threat of Nuclear War’, in Nick Bostrom and Milan Cirkovic (eds.), *Global Catastrophic Risks* (Oxford University Press, Oxford, 2008), 381-401.

<sup>77</sup> For data about the size of state arsenals over time, see Robert Norris and Hans Kristensen, ‘Global Nuclear Arsenals, 1945-2010’, *Bulletin of the Atomic Scientists* 66(4) (2015), 77.

But the democratization of dual-use emerging technologies is rapidly transforming this predicament by multiplying the number of not only state but, far more importantly, nonstate actors having the capacity to unilaterally destroy the world. As I have previously discussed, there are four axes along which this trend, which I have elsewhere dubbed the “threat of universal unilateralism,” is unfolding. In brief, these are:

(i) The *intelligence threshold* that must be exceeded to effect large-scale destruction is lowering. This fact is humorously, but accurately, captured by Eliezer Yudkowsky’s so-called “Moore’s Law of Mad Science,” which states that “every eighteen months, the minimum IQ necessary to destroy the world drops by one point.”<sup>78</sup> (ii) The *information threshold* that one must exceed to use a wide range of emerging technologies in a competent manner is also falling. For example, the genomes of many of the most dangerous pathogens, including Ebola and smallpox, are readily accessible online, thus making such information easy to copy-paste onto one’s computer. (iii) The *skill threshold* that one must exceed to convert one’s know-that into actionable know-how is dropping as well. Perhaps the most conspicuous example comes from synthetic biology, which is “explicitly devoted to the minimization of the importance of tacit knowledge.”<sup>79</sup> The BioBricks Foundation’s standardization of biological entities and devices like digital-to-biological converters are also relevant here.<sup>80</sup> Yet the irrelevance of tacit knowledge may be especially salient with respect to molecular nanotechnology—e.g., nanofactories that can manufacture virtually any technical product for virtually zero cost given a digital blueprint, source of en-

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<sup>78</sup> Eliezer Yudkowsky, ‘Artificial Intelligence as a Positive and Negative Factor in Global Risk’, in Nick Bostrom and Milan Cirkovic (eds.), *Global Catastrophic Risks* (Oxford University Press, Oxford, 2008), pp. 308-343.

<sup>79</sup> Gautam Mukunda, Kenneth Oye, and Scott Mohr, ‘What Rough Beast? Synthetic Biology, Uncertainty, and the Future of Biosecurity’, *Politics and the Life Sciences* 28(2) (2009), 2.

<sup>80</sup> See Kent Boles, Krishna Kannan, John Gill, Martina Felderman, Heather Gouvis, Bolyn Hubby, Kurt Kamrud, J. Craig Venter, and Daniel Gibson, ‘Digital-to-Biological Converter for On-Demand Production of Biologics’, *Nature Biotechnology* 35 (2017), 672.

ergy, and feedstock molecule like acetone or acetylene.<sup>81</sup> And finally, (iv) the materials and equipment necessary for omniviolence are rapidly becoming more widely available and affordable. For example, the advent of nanofactories would make it possible to produce super-high-quality technical products of all sorts at almost no cost, and third-generation laser enrichment technologies such as SILEX (whereby uranium isotopes are separated by laser excitation) could enable small groups or lone individuals to produce weapons-grade uranium without the need for costly, large centrifuges.<sup>82</sup>

To couch the implications of these four trends in terms of the 2016 Dyn cyberattack, it is no longer unreasonable to ask in the wake of a major incident spanning multiple countries and affects millions of people whether the perpetrator is a state actor like Russia or North Korea, or someone in her or his basement, with limited knowledge of computer systems or how to initiate a DDoS attack, using a \$1,000 computer. To underline this point, consider the following two scenarios that could potentially cause the extinction of humanity. Both illustrate the fact that, as Benjamin Wittes and Gabriella Blum observe, greater technological capabilities entail greater susceptibility to harm; in their words, “technologies that expand the power to attack necessarily expand vulnerability to attack.”<sup>83</sup> However, for reasons relating to “information hazards,”<sup>84</sup> I have *not* chosen the most effective ways of bringing about human extinction that scholars in the nascent field of “existential risk studies” have privately devised (and kept secret within the community for information-hazard reasons), nor will I go into much detail about the logistics of

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<sup>81</sup> See Chris Phoenix and Mike Treder, ‘Nanotechnology as Global Catastrophic Risk’, in Nick Bostrom and Milan Cirkovic (eds.), *Global Catastrophic Risks* (Oxford University Press, Oxford, 2008), pp. 481-502.

<sup>82</sup> This paragraph parallels a section of author 2018.

<sup>83</sup> Benjamin Wittes and Gabriella Blum, *The Future of Violence: Robots and Germs, Hackers and Drones: Confronting a New Age of Threat* (Basic Books, New York, 2015).

<sup>84</sup> Nick Bostrom, ‘Information Hazards: A Typology of Potential Harms from Knowledge’, *Review of Contemporary Philosophy* 10 (2011), 44.

actually realizing these scenarios. The simple point is merely to emphasize that we are, indeed, entering a new era of *unprecedentedly distributed destructive capabilities*.

*Scenario 1:* The CRISPR/Cas9 system consists of a segment of DNA from bacterial immune systems—CRISPR—and a protein that acts as “molecular scissors” capable of cutting DNA at target sequences—Cas9—which are specified by an RNA guide molecule. This system has enabled scientists to alter the genomes of organisms with unprecedented precision. Now consider “gene drives,” or genetic mechanisms that enable a segment of DNA to be inherited by an organism’s offspring at a probability of greater than 50 percent, even when the allele expressed by the gene is deleterious to the organism. Gene drives are found in nature, but advancements in synthetic biology are enabling scientists to create them artificially. Combining these two technologies: CRISPR/Cas9 and gene drives will enable the synthesis of genes that propagate through and decimate entire populations of organisms. At the extreme, so-called “suppression drives” that “reduce the population of the target species (for example by damaging a gene with a function essential to survival or reproduction)” could precipitate the extinction of the affected species.<sup>85</sup>

Now imagine that a terrorist sets up a “biohacker” lab with some basic synthetic biology capabilities. It will soon be feasible for a group or lone wolf to create suppression drives that target, for example, the primary pollinators: bees, wasps, moths, butterflies, and beetles. If these short-generation species were to perish, the result would be a cascade of disasters that E.O. Wilson adumbrates as follows, to quote him at length:

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<sup>85</sup> Quoted from Mathematic Ecology, University of Oxford, <https://merg.zoo.ox.ac.uk/projects/genetic-insect-control>.

A majority of flowering plants, upon being deprived of their pollinators, cease to reproduce. Most herbaceous plant species among them spiral down to extinction. Insect-pollinated shrubs and trees hang on for a few more years, in rare cases of up to centuries. The great majority of birds and other land vertebrates, now denied the specialized foliage, fruits, and insect prey on which they feed, follow the plants into oblivion. The soil remains largely unturned, accelerating plant decline, because insects, not earthworms as generally supposed, are the principal turners and renewers of the soil. Populations of fungi and bacteria explode and remain at a peak over a few years while metabolizing the dead plant and animal material that piles up. Wind-pollinated grasses and a handful of fern and conifer species spread over much of the deforested terrain, then decline to some extent as the soil deteriorates. The human species survives, able to fall back on wind-pollinated grains and marine fishing. But amid widespread starvation during the first several decades, human populations plunge to a small fraction of their former level. The wars for control of the dwindling resources, the suffering, and the tumultuous decline to dark-age barbarism would be unprecedented in human history.<sup>86</sup>

In sum, CRISPR/Cas9 plus gene drives will open the door to unprecedentedly effective omnidirectional attacks.

*Scenario 2:* The human expansion into space has historically coincided with the militarization of space. That is to say, the very first human-made artifact to reach space was the V2 ballistic missile built by Nazi Germany. The militarization of space continues today, with President

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<sup>86</sup> E.O. Wilson, *The Creation: An Appeal to Save Life on Earth* (W.W. Norton & Company, Inc. New York, 2006).

Donald Trump, for example, announcing in 2018 the creation of a “United States Space Force” branch of the Armed Forces by 2020. But the situation is becoming more complicated as space simultaneously becomes increasingly privatized. Private companies are already delivering supplies to the International Space Station (ISS), and some plan to deliver satellites and offer tourists trips up to 50 miles above the ground, where the mesosphere becomes the thermosphere. Even more, molecular nanotechnology, which would enable one to manipulate matter with absolute atomic precision, could open up the space frontier to most everyone.<sup>87</sup> In particular, nanofactories might enable groups and even individuals with no prior knowledge of rocket science and no manufacturing skills to build their own orbital spacecraft.<sup>88</sup>

The implications of this are unsettling, not just because more objects in space would increase the probability of an accidental Kessler syndrome (whereby shrapnel initiates a positive-feedback cascade that destroys all satellites in the Lower Earth Orbit), but because of the so-called “deflection dilemma.” This arises from the fact that technologies capable of redirecting larger asteroids or comets *away from* Earth could also be used to direct them *toward* Earth, a possibility taken seriously by many astronomers.<sup>89</sup> The idea is simply that Earth is not safe from extraterrestrial impacts, a view that scientists almost unanimously rejected until the Alvarez hypothesis was vindicated by tests on the Chicxulub crater in 1990. In other words, there have been major impact events in the past and there will be more in the future. Hence, it is critical that hu-

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<sup>87</sup> Eric Drexler, *Radical Abundance: How a Revolution in Nanotechnology will Change Civilization* (Public Affairs, New York, 2013).

<sup>88</sup> See author 2017 for an extended discussion.

<sup>89</sup> See Carl Sagan and Steven Ostro, ‘Dangers of Asteroid Deflection’, *Nature* 368 (1994), 501; Alan Harris, Gregory Canavan, Carl Sagan, Steven Ostro. ‘The Deflection Dilemma: Use vs. Misuse of Technologies for Avoiding Interplanetary Collision Hazards’, (1994). <https://trs.jpl.nasa.gov/bitstream/handle/2014/33485/94-1394.pdf?sequence=1>; Steven Ostro and Carl Sagan. ‘Cosmic Collision and Galactic Civilization’, *Astronomy and Geophysics* 39(4) (1998), 22; Jakub Drmola and Miroslav Mareš. ‘Revisiting the Deflection Dilemma’, *Astronomy and Geophysics* 56(5) (2015), 15.

manity designs and builds spacecraft that could nudge incoming celestial bodies past Earth. But the dual usability of such technologies would also enable “madmen”—to borrow Sagan’s preferred term<sup>90</sup>—to potentially annihilate humanity by converting otherwise non-threatening asteroids or comets into “planetoid bombs” that smash into Earth and, in doing so, initiate a global impact winter of the sort that killed-off the non-avian dinosaurs 66 million years ago. Given the democratization of space technologies, this scenario could become increasingly probable in the coming decades.

These two scenarios illustrate the proposition that nonstate actors could plausibly bring about an omnicidal catastrophe with existing and emerging dual-use technologies. Indeed, state actors are far less likely to attempt to cause human extinction than nonstate actors, since states generally value their continued existence. For example, if humanity were to go extinct, then aspiring global autocrats (perhaps Vladimir Putin or Kim Jung-un) would be unable to fulfill their megalomaniacal ambitions. Similarly, if Hitler had destroyed the world in 1941, his vision of a Thousand Year Reich would not have been realizable. Yet Sagan notes that

in the winter and spring of 1945, Hitler ordered Germany to be destroyed—even “what the people need for elementary survival”—because the surviving Germans had “betrayed” him, and at any rate were “inferior” to those who had already died. If Hitler had nuclear weapons, the threat of a counterstrike by Allied nuclear weapons, had there been any, is unlikely to have dissuaded him. It might have encouraged him.<sup>91</sup>

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<sup>90</sup> Carl Sagan. *Pale Blue Dot: A Vision of the Human Future in Space*. (Random House Publishing Group, New York, 1994).

<sup>91</sup> *Ibid.*



The point is that under normal circumstances, states are pro-human-survival; they are much less likely to attempt an omniscidal attack than nonstate actors, who may be motivated by a range of “kill everyone” ideologies. In previous papers, I have outlined a six-part typology of groups/individuals that engender what I call “agential risks,” which are defined as follows:

*Agential risk*: the risk posed by any agent who could initiate an existential catastrophe in the presence of sufficiently powerful dual-use technologies either on purpose or by accident.<sup>92</sup>

Not all of the six agential risk types are germane to the present discussion, since this discussion is limited to the particular existential risk of *human extinction* (see section 4 for additional scenarios outlined by Bostrom<sup>93</sup>). These are the three agential risk types that are relevant:

- (1) *Omniscidal ecoterrorists*, or individuals who believe that the biosphere, or Gaian system, would be better off if humans were to disappear entirely.
- (2) *Omniscidal ethicists*, or individuals who believe that humanity should go extinct for moral reasons and that this should happen involuntarily (“pro-mortalism”).
- (3) *Omniscidal idiosyncratic actors*, a catch-all category that subsumes individuals who harbor a death wish for humanity for idiosyncratic reasons, which might arise from sadistic, anti-humanist, misanthropic, etc. proclivities.

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<sup>92</sup> Author 2017.

<sup>93</sup> Nick Bostrom. Existential Risk Prevention as Global Priority. *Global Policy* 4(1) (2013), 15.

Although no scientific surveys have yet been conducted to assess the prevalence of omnicultural ideologies in society (such surveys would likely encounter the problem known as “Lizardman’s Constant”<sup>94</sup>), I have elsewhere catalogued a number of historical groups and individuals who almost certainly would have brought about human extinction if only the means had been available.<sup>95</sup> Convincing the reader of this point goes beyond the scope of this paper; I will thus refer them to previous work. For the nonce, I will proceed on the assumption that a nontrivial number of omnicultural agents exist in the world—that is to say, while the percentage of the global population with omnicultural urges is quite small, the absolute number is worryingly large. This fact is enough to take the issue seriously, since as John Sotos calculates, the probability of any single individual successfully causing human extinction need be only minuscule for this to accumulate over space and time to more or less guarantee doom on timescales relevant to contemporary civilization.<sup>96</sup> More specifically, Sotos shows that a 1-in-100 chance of only a few hundred agents releasing a species-destroying pathogen yields virtually certain doom within just 100 years or so.<sup>97</sup>

The aim of this subsection is to foreground the fact that technology is not only making it increasingly possible to bring about human extinction (omniviolence) but multiplying the total

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<sup>94</sup> See Scott Alexander. ‘Noisy Poll Results and Reptilian Muslim Climatologists from Mars’. *Slate Star Codex* (2013). <https://slatestarcodex.com/2013/04/12/noisy-poll-results-and-reptilian-muslim-climatologists-from-mars/>.

<sup>95</sup> See author 2018.

<sup>96</sup> John Sotos. ‘Biotechnology and the Lifetime of Technical Civilizations’. arXiv (2018). <https://arxiv.org/abs/1709.01149>.

<sup>97</sup> Emerging Technology from the arXiv. ‘Genetic Engineering Holds the Power to Save Humanity or Kill It’. *MIT Technology Review*. <https://www.technologyreview.com/s/608903/genetic-engineering-holds-the-power-to-save-humanity-or-kill-it/>. See also author 2018.

number of state *and* nonstate actors capable of doing this (democratization).<sup>98</sup> Furthermore, since states as a general rule value the continued survival of (some portion of) humanity, and since there have been numerous real-world groups and individuals motivated by genuinely omniscidal ideologies, the most significant threats to human survival this century almost certainly stem not from state but from nonstate actors—in particular, omniscidal ecoterrorists, omniscidal moral agents, and omniscidal agents motivated by idiosyncratic beliefs.

*3.3 A Long-Termist Approach to International Law Requires Taking Human Evolution Seriously.* What does the word “humanity” signify in “crimes against humanity”? There are two main interpretations in the literature: first, it could refer to the abstract property or quality or value of *humanness*. On this view, CAH are injurious to this value, just as “crimes against peace” are those injurious to the value of peace. Second, it could refer to the totality of individual human beings in the world, or *humankind*. On this view, CAH are injurious not just to a particular victim, or the group to which the victim belongs, but to every human being worldwide. For example, Mary Ann Glendon suggests that CAH are crimes that specifically harm “humankind in the aggregate,”<sup>99</sup> which implies that, in Luban’s words, “just as international society has an interest in repressing crimes against peace, humanity has an interest in repressing the various misdeeds that fall under the rubric” of CAH.<sup>100</sup> Here the traditional notion of a “Society of States” is supplanted by the “Society of Peoples.”

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<sup>98</sup> A similar point has been made in the context of CAH. For example, Bassiouni (2010) notes that “since WWII, non-state actors are increasingly committing CAH, often not acting pursuant to state policy, but as part of a group policy, although this is not always true. Frequently, these groups’ practices represent indiscriminate violence without being part of a defined policy, but they do reflect a systematic pattern of conduct.”

<sup>99</sup> Mary Anne Glendon. *A World Made New: Eleanor Roosevelt and the Universal Declaration of Human Rights* (Random House, New York, 2001).

<sup>100</sup> *Supra* note 4.

In contrast, the framers of the London Charter embrace the former interpretation, as did Arendt in the Epilogue of her 1963 *Eichmann in Jerusalem*, where she writes that CAH are a “new crime” by virtue of targeting “the very nature of mankind.” Renzo offers his own account of CAH as injuries against *humanness*. On his view, CAH violate “basic human rights,” or the rights that (a) all people have by virtue of simply being human, and (b) are “basic” in that one must “enjoy in order to enjoy all other rights,” such as “non-basic” rights like the freedom of expression, non-discrimination for minorities, and so on.<sup>101</sup> What anchors these rights is the notion of “human dignity,” which denotes the value that (i) accounts for why all humans have human rights, and (ii) is the special property that human rights aim to protect. In sum, Renzo’s idea is that human rights aim to inoculate people against threats that would prevent them from living a minimally decent life of dignity, and that CAH are those crimes, specified by the *actus reus* of the Rome Statute and other international declarations, that violate the human rights upon which all other rights depend. However, these two interpretations of “humanity” are not mutually exclusive. For example, Luban argues that CAH are “universally odious” acts “because they injure something fundamental to being human in a way that municipal legal systems fail to address.” Furthermore, they are *so very* odious that those guilty of them are enemies of not just the victims, or the victims’ communities, but humanity itself. In other words, perpetrators of CAH are “*hostis humani generi*,” similar to the way pirates on the high seas were considered “enemies of mankind” within traditional international law.<sup>102</sup> CAH thus pit the wrongdoer “against humanity” precisely because they assault the core value of *humanness*. Once again, this value plays a central role in understanding CAH.

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<sup>101</sup> *Supra* note 38.

<sup>102</sup> *Supra* note 4.

The point is that all three interpretations are predicated on an *anthropocentrism* that is incompatible with a scientific understanding of humanity. Here we can understand “anthropo-” as referring specifically to *Homo sapiens*, a species of human (there were many others) that emerged in East Africa some 300,000 years ago. From the evolutionary perspective, not only does humanity lack a metaphysical essence—i.e., there is no mysterious “Factor X” that separates us from the rest of the Animal Kingdom, as Francis Fukuyama argues<sup>103</sup>—but all species that don’t die out are transient intermediaries between the already-extinct and the not-yet-extant. That is to say, we do not constitute a “final product” of evolution, but will instead naturally and inevitably become a new “posthuman” species given enough time; let’s label this the *Darwinian thesis*. In fact, studies suggest that evolution has actually “accelerated in 1,800 human genes, which encompass about 7 percent of the human genome,” mostly as a result of explosive population growth in the recent past. This study concludes that “far from slowing down, human evolution has sped up in the past 40,000 years and has become 100 times faster in the past 5,000 years alone.”<sup>104</sup> Salient examples include the ability to digest lactose among Europeans (in particular) and higher rates of sickle-cell anemia among (especially) people with African descent as a trade-off for greater malarial resistance.

Yet all indications are that humanity is far more likely to assume a posthuman form through the “intelligent design” process of *cyborgization*. This involves the intentional modification of our phenotypes using advanced technologies from fields like biotechnology, synthetic biology, nanomedicine, and artificial intelligence (AI). Here we can follow Mark Walker in label-

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<sup>103</sup> Frances Fukuyama. *Our Posthuman Future: Consequences of the Biotechnology Revolution* (Picador, New York, 2003).

<sup>104</sup> Ann Gibbons. ‘Human Evolution Is Speeding Up’. *Science*. <https://www.sciencemag.org/news/2007/12/human-evolution-speeding>.

ing any artifact capable of extending or enhancing our phenotypes a “person-engineering technology.”<sup>105</sup> But how realistic is this outcome? Consider that certain genetic manipulations can significantly affect the intelligence of model organisms like mice. For example, overexpressing the NR2B gene involved in long-term potentiation resulted in super-smart transgenic mice compared to their wild-type littermates. While such benefits were not inherited by the “Doogie mice” in the experiment, CRISPR/Cas9 makes it possible to alter not just the genes of our somatic cells, but our germlines, which would thus introduce permanent changes to the human genotype that would persist indefinitely. Others have speculated about the possibility of using “iterated embryo selection” to, in a relatively short period of time, engineer children with super-human levels of intelligence. According to Carl Shulman and Bostrom, selecting one of ten embryos, creating ten more from the selected embryo, and repeating the process ten times could result in IQ gains in the embryos produced (which would then become full-grown humans) of up to 130 points.<sup>106</sup>

There are also brain-computer interfaces, perhaps via implanted neural chips or a “neural lace,” that will enable future people to connect their minds directly to the Internet, control robotic appendages by thought alone, and even communicate with each other without any direct interaction. As I have elsewhere catalogued, scientists have used brain waves to reconstruct movie clips being watched in realtime; managed to transmit messages from one person to another using a noninvasive brain-to-brain connection; created a decoder that can read the words of one’s private internal monologue; and figured out a way to verify the identity of people based entirely on neurological responses to particular words.<sup>107</sup> Even more fantastically, by the middle

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<sup>105</sup> Mark Walker. ‘H+: Ship of Fools: Why Transhumanism is the Best Bet to Prevent the Extinction of Civilization’, *Metanexus*. <https://metanexus.net/h-ship-fools-why-transhumanism-best-bet-prevent-extinction-civilization/>.

<sup>106</sup> Carl Shulman and Nick Bostrom. ‘Embryo Selection for Cognitive Enhancement: Curiosity or Game-Changer?’, *Global Policy* 5(1) (2014), 85.

<sup>107</sup> See author 2018.

of this century it could become possible to “upload” minds by scanning the microstructure of a brain using nanotechnology and then emulating this on a supercomputer. Calculations suggest that whole-brain emulations would process information about a million times faster than the human brain, meaning that a PhD that requires 8.2 years to complete—the average amount of time that it takes a US student—could be completed by a whole-brain emulation in just 4.3 minutes.<sup>108</sup> Uploaded minds would also be far easier to further enhance than real brains, given the inherent messiness of biology (bleeding, infections, etc.), and if given access to their source code, they could initiate a process of recursive self-improvement that triggers an “intelligence explosion.”<sup>109</sup>

The point is not to provide an exhaustive list of how we could become posthuman, but merely to motivate, for the specific purposes of this subsection, the descriptive claim that people *will* almost certainly modify themselves through cyborgization as person-engineering technologies become available: first it will be “transhumanists” motivated by “morphological freedom,” then it will be others seeing the benefits of enhancement or worrying about being left behind.<sup>110</sup>

To put this argument more formally:

- (i) The omniviolence and democratization theses entail the growing feasibility of an omniscidal attack.

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<sup>108</sup> See author 2018.

<sup>109</sup> See David Chalmers. ‘The Singularity: A Philosophical Analysis’. *Journal of Consciousness Studies* 17(9) (2010), 7, and Nick Bostrom. *Superintelligence: Paths, Dangers, Strategies* (Oxford University Press, Oxford, 2014).

<sup>110</sup> See Anders Sandberg. ‘Morphological Freedom—Why We Note Just Want It, but Need It’. In Max More and Natasha Vita-More (eds.), *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future* (Wiley-Blackwell, Chichester, UK, 2013), 56-64.

(ii) The fact that omnicide has global-terminal-pangenerational consequences suggests the need for a long-termist perspective, since it is only from this perspective that one can grasp the full implications of human extinction.

(iii) But if one adopts a long-termist perspective, then one must take seriously the Darwinian thesis that we are temporary actors on the stage of existence and will, if only through natural processes, give rise to one or more new species if we don't die out.

(iv) If one accepts that at least some emerging technologies have person-engineering properties, then one must also accept that we could become "posthuman" not through natural evolutionary processes but through cyborgization.

(v) If we could become "posthuman" through cyborgization, and if the relevant technologies with person-engineering properties are being developed at an exponential or super-exponential pace, then we could become "posthuman" through cyborgization in the near-term, perhaps *within the next few generations*.

(vi) If one accepts that we could become "posthuman" within the next few generations, then current laws predicated on concepts like "humanity," "humanness," or "humankind" could become obsolete in the coming decades.

(vii) Hence, old laws will need to be rewritten and new laws composed in a manner appropriate to the rapidly changing conditions of Earth-originating intelligent life during the twenty-first century.

How should such laws be rewritten? What new vocabulary ought both revised and new laws incorporate to establish themselves as relevant to a human existential condition in flux? The fact is



that international criminal law is “frequently portrayed as the strong arm of the international human rights regime,” and human rights have, as alluded to above, traditionally been understood as arising from a universal dignity that all and only humans possess, and which ground our full moral status as human beings.<sup>111</sup> This has led to worries that becoming posthuman could undercut human rights, and thus laws that are based on the existence of human rights. Some scholars have even suggested that becoming posthuman should be seen as a CAH, since it could pit unenhanced humans against posthumans, resulting in genocidal wars.<sup>112</sup> In response, Bostrom argues that posthumans could not only possess dignity like unenhanced humans, but possess far more than current humans could ever have.<sup>113</sup> However, this claim applies only to a qualitative interpretation of dignity as “a kind of excellence; being worthy, noble, honorable.” Bostrom elaborates that “persons vary in the degree to which they have this property. A form of Dignity as a Quality can also be ascribed to non-persons. In humans, Dignity as a Quality may be thought of as a virtue or an ideal, which can be cultivated, fostered, respected, admired, promoted, etc.”<sup>114</sup>

This “Dignity as Quality” contrasts with what Bostrom dubs “Human Dignity,” which is the sense relevant to human rights, and thus to criminal law. Nonetheless, Bostrom<sup>115</sup> also suggests that just as our “circles of moral concern” in Western society have expanded over time, especially since the 1950s, to include women, homosexuals, people of color, and nonhuman animals, so too might it expand to include posthumans.<sup>116</sup> This could give rise to a regime of *posthuman rights* that would simultaneously be justified by and aim to protect a kind of posthu-

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<sup>111</sup> Adil Ahmad Haque. ‘Group Violence and Group Vengeance: Toward a Retributivist Theory of International Criminal Law’, *Buffalo Criminal Law Review* 9(1) (2005), 273.

<sup>112</sup> George Annas, Lori Andrews, and Rosario Isasi. ‘Protecting the Endangered Human: Toward an International Treaty Prohibiting Cloning and Inheritable Alterations’, *American Journal of Law and Medicine* 28 (2002), 151.

<sup>113</sup> Nick Bostrom. ‘In Defense of Posthuman Dignity’, *Bioethics* 19(3) (2005), 1467.

<sup>114</sup> *Ibid.*

<sup>115</sup> *Ibid.*

<sup>116</sup> See Steven Pinker. *The Better Angels of Our Nature: Why Violence Has Declined* (Viking, New York, 2011).

man dignity, in the moral sense. After all, there are scholarly debates at present about how to extend basic rights to artificial intelligence systems once they acquire the capacity to consciously suffer, thus becoming moral patients. Suffice it to say at present that there are no knock-down arguments for why posthumans couldn't possess a kind of dignity that grounds their full moral status as sentient, intelligent beings. Dignity is a topic that we will return to below.

#### **4: The Crime of Omnicide**

We are now in a position to outline a theory of the crime of omnicide. But what should this theory explain? There are at least two answers, one *conceptual* and the other *normative*: (1) What constitutes omnicide? That is, under what conditions will omnicide have been committed? What does it mean for someone to be responsible for an omnicidal event? And (2) why is prosecution by the international community warranted? That is, what justifies imposing limitations on the omnipotence of the state within the context of omnicide? Why should omnicide be seen as an international rather than domestic crime? Taking these in order:

There are several possible interpretations of the word “omnicide.” First, one could construe it as denoting any instance of human extinction caused by a member of humanity. For example, consider David Benatar's anti-natalism, according to which procreating is always morally wrong.<sup>117</sup> Thus, Benatar argues that we should all cease bringing new people into the world, which of course entails the gradual dwindling of the global human population to zero. Imagine that for some reason people around the world become convinced that Benatarian antinatalism is

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<sup>117</sup> David Benatar. *Better Never to Have Been: The Harm of Coming Into Existence* (Oxford University Press, Oxford, 2006).

the correct moral view, and consequently humanity goes extinct via what Benatar calls a “dying-extinction.” In this case, there is a robust sense in which Benatar-the-philosopher *caused* human extinction, although it seems misguided to label him a “criminal” in this scenario. The same could be said about the Voluntary Human Extinction Movement (VHEMT), which as the appellation implies advocates for the voluntary disappearance of humanity. As with Benatarian antinatalism, if VHEMT were to convince humanity not to procreate, it would be odd to accuse the group of having committed a crime. If these intuitions are correct, there could be instances of omnicide that are *acceptable* in the sense that they neither violate any current international or municipal laws nor contravene any defensible ethical norms.

In contrast, a second interpretation coincides with what Benatar calls a “killing-extinction,” whereby someone causes human extinction without the full consent of everyone affected. More formally, we can define this sense of “omnicide” as follows:

*Omnicide*: human extinction that is intentionally and involuntarily brought about by the unilateral action(s) of one or more perpetrators.

For the remainder of this article, I will use the term “omnicide” as defined above, as the limiting case of mass murder or extermination. Since mass murder and extermination are crimes, it follows that omnicide should also be a crime. But what kind? First, consider that the implications of omnicide are international in nature. This suggests that the crime of omnicide should be internationalized: all of humanity has an interest in preventing omnicide from occurring. It is precisely this fact that warrants intervention from the international community when states are either un-

willing or unable to prosecute offenders under municipal law. But omnicide is more than an international crime, it is a crime against our collective capacity for “desirable future development.” In other words, one could argue that the ultimate property or value that omnicide injures is *human potentiality*—the option to continue writing the human story, to realize future great goods in science and the arts, to explore the posthuman realm—and this makes offenders not merely enemies of humanity, or *hostis humani generi*, but enemies of the transgenerational human project, or *hostis humani potentatis*. This suggests that omnicide could be usefully classified as an instance of “crimes against humanity’s potential,” or CAHP, which we can define as follows:

*Crime Against Humanity’s Potential (CAHP)*: any act that permanently and drastically compromises our collective potential for desirable future development.

This definition parallels Bostrom’s characterization of an *existential risk* as “one that threatens the premature extinction of Earth-originating intelligent life or the permanent and drastic destruction of its potential for desirable future development.”<sup>118</sup> In other words, CAHP are catastrophes—the instantiations of risks—that (a) are intentionally and involuntarily brought about by the action(s) of one or more perpetrators, and (b) permanently and drastically compromise our collective potential for desirable future development. Here omnicide may be the paradigmatic case, but it is not the only scenario that could satisfy these definiens. For example, an attack that aims to destroy civilization—call this “civilicide”—but not bring about our extinction could constitute a CAHP if the negative consequences are irreversible and severe.<sup>119</sup> Indeed, Bostrom rec-

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<sup>118</sup> *Supra* note 93.

<sup>119</sup> Anarcho-primitivists generally advocate for civilizational destruction but *not* human extinction.

ognizes three existential risk failure modes in addition to human extinction, namely, permanent stagnation, flawed realization, and subsequent ruination.<sup>120</sup> Describing these goes beyond this paper; suffice it to say that human extinction isn't the only CAHP, and that we are unlikely to succumb to the second or third before reaching a posthuman stage.

Here one might ask: what grounds this notion of CAHP? A possible answer is that just as genocide presupposes that groups themselves possess a kind of dignity in addition to the dignity of individual members, the human phylogenetic lineage could also possess a kind of dignity in addition to the dignity of groups and individuals. It is this dignity, in the moral sense, that accounts for why our continued survival in the universe ought to be protected. Along similar lines, Johann Frick argues that the human lineage, “with its unique capacities for complex language use and rational thought, its sensitivity to moral reasons, its ability to produce and appreciate art, music, and scientific knowledge, its sense of history, and so on, should be deemed to possess final value.”<sup>121</sup> Here “final value” contrasts with “instrumental value,” where the former is valuable in and of itself whereas the latter is valuable only as a means to an end. If the human lineage has final value, then it has value by virtue of what it is, rather like individual humans have dignity by virtue of being human. This also relates to the claim that omnicide would “shock the conscience of humanity” and “turn our stomachs,” the latter of which is Luban’s description of CAH<sup>122</sup>—although given that the effects of omnicide would be far more *widespread* than CAH in both space and time, these phrases may seem inadequate to capture the true nature and enormity of omnicide. It is, indeed, the *ultimate* “crime of crimes,” an outcome that is what we could de-

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<sup>120</sup> *Supra* note 93.

<sup>121</sup> Johann Frick. ‘On the Survival of Humanity’, *Canadian Journal of Philosophy* 47(2-3) (2017), 344.

<sup>122</sup> *Supra* note 4.

scribe as “cosmically odious,” not merely “universally odious.” Omnicide would entail the end of all endings, the final word of humanity’s autobiography. It would constitute the saddest of all endings to the adventure we’ve been on together for the past 300,000 years, since our debut in the African savanna.

This being said, if omnicide constitutes an international crime, one could argue that it would be appropriate for the United Nations General Assembly to adopt an Omnicide Convention that codifies the crime of omnicide as such. A convention of this sort would be, to borrow language from the 1949 article “Genocide: A Commentary on the Convention,” the world’s first attempt to eliminate the planned destruction of humanity. (More generally, it may become necessary to establish a specialized convention on CAHP that includes intentionally caused existential catastrophes that don’t result in human extinction.) In fact, some scholars have posed the question of whether Article 7 of the Rome Statute should be amended to include omnicide. As Farquhar et al. write, “it could in theory be made a crime against humanity to recklessly and negligently take action which creates a significant risk of extinction for humanity.”<sup>123</sup> But for the many reasons outlined above, omnicide should not be understood as a type of CAH; it is qualitatively different from both CAH and genocide. Thus, rather than expanding existing international law, the international community should stand together in recognizing the unprecedented dangers posed by the omniviolence and democratization phenomena, as well as the extraordinary crimi-

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<sup>123</sup> Incidentally, Farquhar et al. do not recommend amending Article 7 of the Rome Statute. The reason is that doing so would be an “arduous” process, and “the Rome Statute remains unratified by key member states. This means that even if negligently exposing the world to existential risks were prosecutable by the ICC, it would not necessarily change the behaviour of key risk takers.” Sebastian Farquhar, John Halstead, Owen Cotton-Barratt, Stefan Schubert, Haydn Belfield, and Andrew Snyder-Beattie. *Existential Risk Diplomacy and Governance*. <https://www.fhi.ox.ac.uk/wp-content/uploads/Existential-Risks-2017-01-23.pdf>.

nality of bringing about an omnicultural disaster, and consequently adopt a convention that specifies the unique nature of the crime of omniculture.

Furthermore, the right time for such action is *now*, given (a) the exponential or superexponential development of dual-use emerging technologies, and (b) the possible objection that establishing an Omniculture Convention after an attempted omnicultural attack would be susceptible to the objection that defendants would be tried for crimes that are *ex post facto* formulations. Consider Lemkin's complaint that

in 1933, ... the author of the present article [i.e., Lemkin] introduced a proposal providing for this type of jurisdiction for acts of persecution amounting to what is now called genocide. Unfortunately, at that time, his proposal was not adopted. Had this principle been adopted at that time by international treaty, we would not now have all the discussions about *ex post facto* law, in relation to crimes committed by the German government against its own citizens prior to this war.<sup>124</sup>

It follows that, insofar as one takes seriously the dual trends of omniviolence and democratization, it may be important to act today in anticipation of the threat environment of tomorrow. But here we run into an obvious problem that has cast a shadow over our entire discussion so far: whether CAHP takes the form of omniculture or civilicide, a truly *successful* attack would under most circumstances preclude the prosecution of the offenders in the post-attack world. This is

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<sup>124</sup> Raphael Lemkin. 'The Crime of Genocide', *American Scholar* 15(2) (1946), 227. Note also that one of the criticisms against the notion of genocide is that it pits one group against another, thereby reinforcing in-group/out-group prejudices. In contrast, omniculture doesn't pit any group against any other, since it concerns the super-group of humanity.

obviously the case with omnicide, which would entail the non-existence of courts of law in which offenders could be brought to justice. Hence, omnicide is in principle non-prosecutable; the only acts that could be prosecuted are (a) conspiracy to commit omnicide; (b) direct and public incitement to commit omnicide; (c) attempt to commit omnicide; or (d) complicity in (a) through (c).<sup>125,126</sup>

This fact requires a uniquely *proactive* stance toward this crime: law enforcement, perhaps of a centralized international agency, will need to surveil the human population to *identify and prevent without fail* potential omnicidal attacks. How might this be accomplished with 100-percent accuracy? One possibility would be for states or international entities to employ mind-reading technologies paired with minimal individual privacy to spot cases of planning, preparing, or initiating omnicide (to borrow words from Article 8(1) of the Rome Statute on “crimes of aggression”). Such technologies might be available to states in the relatively near future, perhaps *before* technologies like CRISPR/Cas9 become widely available to nonstate actors, thereby conferring a defensive advantage against omnicidal agents. Yet mind-reading technologies are dual-use and, as such, could enable dystopian scenarios in which totalitarian governments become stable singletons in which a small elite oppresses everyone else, if not simply eliminating them.<sup>127</sup> Thus, while a benefit of such defenses could be our collective survival and, consequent-

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<sup>125</sup> This parallels the Genocide Convention.

<sup>126</sup> As the United States prosecutor at the Nuremberg trials, Telford Taylor, put it, under no “known system of criminal law is guilt for murder confined to the man who pulls the trigger or buries the corpse ... not only are principals guilty but also accessories, those who take a consenting part in the commission of crime or are connected with plans or enterprises involved in its commission, those who order or abet crime, and those who belong to an organization or group engaged in the commission of crime. These provisions embody no harsh or novel principles of criminal responsibility.” Furthermore, the so-called Lašva Valley case tried by the ICTY affirms “that two types of liability for criminal participation ‘appear to have crystallised in international law—co-perpetrators who participate in a joint criminal enterprise, on the one hand, and aiders and abettors, on the other.’” Stuart Casey-Maslen. ‘Use of Nuclear Weapons as Genocide’, in Gro Nystuen, Stuart Casey-Maslen, and Annie Golden Gersagel (eds.), *Nuclear Weapons Under International Law* (Cambridge University Press, Cambridge, 2014).

<sup>127</sup> As discussed by Yuval Noah Harari. *Homo Deus: A Brief History of Tomorrow*. (HarperCollins, New York, 2017).



ly, a continuation of the human story, the risks are also immense. It is unclear from the limited vantage point of the early twenty-first century what the wisest path forward is—that is, which path will maximize expected value in the longer term.

Tying together the various points of section 3 and 4, we can list the following items as key features of the crime of omnicide:

- (1) The intent of offenders is to destroy not a nationally, ethnically, racially, religiously, socially, culturally, or politically defined group of people partly or entirely, but the whole human population itself, thereby terminating our phylogenetic lineage; thus, its target is both civilian and military, including the perpetrators themselves (i.e., omnicide entails suicide).
- (2) The offenders may be representatives of a state or organization within the state, but they are more likely to be nonstate groups or individuals; i.e., there is no state or policy requirement.
- (3) Liability should be fixed upon individuals who give orders to commit omnicide in addition to those who attempt to execute an omnicultural attack.
- (4) Omnicultural should be seen as an international crime because it constitutes a threat to the peace and security of the international community, and violates cardinal ethical norms (e.g., that killing is morally wrong) endorsed by virtually all mainstream ethical theories, including consequentialism/utilitarianism, Kantianism/deontology, contractualism, and virtue ethics.<sup>128,129</sup>

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<sup>128</sup> This parallels Raphael Lemkin. ‘Genocide: A Modern Crime’, *Free World* 9(4) (1945), 39.

<sup>129</sup> See author / co-author, forthcoming.

- (5) The crime of omnicide can be committed during periods of war or peace; i.e., there is no “war nexus.”
- (6) An important property or value that omnicide injures is our collective potential for desirable future development; omnicide constitutes the clearest but not the only case of CAHP, and is qualitatively distinct from both CAH and genocide.
- (7) Although omnicide has never happened, technological advancements over the past few decades and those expected to occur this century will very likely make possible a successful attack that results in a killing-extinction disaster.
- (8) An omnicultural attack could occur as the result of multiple attacks or a single strike; thus, it could be systematic in nature, as defined by the ICTR in section 2, or not.
- (9) Offenders can only be charged of the crime of omnicide if the omnicultural attack fails; this mirrors prosecution of suicide in jurisdictions that have made suicide illegal.

I do not present these features as exhaustive or incontrovertible, but only as a starting point for a “judicial revolution”—to borrow Mazlish’s term<sup>130</sup>—that takes seriously current and projected technological trends, and a long-termist perspective on humanity’s place in the universe, which could remain habitable for trillions of years to come. If one takes such phenomena seriously, then urgently establishing a specialized convention on omnicide appears wholly warranted.

## 5. Conclusion

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<sup>130</sup> *Supra* note 32.

This paper aims to offer the first theoretical account of omnicide as a crime—specifically, a crime against humanity’s potential. I hope to have shown that omnicide is becoming increasingly feasible for nonstate actors to unilaterally bring about, that it constitutes a distinct crime from both CAH and genocide, and that our rapidly changing threat environment warrants the establishment of an Omnicide Convention within the immediate future. With sufficient foresight and attentiveness to the ballooning dangers associated with emerging technologies, the international community could significantly increase the likelihood of a good outcome for our species.

**Acknowledgements:**

Many sincere thanks to Matthijs Mass, Kyle Evanoff, and Anders Sandberg for helpful comments and criticisms.