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FROM THE EDITOR

Existential Health Care Ethics

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This issue of the *AMA Journal of Ethics* is dedicated to addressing ethical questions at the intersection of human extinction and health care. These questions include some of the following: *Should clinicians be considered to hold special obligations to ensure humanity's survival? Would such obligations conflict with traditional codes of health professional ethics? And, if so, what might this mean for clinical care, public health, or health law?* How one responds to such inquiries has pragmatic implications for any agent aiming to promote health.

While this special issue draws inspiration primarily from existential ethics, an emerging discipline in contemporary moral philosophy concerned with human extinction,[1] it is rooted in 20th-century health activism on nuclear war and the environment. Despite these cross-disciplinary influences, existential ethics remains largely separate from health care ethics and unknown to most clinicians. To understand why, we must look back on a long, winding history of ideas, one in which science, health care, philosophy, and religion intersect in what Albert Schweitzer referred to as a "struggle for a satisfactory world-view" that "unrolls itself like a tragic drama."[2]

19th Century

The physician Thomas Percival is credited with having coined the term *medical ethics* in 1803, a time when there were no clear scientific mechanisms by which humanity could go extinct.[1,3] In fact, since classical antiquity, many Western people had believed that every possible thing existed along an unbroken, hierarchical "Great Chain of Being" supposedly representing divine perfection.[1,4] Under this worldview, the concept of *extinction* made little sense.[1,3] In 1767, the physician and anatomist William Hunter challenged the Great Chain of Being dogma, arguing that species extinction is possible based on fossil evidence.[5,6] George Cuvier's work in the early 1800s fostered this idea's wide acceptance by attributing species extinction to geological revolutions, which clashed with Christian stories about human origins.[1,7] Later, the mid-19th-century discovery of the second law of thermodynamics led scientists to infer that the sun and universe would eventually fizzle out, taking humanity with them. Thinking about human extinction has since taken on 2, interrelated forms: scientific description and ethical evaluation, the latter of which is the focus of existential ethics.

In 1856, the physician and scientist Hermann von Helmholtz described ethical implications of the second law of thermodynamics, whereby "this store of force, which can only suffer loss and not gain, must be finally exhausted.... But above the forms of life gone by, the human race has higher moral problems before it, the bearer of which it is, and in the completion of which it fulfils its *destiny* [italics mine]."[8] In philosophy, however, heat death (ie, the inevitable trudge to maximum entropy in the universe, eventually incompatible with humanity's survival) has long sparked perceptions that life is meaningless.[9] In 1952, Hans Jonas called this view "cosmic nihilism," which some posit might require pharmacotherapy to cope with.[9,10,11] Yet the philosopher Philipp Mainländer saw in heat death a different, redemptive destiny for humanity: an end of suffering.[1,12,13] Endorsing pro-extinctionism, he died by suicide in 1876.[1] Later, the philosopher Friedrich Nietzsche denied heat death, God, and objective ethics, proposing a destiny in which some humans become *Übermenschen* and define their own values.[9,14,15]

In 1883, the same year that Nietzsche published these ideas, Francis Galton popularized the term *eugenics* and framed it as a scientific enterprise, thereby furthering racism, classism, sexism, ableism, and genetic determinism, particularly in medicine.[16] Believing Indigenous people and many with minoritized identities to be "primitives," "savages," or "barbarians" by nature and therefore inferior to "more evolved" European men, some rationalized the former's eradication as civilizational or evolutionary "progress."[17,18] After the First World War, racialized thinking about extinction, paired with utopian and Nietzschean ideas, culminated in the Holocaust.[19,20,21,22,23]

20th Century

Following the Second World War, the context of thinking about human extinction shifted to nuclear war and the environment. Concerned with both, the public scientist Julian Huxley gave eugenics a makeover by merging it with postwar concepts of human rights, advocating for a new secular religion: *evolutionary humanism*.[24] Incredibly, his physician colleague C. P. Blacker called for eugenics to create more intelligent managers of nuclear competition.[25] However, health activism on nuclear war overwhelmingly focused on a pragmatic ethic of "social responsibility" devoid of eugenic advocacy.[26] International Physicians for the Prevention of Nuclear War (IPPNW) argued that physicians have duties to prevent global catastrophe, and their Nobel Prize-winning advocacy helped halt the Cold War arms race.[26] In 1991, 7 years after at least one medical book had considered near-term global threats altogether from a psychological perspective, it was argued that IPPNW should extend its mission to addressing anything and everything that compromises "global security."[27,28]

Although the term *bioethics* is thought to have been introduced by Fritz Jahr in 1927,[29,30] 2 forms of bioethics emerged in 1970 (before the advent of IPPNW), one of which was responsive to global threats.[31] Van Rensselaer Potter used the term to call for a new, interdisciplinary "science of survival" integrating biology, ecology, and ethics,[32] which he later is credited with having named "global bioethics."[33] This new name was meant to differentiate these ideas from a Georgetown model of bioethics, which developed a narrower focus, mostly on clinical practice and research.[31,33] Despite the emergence of public health ethics and global health ethics more recently, both forms of bioethics generally remain siloed from the pragmatic ethics of practitioners in groups like IPPNW.[34] In the latter part of the 20th century, Huxley's evolutionary humanism consolidated into *transhumanism*, a movement that to this day aims to create a new

humanity ("posthumanity") through so-called directed evolution of *Homo sapiens* via ethically dubious iterative embryo selection, genetic engineering, and technological enhancement, which commonly appear in the bioethics discourse.[24,35,36,37]

21st Century

In 2002, the transhumanist philosopher Nick Bostrom defined *existential risk* ("x-risk") as anything that could "annihilate Earth-originating intelligent life or permanently and drastically curtail its potential."[37] Bostrom's insight was that many existential threats to humanity are also existential threats to posthumanity.[37] Separate from medical efforts, the concept of x-risk, with its secular and enhancement orientation, led to greater attention to threats from long-term phenomena (eg, asteroids, volcanic super-eruptions, astrophysical events) and emerging technologies.[38,39,40] Today, x-risk has morphed into a field of existential risk studies (ERS) aiming to prevent extinction and a heavily utilitarian philosophy of longtermism concerned with what some view as a kind of fulfillment of humanity's long-term "potential."[41,42] While ERS and longtermism now dominate extinction discourse due to support from some wealthy technologists,[43] a new variant of ethical inquiry is emerging that challenges these paradigms.

For example, Mollie Gleiberman coined *x-risk transhumanitarianism* to refer to transhumanists' reframing of their goals under the banner of "existential risk reduction"[44]; this co-optation of the language of "safety" and the "protection of humanity" leads to goals that are seemingly shared with humanitarian initiatives like IPPNW (eg, preventing catastrophe) but with an emphasis on different reasons (eg, enabling "superior" posthumans to colonize space in the future instead of protecting today's vulnerable humans).[44] Although some might view this characterization as an oversimplification of shifting views, of ethical importance is that some longtermists and existential risk scholars—while portraying themselves as motivating the interests of "humanity"—work on projects that *perpetuate* global risk, inequality, neocolonialism, and harmful eugenics practices.[45,46,47] Health care should be wary of these harms alive in today's thinking and should unequivocally oppose them.

This special issue arose to understand these developments, to bring together siloed discourses and histories, and to reawaken health care to the urgent need to address threats to humanity. While these issues appear abstract, they are of paramount importance in health care for several reasons. First, global health, extinction, and eugenic threats are real, neglected, poorly managed when addressed, and imbued with injustice. Second, an understanding of philosophical views associated with these threats can help isolate underlying drivers of human-caused global risk and reconcile conflicting policy proposals to protect patients. Third, ethical inquiry into health care's roles in mitigating existential threats is necessary to balance the health interests of current and future generations. Finally, health professionals, policy makers, and institutions have moral, social, and cultural authority and can use these advantages to help society address global threats.

Overall, it is increasingly important for health professionals to engage in critical analyses and evaluations of all threats to humanity, the worldviews they promote, and how those threats intersect with health care. Through such engagement, we might humbly hope to foster and improve the conditions of humanity's existence.

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