It's the End of the World as We Know It and We Feel Fantastic: Examining the End of Suffering

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Abstract:
This paper examines the consequences of the transhumanist goal to eliminate the suffering of all sentient beings. While transhumanists identify numerous approaches to this goal, the endgame is genetic modification of humans and natural predators. Pursuing this goal would cost trillions, and such treatments/technology would be available only to the wealthy. The transhumanist agenda around suffering is economically irresponsible, socially divisive, and inherently egotistical in its assumption that suffering is universally undesirable and meritless, and that scientists and the techno-elite have the right to modify sentient creatures. If transhumanists narrowed their focus to disease treatment and eradication, they could alleviate suffering while avoiding many of the negative consequences of their broader goal. Critically assessing the implications of the transhumanist agenda is crucial to the future of humanity, nature, and the planet as technology continues its exponential growth.

Keywords: transhumanism, anthropocene, genetic modification, suffering, humanism

Landscape Pollution. Photo by Sam Fee, 2018. JPEG.

Transhumanists, members of the philosophical and political movement that advocates using technology to help humankind transcend its biological and intellectual limitations, have ambitious goals that, if achieved or even pursued, would change our species and the planet. The "Transhumanist Declaration" "advocate[s] the well-being of all sentience, including humans, non-human animals, and any future artificial intellects, modified life forms, or other intelligences." This broad objective comes into sharper relief thanks to "abolitionism," a subset of transhumanism that advocates the elimination of both physical and psychological suffering in the human and natural world (not to be confused with opposition to slavery, but perhaps implying that humans are slaves to suffering). Beyond its surface appeal and positive intent, negative consequences abound, including infeasibility, inaccessibility and the resulting exacerbation of the wealth gap, contrived limitations of the range of human emotional experience, and the disruption of critical bodily systems. The goal also bespeaks hubris, as transhumanist abolitionists presume the right to fundamentally alter sentient beings and the

widespread desire to do so. Rather than argue that the philosophy of transhumanism itself is problematic, this paper focuses on how the scope and arrogance of its vision undermines its plausibility and runs counter to the movement's overall goal. Instead of trying to eliminate all suffering or make all sentient creatures happy transhumanists should instead focus on treating or eradicating conditions that cause physical and/or psychological pain. More specific objectives, such as developing accessible treatments for curable diseases, implementing technologies to purify polluted water, or devising affordable housing able to withstand the effects of climate change would imbue a colossal goal with clarity, plausibility, and a sense of global responsibility—and would provide a more realistic path to alleviating suffering.

Abolitionists, led by utilitarian philosopher and co-founder of the World Transhumanist Association David Pearce, believe the most effective way to alleviate physical pain involves genetic modification ("Hedonistic Imperative"). The feasibility of genetic deactivation of physical pain relies primarily on a 2010 study conducted by University of Cambridge biochemist Frank Reimann, which identifies the SCN9A gene as being "responsible for three human pain disorders" (Reimann et al). In the study, researcher-activated mutations in the SCN9A gene caused "man on fire" syndrome, characterized by endless, burning pain; deactivating the mutations eliminated the pain. Pain sensitivity can also be heightened or reduced by activating or deactivating alleles (Reimann et al). Abolitionists believe that in the future, we will be able to dictate pain sensitivity levels for our children, thereby alleviating suffering on a large scale (Pearce "The Fate of the Meat World").

Abolitionists (also known as Hedonistic Transhumanists) similarly view psychological suffering, including depression, as both preventable and unnecessary (Pearce "The End of Suffering?"). In a 1971 essay called "Hedonic Relativism and Planning the Good Society," psychologists Philip Brickman and Donald Campbell introduced the concept of the "hedonic treadmill." Also known as "hedonic adaptation," the hedonic treadmill is the human tendency to resume a default level of happiness after major life changes (Brickman and Campbell 289). The pursuit of happiness is akin to a person walking on a treadmill, maintaining the status quo. As people grow older, make more money, and buy nicer things, their wants also escalate; in other words, the treadmill starts to move faster and thus, the person has to walk faster, but even when they do, they're still locked in the status quo, generally no happier than they were before. Thus, even major life events don't have a long-term impact on happiness, as one's hedonic set-point remains relatively consistent.

Theoretically, pre-determining people's hedonic set points would induce greater happiness. One way of achieving a high hedonic set point involves genetically programming people to be born hyperthymic. Hyperthymia is the opposite of dysthymia, now called Persistent Depressive Disorder, a low-grade, chronic depression that, according to the National Institute of Mental Health, afflicts roughly 1.3% of the adult American population, or over 3 million people ("Persistent Depressive Disorder"). Based on the hedonic treadmill and research about hyperthymia and dysthymia, transhumanists believe a small portion of the population are hard-wired to be hyperthymic, or generally and consistently happy. Thus, they believe the condition could—and should—be replicated and propagated genetically.

In a pain-free world, humans could choose what fills the spaces previously occupied by suffering. In the abolitionist manifesto "The Hedonistic Imperative," Pearce argues that the "metabolic pathways of pain and malaise…will be replaced by a different sort of neural architecture—a motivational system based on heritable gradients of bliss. States of sublime well-being are destined to become the genetically pre-programmed norm of mental health . . . [T]he world's last unpleasant experience will be a precisely dateable event."

Perhaps the most prominent transhumanist and futurist, Ray Kurzweil, advocates for genetic modification as a means of "transcending" the human condition via technology to create an intelligent, immortal, and happy race. The goal of technological advancement in general, according to Kurzweil, "is for the emerging post-human civilization to engineer the universe it wants," which includes a universe free of suffering (363). In order to exert that kind of control, humans have to transform themselves into "transhumans" or "post-humans"—a race that, through technological mastery, transcends nature and takes its evolution into its own hands.

Physical pain has a purpose—it alerts us to danger. Deactivating pain sensitivity could mask problematic conditions. People with congenital analgesia, a pain-insensitivity condition caused by SCN9A gene mutations, either don't perceive pain or don't react when they do ("Congenital Insensitivity to Pain"). People with congenital analgesia can't tell if they're being burned, if they're hungry, or if they've broken a bone (or worse). They can develop severe diseases because symptoms often go unnoticed and untreated, and studies indicate that people who can't feel pain don't live as long as those who can ("Congenital Insensitivity to Pain").

Instead of promoting the elimination of all physical pain, Pearce suggests that genetically selecting for low pain sensitivity in future generations makes more sense (qtd. in Dvorsky). Pain

reduction is less dangerous than pain elimination, but it could have similarly problematic consequences. Daily aches are bodily white noise—their volume is so low and their existence so common that they become facts of life. If all pain registers this way, rather than more acutely, people could become inured to what it might be signaling.

Given the importance of pain signals, some abolitionists advocate finding a way to replicate them without the pain itself (Pearce qtd. in Dvorsky). This approach suggests that the experience and sensation of pain is itself dispensable, which may be more a product of wishful thinking than of scientific theory. Evolutionary biologist Richard Dawkins believes that even debilitating pain is a "Darwinian device" necessary for survival:

> Theoretically, you'd think, the equivalent of a little red flag could painlessly be raised somewhere in the brain, whenever the animal does something that damages it: picks up a red-hot cinder, perhaps. An imperative admonition, 'Don't do that again!' or a painless change in the wiring diagram of the brain such that, as a matter of fact, the animal doesn't do it again, would seem, on the face of it, enough. Why the searing agony . . . from which the memory may never shake itself free? (393)

Dawkins suggests that when the brain grapples with opposing inclinations, an "internal tussle" arises (393). We've all experienced this—we understand the benefits of sleep and not having a hangover, but we want to stay out for another drink. Just as we can talk ourselves into almost anything, some people can "over-rule the desire to escape pain," which Dawkins believes runs counter to evolution: "Natural selection is 'against' individuals over-ruling the warning sensations of pain. Natural selection 'wants' us to survive . . . little red flags will be favoured only if they are never overruled" (393-4). The real question is whether pain-insensitive individuals would ultimately survive better or longer than pain-feeling individuals, and Dawkins reasons that even if a painless warning system were available, "there seems to be no reason why natural selection would positively favour it over a real pain system just because it is less unpleasant" (395). Of course, no one knows for sure, but that's precisely the point. The likelihood of negative unintended consequences can't be adequately measured—a point abolitionist transhumanists tend to ignore in favor of what they see as a utopian vision.

That same blindness to potential undesirable consequences underlies the transhumanist aim to genetically hard-wire humans against pain sensitivity. Pearce argues that "Mastery of our genetic source code . . . and the CRISPR revolution in biotechnology have left the merely

technical arguments against phasing out the biology of suffering less convincing than they seemed two decades ago" ("Unsorted Postings"). CRISPR—a gene-splicing technique—may indeed revolutionize genomic modification, and indeed much progress has been made in this field over the past 20 years, but feasibility should not be conflated with safety. In 2015, Chinese geneticists published a study in *Protein & Cell* (after it was rejected by *Nature* and *Science* due to questionable ethics) detailing the first genomic editing of human embryo DNA (Cyranoski and Reardon). The researchers used CRISPR to modify the gene that causes the blood disorder *β-thalassaemia*. One-third of the embryos in the study were effectively spliced, but only "a small fraction of those contained the replacement genetic material" (Cyranoski and Reardon). According to one of the researchers, "'you need to be close to 100% . . . That's why we stopped'" (qtd. in Cyranoski and Reardon). More troubling, a large number of mutations resulted: "This effect is one of the main safety concerns surrounding germline gene editing because these unintended mutations could be harmful. The rates of such mutations were much higher than those observed in gene-editing studies of mouse embryos or human adult cells" *(*Cyranoski and Reardon). Even though subsequent experiments have yielded more positive results, the researchers' conclusion applies as much today as it did in 2015: *"*a serious knowledge gap remains in our understanding of DNA repair mechanisms in human early embryos, and in the efficiency and potential off-target effects of using technologies such as CRISPR/Cas9 in human pre-implantation embryos" (Liang et al.). Scientists may figure out how to genetically modify human DNA safely, but transhumanists' willingness to gloss over these concerns indicates naiveté at best and recklessness at worst.

Even before the publication of the 2015 study, many scientists called for a ban on CRISPR. *New York Times* science writer Nicholas Wade reported that the objecting scientists feared "physicians may push ahead before its safety can be assessed," as sometimes happens when money and notoriety are on the line. Even more importantly, these scientists "want the public to understand the ethical issues surrounding the technique, which could be used to cure genetic diseases, but also to enhance qualities like beauty or intelligence. The latter is a path that many ethicists believe should never be taken" (Wade). And yet, that path is the one transhumanists advocate, often bypassing ethical objections altogether or claiming that it would be unethical *not* to pursue such ends. By ignoring reservations and warnings from concerned scientists, transhumanism could invite the suffering it aims to eliminate.

Much like physical pain, many scientists believe psychological conditions such as depression have an evolutionary origin. Psychiatrists Anthony Stevens and John Price's "Rank Theory" posits that depression evolved via natural selection to make people feel badly about losing status and to make them doubt their ability to regain it (70-1). The resulting depression also prevents additional defeat, as depressed people often have diminished ambitions and are less likely to enter a new conflict. People adapt to getting toppled and learn how to thrive in more subordinate roles. "Winning" promotes a clear rank, confidence, access to resources, and assurance that the one who has yielded will not issue a future challenge, which in turn facilitates survival:

> The selective advantage of an evolved capacity for the recognition and acceptance of rank difference in social groups is that it reduces aggressiveness and establishes precedence in granting rights of access to indispensable resources such as territory, food, and potential mates . . . To be popular and hold rank within a group are immensely desirable accomplishments; to perceive oneself as unpopular and without rank are causes of misery and unhappiness; while to be rejected from the group altogether is one of life's greatest disasters. It is in terms of these factors that joy and sorrow, mania and depression, contentment and anxiety can be most readily understood. (Stevens and Price 71)

Rank Theory also underscores the importance of dualism. Success and failure must both exist in order to establish rank, just as the resulting emotions of happiness or sadness must exist.

Duality brings meaning to experiences—sadness makes happiness more powerful. While many people would likely welcome more happiness in their lives, would they forego the full breadth of emotional capabilities? If happiness were a default state, would it still be happiness? Aldous Huxley's *Brave New World* engages the consequences of consistent induced happiness, particularly through the character of outsider John the Savage: "'I don't want comfort. I want God, I want poetry, I want real danger, I want freedom, I want goodness, I want sin . . . I'm claiming the right to be unhappy.'" (240). John not only claims the right to be unhappy, but also to *earn* happiness.

Just as bodybuilders spend hours at the gym, many people spend hours, months, and years learning how to manage thoughts and behaviors that negatively impact them. Suffering motivates us to attain insight about navigating life's complexities. "'Has any of you ever

encountered an insurmountable obstacle?'" World Controller Mustapha Mond asks a tour group (Huxley 45). They haven't; thus, no one triumphs or grows. John rejects this paradigm because he understands the importance of suffering: "'Getting rid of everything unpleasant instead of learning to put up with it. Whether 'tis better in the mind to suffer the slings and arrows of outrageous fortune, or to take arms against a sea of troubles and by opposing end them . . . But you don't do either. Neither suffer nor oppose. You just abolish the slings and arrows. It's too easy'" (Huxley 238). In the book, Soma functions as a panacea, but readers know this superficial utopia turns the populous into zombies. Eliminating suffering is the transhumanist version of Soma—it might address some of the symptoms of distress, but it would leave the causes largely untouched.

Many philosophies and religions embrace suffering as a means of growth. Father Tadeusz Pacholczyk, Director of Education for the National Catholic Bioethics, says, "'For Catholics, escaping suffering and trials by escaping human nature itself is a morally unacceptable option'" (qtd. in Mena and Rezac). Whether or not religion is the path to happiness, Father Pacholczyk notes that without suffering "'our innermost self would retain fundamental shards of incompleteness'" (qtd. in Mena and Rezac). Similarly, from a Buddhist perspective, salvation comes from experiencing suffering as a way of understanding the world ("Basics of Buddhism").

Pearce likes to quote Buddha to support the abolitionist stance, which indicates a misunderstanding (whether inadvertent or intentional) of Buddhism and a superficiality of consideration ("The Fate of the Meat World"). Political science professor Charles Rubin argues that "'[transhumanists] have the very "thin" understanding of what it means to be human that is in many ways characteristic of our contemporary thin ideas about self-hood . . . [including the assumption that] material circumstances can solve all our problems'" (qtd. in Mena and Rezac).

Failure to recognize the possible negative consequences of fundamentally changing humanity represents naiveté and egotism. Political scientist and Stanford Senior Fellow Francis Fukuyama, worries about the repercussions of tinkering with something no one, including transhumanists, fully understands:

> For all our obvious faults, we humans are miraculously complex products of a long
> evolutionary process—products whose whole is much more than the sum of our parts . . .
> Modifying any one of our key characteristics inevitably entails modifying a complex,
> interlinked package of traits, and we will never be able to anticipate the ultimate outcome.

Modifying genes that control pleasure, pain, and emotion is bound to have consequences we can't predict, whether they're physical, psychological, economic, social, environmental, etc. Those who believe ending suffering wouldn't come with significant trade-offs, both predictable and unpredictable, demonstrate dangerous short-sightedness.

Transhumanists maintain that their goal is grander than self-gratification: "the purpose of radically enriched hedonic set-points isn't just to improve everyone's default quality of life. Rather, it's to allow critical insight, social responsibility, depth of motivation and intellectual progress to be sustained" (Pearce "Top Five Reasons Transhumanism Can Eliminate Suffering"). Insight, responsibility, and progress are unquestionably necessary, but transhumanists fail to explain how lowering our happiness threshold or eliminating suffering would promote them. Might it not do the exact opposite? It's difficult to imagine humans maintaining a sense of social, cultural, and environmental responsibility while in a consistent state of near-bliss.

Transhumanists consider Abolitionism a utilitarian movement that would bring the most good to the most people. Abolitionists build on utilitarian philosopher Jeremy Bentham's "felicific calculus," a means of weighing whether an action generates more positive or negative consequences and thus, whether the act is moral. Bentham takes a hedonistic approach to "good" and "bad": "Nature has placed mankind under two Sovereign masters, pain and pleasure." Pleasure with moral rightness presents problems for populations for whom pleasure is in short supply. Beyond that is the hedonistic slippery slope: a pain-free world encourages people not to consider consequences.

Even if one presumes such utilitarianism appropriate, the question remains whether transhumanists can adequately make those calculations. Transhumanists don't represent the worldwide population when it comes to gender, race, wealth, or education; thus, their views don't necessarily reflect global values, worldviews, or lived experiences. A World Future Society survey found that "Transhumanists are largely alike in almost every category . . . Most are non-believers; most are white, male, urbanites, educated, etc. The data reveals an even larger proportion of white [85.4%] males [90.1%] than was expected" (Pellissier and Dal Santo). The transhumanist agenda reflects transhumanist desires, as well as the privilege of access. But what about everyone else?

While some might consider transhumanism a fringe movement, its followers—also known as the techno-elite—have a disproportionate amount of power to guide emerging technologies: Ray Kurzweil (engineering director at Google); Zoltan Istvan (2016 Transhumanist presidential candidate and 2018 California Libertarian gubernatorial candidate); Mark Zuckerberg (Facebook founder/CEO); Sergey Brin (Google co-founder); Peter Diamandis (Planetary Resources CEO / X-Prize founder); and Stephen Hawking, to name a few. Transhumanists will continue to guide technological advancement, which will guide social, environmental, and economic development. However, allowing the techno-elite to dictate the human condition is a recipe for dissatisfaction, resentment, and widening inequality.

While transhumanists don't necessarily share all of the exact same beliefs, just as Catholics or Protestants don't, they generally subscribe to the principles set forth in the Transhumanist Declaration, including the elimination of suffering. "Hedonistic Transhumanism," championed by Pearce, is one of transhumanism's many "sects" (Pellissier). Hank Pellissier, managing director of the Institute for Ethics and Emerging Technology (IEET), created a representation of various transhumanist beliefs in pie-chart form, noting that he's 44% abolitionist/hedonistic transhumanist (other IEET board members similarly embrace the movement's goals). More broadly, a survey of transhumanists indicates that 85.1% favor "brain enhancements," whether cognitive, emotional, or both, and 84.8% favor "maximizing health," whether physical, emotional, or both (Pellissier and Dal Santo). Neither Abolitionism/Hedonistic Transhumanism, nor Pearce himself, are outliers.

Where transhumanists differ is in their prioritization of the three overarching transhumanist goals: superintelligence, superlongevity, and superhappiness. Transhumanists such as Aubrey de Grey focus on longevity or immortality, while others such as Nick Bostrom focus on superintelligence; the three areas overlap and culminate in the idea of "transcending humanity." Some transhumanists, such as Machine Intelligence Research Institute founder Eliezer Yudkowsky, identify as abolitionists, but believe "mild sorrow" has a purpose, as universal bliss would become boring (Yudlowsky). Yudkowsky's attitudes about the transhumanist future are refreshingly practical: "'I think outcomes are not good by default—I think outcomes can be made good, but this will require hard work that key actors may not have immediate incentives to do. Telling people that we're on a default trajectory to great and wonderful times is false'" (qtd. in Horgan). If put into practice, such a measured view would be a boon to transhumanism, and potentially to much of the rest of the world. Unfortunately, spokespeople such as Kurzweil and

Pearce repeatedly use words such as "bliss," "eternity," and "techno-utopia," as though selling their vision at a pep rally, and suggesting transhumanism could beget no other kind of future for anyone.

Ironically, many transhumanists refer to Abolitionism or Hedonistic Transhumanism as "Transhumanist Effective Altruism," which obscures the drawbacks of hedonism by asserting a moral imperative. Pearce argues that "humans are the only species capable of phasing out suffering throughout the living world," and that without humans, "pain-ridden Darwinian life would go on indefinitely" ("Top Five Reasons Transhumanism Can Eliminate Suffering"). He conflates capability with desirability, which represents a problematic "because we can" outlook. While this paper doesn't address the myriad problems with eliminating suffering in the natural world (which could include "remote-controlled neuroimplants for behavioral modification [and] genomic rewrites" for predators), the idea rests on the same faulty proposition as ending anguish for humans—that only drastic human intervention can fix the problem (Pearce "The Fate of a Meat World"). "Solving" natural predation seems illogical and fantastical, given the destructive human acts that cause significant suffering in the animal world; attempting to vanquish all human suffering is similarly implausible, and more problematically, doesn't call on people to examine and change the behaviors that cause it. A more effective approach to easing suffering would involve ameliorating or preventing the harm humans have already done to one another and to the planet.

Transhumanists may claim that ending suffering is an altruistic goal, but ego drives the sweeping generalization that lumps sentient beings into one suffering mass waiting to be delivered from pain. The desire to rid the world of suffering by creating a "better" species bespeaks an appetite for limitless control, as well as egoism in appointing oneself master designer or savoir. Fukuyama argues for transcending ego: "The environmental movement has taught us humility and respect for the integrity of nonhuman nature. We need a similar humility concerning our human nature." We also need a "similar humility" when it comes to making decisions that have such widespread effects.

Such important and practical values are not incompatible with Transhumanism, at least on its face. The "Transhumanist Declaration" "recognize[s] that humanity faces serious risks, especially from the misuse of new technologies. There are possible realistic scenarios that lead to the loss of most, or even all, of what we hold valuable. Some of these scenarios are drastic, others are subtle. Although all progress is change, not all change is progress." Just as the

Constitution doesn't necessarily dictate the values and behaviors of Americans, the Transhumanist Declaration will not always align with the endeavors of its members. Hopefully transhumanists commit to considering the impacts of their ideas carefully and from broader perspectives when performing their utilitarian calculations.

What would do the most good for the most people, then? Treating fatal diseases is necessary for survival, but eliminating suffering isn't. According to psychologist Abraham Maslow's Hierarchy of Needs, people must satisfy basic physiological needs—food, water, and shelter— before they can even think about meeting other needs ("Abraham Maslow"). According to the United Nations Development Programme, roughly 800 million people don't get enough to eat, 750 million people don't have access to clean drinking water, and 2,300 people die each day due to lack of clean water and hygiene ("Human Development Report 2014"). At the root of these numbers lies the cause: over 3 billion people "live on less than $2.50 a day" and "more than 1.3 billion live in extreme poverty—less than $1.25 a day" ("Human Development Report 2014"). What's the point of flipping a bliss switch for a select few if billions suffer from poverty, famine, and lack of basic hygiene and health care?

Imagine what would happen if transhumanists, with their financial, scientific, and intellectual resources, directed their efforts not to an abstract and illusory objective, but rather, to goals designed to address causes of suffering: affordable water purification techniques, carbon-capture technology, or a cure for leukemia. There's currently a government financial commitment to expedite cancer research for detection and treatment, and genomic treatments may lead the way ("Cancer Moonshot"). Why not redirect abolitionism's efforts to such initiatives? Abolitionists' desire to eradicate suffering is understandable; what's doesn't make sense is their failure to recognize ideological and practical shortcomings inherent in their grandiose propositions. Such examples fall under Transhumanism's broader goals, but abolitionist strategies focus more on genetic modification and species-level upgrades than to easing conditions that cause suffering or ceasing the human behaviors that perpetuate it. Some may argue that the techno-elite have and always will pave the way when it comes to advanced technology, and it's true that someone has to break new ground. However, lack of knowledge about the transhumanist agenda and its consequences decreases people's ability to question it. If everyone were happy, it would become even harder to challenge those in power. The ignorant contentment of Brave New World citizens renders individuality and freedom obsolete and negates equality and liberty:

"Sleep teaching was actually prohibited in England. There was something called liberalism. Parliament, if you know what that was, passed a law against it. The records survive. Speeches about liberty of the subject. Liberty to be inefficient and miserable. Freedom to be a round peg in a square hole . . . There was something called democracy. As though men were more than physico-chemically equal." (Huxley 46-47)

The ability to control technology, especially as it intersects with governmental policy, makes for a complacent constituency, which brings a host of problems—some of which have been on full display throughout the 2016 election and its aftermath.

In his book *The Demon-Haunted World*, Carl Sagan articulates his fear of a time when "awesome technological powers are in the hands of a very few, and no one representing the public interest can even grasp the issues; when the people have lost the ability to set their own agendas or knowledgeably question those in authority" ("Science and Hope" 28). Whether "those in authority" are politicians or scientists, unchecked technological progress can undermine democracy and freedom. Given how relatively few people are aware of or understand the implications of emerging technologies, such as genetic modification, Sagan's warning has never been more relevant. When it comes to practicing both science and democracy, he also advocates "a certain decency, humility and community spirit. In the demon-haunted world that we inhabit by virtue of being human, this may be all that stands between us and the enveloping darkness" (Sagan, "Real Patriots Ask Questions" 435). The transhumanist goal to end suffering lacks humility and would lead to a world in which people lose the ability to make decisions about how to live. Ultimately, such an agenda would beget the very suffering it seeks to abolish.

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