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The Less Visible Side of Transhumanism Is Dangerously Un-radical

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Abstract: According to transhumanists who urge the radical enhancement of human beings, humanity’s top priority should be engineering “posthumans,” whose features would include agelessness. Increasingly, transhumanism is critiqued on foundational grounds rather than based largely on anticipated results of its implementation, such as rising social inequality. This expansion is crucial but insufficient because, despite its radical aim, transhumanism reflects beliefs and attitudes that are evident in the broader culture. With a focus on the yearning to eliminate aging, I consider four of these: a disproportionate reliance on science and technology to address major human challenges; the conceptualization of human beings in terms of binaries like “young-old”; a repudiation of vulnerability; and intensifying perfectionism. Illuminating these interlocked commitments both deepens an existing critique of transhumanism and draws our attention to deleterious cultural views that must be vigorously contested if our commitment to human flourishing is to be deep and unwavering.

Key words: transhumanism, cultural roots of transhumanism, medicalization of aging, agelessness

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1. Introduction

As the “Report on the 2007 Interests and Beliefs Survey of the Members of the World Transhumanist Association” (Hughes 2008) made clear, the umbrella of “transhumanism” covers a range of agendas that feature, in some way, dramatic human improvement. My focus here is a prominent version of transhumanist argumentation, which urges our commitment to develop biotechnologies that augment select capacities, above all, cognitive ability and lifespan, so far beyond any recognizable human ceiling that their possessors would qualify as “posthuman” (aka “godlike,” “divine”) because they would reside on a higher ontological plane (Levin 2021). Differently put, “rational evolution” (Savulescu 2005, 38) should replace Darwinian natural selection, steering humanity’s technological self-transcendence into what would be, in effect, a higher species (Bostrom 2008; 2020; Harris 2003; 2010; Walker 2002). The target of said evolution is “possible functioning” (Harris 2010, 53). Anything less than the maximization of featured capacities, with specific targets set by what biotechnology made possible at a given time, would be “irrational” (Savulescu 2013, 54; see also Savulescu and Kahane 2009, 280). Henceforth, unless otherwise indicated, the terms “transhumanism” and “transhumanists” refer to this version and its advocates, respectively.

Like Michael Hauskeller (2012, 40), my basis for classifying individuals as transhumanists is not self-labeling but whether they urge our pursuit of “radical[...]forms of enhancement” and deem “ceasing to be human[...]in [no] way problematic” (Harris 2010, 16–18). In this paper, I use the term “transhumanist” for qualifying figures, who include John Harris, Nick Bostrom, Mark Walker, Julian Savulescu, and Aubrey de Grey. For transhumanists, a moral requirement to use bioenhancement technologies is either explicit (Persson and Savulescu 2008; Savulescu and Kahane 2009) or built into utilitarian rationales for their employment (Levin 2021,

131–71). Notably, among major ethical theories, utilitarianism is distinctive for the fluidity with which moral mandates can lend themselves to sociopolitical requirements (Williams 1973).

Transhumanism is a “totalizing vision” because its guiding aim is the engineering of “posthumans,” whose mental and physical capacities would transcend those of humanity outright (Levin 2021). As such, transhumanism appears to be purely an outlier on the contemporary scene. This appearance is, however, deceiving.

In *Posthuman Bliss? The Failed Promise of Transhumanism* (Levin 2021), I argue that transhumanism is fundamentally flawed on philosophical and scientific grounds. That argument has several facets. First, I challenge advocates’ views of the mind, brain, and genes. Second, I reveal transhumanists’ problematic ethical commitments, centrally including a clash between professions of procedural autonomy in decisions about enhancement and utilitarian rationales, often tacit, for moral mandates; these rationales and associated mandates could yield sociopolitical requirements that put liberal democracy at risk. Third, I document transhumanists’ reduction of reality and knowledge to manipulable units of “information”—a view dating to World War II and its aftermath that is on the verge of being outdated. This level of critique of transhumanism, alongside more familiar criticisms focused on likely results of its endorsement, such as rising social inequality, is crucial.

But even this is not enough: although transhumanists’ endorsement of species-level transcendence makes it an outlier on the contemporary scene, several beliefs and attitudes on which transhumanists rely to reach that aim reflect the broader culture to which we all belong (cf. Ferrari, Coenen, and Grunwald 2012, 225). For this reason, a wholesale critique of transhumanism necessitates both tackling it straight on and identifying and unpacking pertinent facets of our cultural milieu.

The case of aging makes this especially clear: not only is its biological conquest a central transhumanist aspiration (Vallor 2011, 137), but outright antipathy to aging and an embrace of the goal to forestall it technologically are increasingly evident in today's culture. According to Rafał Ilnicki and Adam Mickiewicz, transhumanism is both "changing" and "feeding on" this culture (2018, 42, 37). It is debatable whether transhumanism has sufficient purchase, as of yet, to alter the culture itself. But it does reflect cultural beliefs and attitudes, and illuminating these is very important.¹

I single out the following four factors because they are central both to transhumanist argumentation and to today's repudiation of aging:

- (i) a disproportionate reliance on science and technology to deliver humanity from what is seen to imperil it;
- (ii) a dependence on binaries, such as "young-old," in conceptualizations of what promotes and impedes living well;
- (iii) a repudiation of human vulnerability; and
- (iv) intensifying perfectionism.

These four commitments often operate tacitly, pre-setting the frame within which we choose what to value highly or depreciate.² In addition, though the factors are separately identifiable, operationally, they are closely interconnected both within transhumanism and in the broader culture.³ For these reasons, the sway of our four commitments can be harder to pinpoint.⁴ My unpacking of them will reflect this complex situation.

To be clear, the views that I consider are not themselves transhumanist: they are, rather, cultural roots of transhumanism. Also, one should distinguish between the craving for eternal youth, which has long been with human beings, and the desire's current conduits and manifestations. Though not necessarily interlocked as a quartet previously, all four factors have

antecedents in Western thought. But specific constructions of the factors are distinctive. For instance, although optimism about conquering death in Renaissance science and transhumanists' confidence in death's technological defeat are broadly similar, transhumanists' assurance that the requisite "materials" for making this happen "are laid out" before us (Bostrom 2020, 6) hinges on a specific view of us, as in essence "information," that has a grip on the culture, too. For its part, perfectionism has been a presence in Western thought since the Greeks. However, even where "perfection" has included an emphasis on purification, as in the *Enneads* of Plotinus (2018), Neoplatonism's founder, today's construction of perfection qua purification embeds the taint in human biology, not our intellect, character, or spirituality. Though binary thinking also dates to the Greeks, the interpretation and interpenetration of the trio addressed here, young-old, healthy-diseased, and abled-disabled, is a contemporary phenomenon.

The cultural positions considered in Sections 2–5 do not suddenly become deleterious when transhumanism embeds them: taken together, they suggest a strengthening notion that aging, a built-in feature of human existence, is an affront—one that we need not and should not tolerate going forward. This orientation disposes one to cast aspersion on whatever calls to mind the rejected feature (e.g., older persons and those who are frail). Thus, in addition to illuminating cultural anchors of transhumanism, my account of the contemporary scene puts before us beliefs and attitudes that need marked revision or setting aside if our dedication to human flourishing is to be unstinting. As transhumanism and cultural features discussed here reflect a rigid, fantastical perspective on "the good life" that Continental philosophers have fruitfully contested (see, e.g., Nietzsche 1974; 1989; Heidegger 1962; Gadamer 2013; Beauvoir 1992), my account draws on pertinent contributions by figures in this tradition.

2. Science and Technology as Our Salvation

This section addresses the widespread notion that science and technology can save humanity from its biggest challenges, central among them aging. Signs of resistance to its status as a built-in parameter of human life are evident in the ageism of our culture and, increasingly, in people's uptake of "anti-aging" measures. In fact, I focus on aging precisely because the quest for agelessness has a powerful grip not only on transhumanists but also on the broader culture, including Silicon Valley (e.g., the companies Calico Labs and Altos Labs, with whose launches Larry Page, co-founder of Google, and Jeff Bezos, Amazon's founder, respectively, were involved).

Before proceeding, I should explain the presence of "salvation" in the section's title given that "transhumanism," however construed, is predominantly atheistic (Hughes 2008).⁵ Advocates of transhumanism, as construed in the present paper, are staunchly so. Christianity and this version of transhumanism diverge in their views of the role of human agency in aging's transcendence and in their visions of post-aging existence.⁶ But this is not what matters here: though transhumanists staunchly reject constructions of the "divine" within traditional theology, they retain the *concept* of the divine, applying it to the nature and caliber of posthuman transcendence itself (Levin 2021, 176–77). Moreover, transhumanists are confident that our agency, applied to science and technology, can and will manufacture beings whose categorically elevated capacities enabled their conduct of existences unimaginably superior to ours. This is transhumanism's functional analog to the very different idea, within Christian theology (Ratzinger 1988, 259–60; Grumett 2011, 44), of individuals' post-death existence with God as a gift of grace.⁷

For transhumanists, the rational course regarding aging is its utter defeat, aka to "eradicate constraints on lifespan" (More 2003).⁸ Transhumanists medicalize aging itself, deeming it

humanity's gravest disease (de Grey 2005). Conceptually and evaluatively, this scenario differs vastly from our standard reservation of the term "disease(s)" for ailments to which we become more susceptible *as* we age. To vanquish aging, Aubrey de Grey urges the development of "strategies for engineered negligible senescence" (SENS), a collection of technologies that would manipulate genes and cells so that aging-related pathology never occurred (Zealley and de Grey 2013). If we commit to developing SENS, contemporary persons may reach "an endless summer of literally perpetual youth" (de Grey and Rae 2007, 335). Assuming that all of us do (or at least should) want this, advocates of SENS fold readers directly into their orbit, addressing them in the second person: for instance, the opening chapter of a book entitled *Fantastic Voyage* is called "You Can Live Long Enough to Live Forever" (Kurzweil and Grossman 2004, 1). Per transhumanist de Grey (2008), we have a "duty" to conquer aging. In addition, (if and) when technologies for engineering agelessness became available, individuals' refusal to use them could be interpreted as irrational (de Grey 2008); moreover, use of these technologies might be morally required due to societal boons, including reduced healthcare costs and greater productivity (Rae et al. 2010). Here, de Grey channels transhumanists' commitment to maximizing featured abilities as the rational course, with an associated moral requirement that pertinent biotechnologies be developed and used.

2.a. Fundamental Problems with Depending on Science and Technology for Deliverance

Independently of whether the promise of agelessness could be delivered on, there are two problems with transhumanists' dependence on science and technology to liberate humanity from its ultimate biological vulnerability to aging and ensuing death. One is that science and technology cannot tell us what humanity's top priorities *should* be. Recognizing this is crucial

because technologies themselves are by no means value neutral (de Melo-Martín 2017; Miller 2021).

The other problem is that human confidence that an ageless existence would be *better* than our own cannot be supported by rational argument. We also cannot conclude with confidence that an existence absent aging would be worse. But, given the thrust of transhumanism and the cultural features considered here, the former object of assurance is what needs contesting.

First, our “ontological” vulnerability (Turner 2006, 29, 32), here, the occurrence of aging that leads inexorably to death, is not a self-contained facet of human existence. Consider, for instance, individuals’ motivating anxiety regarding their futures and a yearning “to extend [themselves] through progeny,” not to mention “the more altruistic motives, the desire to nourish and protect that which is weak and fragile” (Nussbaum 1990, 376). Given the non-compartmentalized nature and impacts of our ontological vulnerability, we cannot confidently predict that *existence* with that parameter extracted would be better.

Second, we can reflect on flourishing, centrally including futures that might be viable options for us, solely within the parameters of human thought, experience, and imagination. An ageless existence is unfathomable to us, on grounds that Immanuel Kant articulated effectively in the *Critique of Pure Reason* (Kant 1998).⁹ Our understanding can access only objects of actual or possible human experience, and these are constituted through the operation of our cognitive apparatus, comprising the forms of sensible intuition, namely, space and time, and the categories, including substance and causality. This apparatus is objective strictly in the sense that it typifies human beings (Kant 1998, B 121–22, B 141–42). In Kant’s framework, ageless beings fit under “ideas/pure concepts of reason,” in particular, under an expanded version of the idea/pure concept

of reason involving a transcendent being, in Kant's case, God (A 567/B 595, B 383, B 391, A 632–33/B 660–61).

Kant divides everything into *phaenomena* and *noumena*, the latter term designating what our understanding cannot reach (B 294–315). On his account, “The concept of a *noumenon* is[...]merely a **boundary concept**” that aids us in distinguishing between what our reason can access and what it cannot (B 310–11, bold type in original). Human beings should interpret the idea of an ageless existence as a *noumenon* in Kant's “negative” way, as signaling something unavailable to our understanding, versus in a “positive” manner, where the idea is mistakenly treated as one that we can rationally entertain (B 307).

One sign that transhumanists have bumped up against a built-in barrier to the comprehension of what they confidently urge upon us is their reliance, when extolling posthuman existence, on tools that are fixtures of human conceptualization, like analogy; for instance, transhumanist Bostrom, urging our embrace of *posthumanity*, puts argumentative weight on the fulfillment of potential represented by the “radical” change of “maturation” that is built into human ontogeny (2008, 125). Moreover, when transhumanists laud transcendent existence, they use comparatives (e.g., “longer”) to gain argumentative footholds, when what they actually endorse is the superlative (“longest/as long as possible”). Thus, Bostrom segues from “The path to maturity of the soul takes longer” (2020, 3) than the familiar duration of human life to “Any death prior to the heat death of the universe is premature if your life is good” (2020, 3). This segue presumes the truth of transhumanists' stance that, if a capacity is good, more is better, with maximization being best. It also points to a human limit, namely, that we cannot directly characterize what existence might be like on a different, higher plane: we can only gesture toward it via routes meaningful to us, where our thought and aspiration can gain a foothold; that is to say,

by speaking of bettering our situation as human beings. For the confident defense of an aging-free existence as superior to an existence that includes it, this will not do.

The above epistemological concessions are indirect. More directly, Bostrom concedes in “Letter from Utopia” that we cannot foresee what an existence surpassing the human would be like, deeming it “beyond words and imagination” (2020, 2). When this statement is contextualized, however, it clearly means only that we cannot anticipate what it would actually feel like to be a posthuman (Bostrom 2020, 3). There is no suggestion that the statement gives us any reason to doubt that posthuman existence would be better. Quite the opposite. For humans “don’t have to understand what I [Bostrom’s fictional posthuman] think and feel” (2020, 3) to warrant proceeding with assurance. Thus, “Letter from Utopia” includes extravagant claims like: What humans have “in [our] best moment is but a beckoning scintilla at most. Not close to what I have. No closer than the word ‘sun’ written in yellow ink is to the actual sun” (Bostrom 2020, 2).

Elsewhere, Bostrom contends that “we need realistic pictures of what the future might bring in order to make sound decisions” (2009, 42). Given the monumental shift that transhumanists urge, we should be very confident that their favored scenario would be better. If it turned out that we could not achieve these “realistic pictures,” then, per Bostrom’s own claim, we should not proceed.

All that we know and are poised to weigh in on with any confidence are capacity, aspiration, and fulfillment in human terms. Thus, we have no basis for bullishness that the erasure of aging would improve persons’ pursuit of what they already valued or prompt major improvements to their priorities. Major changes could occur, but whether existence, thus altered, would be better is another matter (Hofmann 2017; Schramme 2013).

2.b. Markets and Advertising Exploit a Notion that Youthfulness Is Indefinitely Sustainable

Due to transhumanists' aim of species-level transcendence, the two problems identified above—a heavy reliance on science and technology in setting humanity's top priorities and confidence that an ageless existence would be better—may be more readily identifiable in their accounts.

However, the problems themselves are rooted in the broader culture, where aging is increasingly seen, not as a built-in feature of human existence whose disvaluing is largely social, but as a *pathology* that science and technology could remedy or, better, prevent. At this stage, this result is merely promissory. For instance, stem-cell therapy that can delay aging, and perhaps eventually cure it, is promoted by medical professionals (Cona 2022). As well, cosmetic surgery and other procedures to remove and prevent the appearance of aging are in great demand, and the cosmeceutical industry, which markets products for facial skin, has exploded. Given the current absence of measures that could, in fact, work directly to promote agelessness, it is not surprising that the merely cosmetic is imbued with an “anti-aging” function that, by definition, it cannot have.

An indication of how far aging's medicalization already penetrates the broader culture is that ads even for cosmeceuticals suggest that aging is a “disease” that touted products can “cure” (Smirnova 2012, 1242). In addition, ads closely link “healthy” and “youthful” (Jan Marini Skin Research 2022), which can be taken to imply that, just as young-looking skin is a sign of health, visibly aging skin represents or at least portends pathology. True, “companies fight for consumer attention by inflating the possibilities of their products” (Stark 2016, 2470). However, companies emerge from and reflect the same cultural milieu as persons to whom they market their wares; thus, even if ads reinforce and focus desires, pitches would not have purchase if people did not already crave the boons that products purportedly delivered. Today, the interlocking of health with ongoing youthfulness is intensifying, as illustrated by the phenomenon of “prejuvenation”

(American Academy of Facial Plastic and Reconstructive Surgery, Inc. 2019), whereby women only in their 20s—worried about their “risk” of aging—now resort to procedures, including surgery, out of a concern to preempt it.

In line with the above, ads for cosmeceuticals frame products as potent fruits of medical science and technology. Medical professionals are identified as products’ creators (e.g., Dr. Brandt Integrative Dermatology 2023). It is suggested, too, that products’ efficacy has been scientifically confirmed. For instance, *Clinical+Skin* touts its “pro-collagen serum” as improving skin’s appearance for 93% of users and its luminosity for 89%, per “clinical study data on file” (NewBeauty Magazine 2022). Sometimes, a single ad combines both professional roles: Epionce’s *Intense Defense Serum* is trumpeted as “Dermatologist-Developed” and “Clinically Proven” to “deliver superior anti-aging results” (NewBeauty Magazine 2022).

Traditionally, and problematically, in American society, the worth of women has been tied closely to their being (or at least looking) young, while the merit of men has been linked primarily to economic status and power/potency (Stark 2016, 2470). Though women are still the main clientele for cosmetic procedures and cosmeceuticals, men gravitate increasingly to both. This does not signify that men are only now becoming concerned with remaining youthful, as, for several decades, they have been a receptive audience for pharmaceuticals whose promotion medicalizes any challenges they experience in reaching and sustaining erections as “erectile dysfunction” (Marshall 2006). Men pursue treatment of this “pathology,” hoping for an indefinite continuation of their youthful vigor and potency.

Though what is pathologized in the preceding examples are indicators of aging, not aging itself, their pathologizing is intelligible and has purchase only within a larger context in which the process and avoidance of aging are increasingly seen, whether tacitly or expressly, as a medical matter. “Rejuvenating” interventions and products have been promoted by the medical profession

since early in the 20th century (Stark 2016). Today, promises of restoration are not enough: forestalling is an aim and, perhaps increasingly, an expectation.

2.c. Personal and Social Responsibility

We have already seen the relevance of the concept of risk in relation to the allure that prejuvenation, or the preemption of visible aging, holds for young women. Moreover, we are witnessing an expansion of the “medicalization of masculinity,” whereby the age at which males are considered to be at elevated risk of losing their youthful, masculine force is declining (Marshall 2006).

These developments reflect a larger phenomenon, “an increase in the prevalence of that most modern of ills, being ‘at risk’” (Burriss and Gostin 2007, 364). To the extent that this typifies our time, our lives and success (or not) in conducting them are placed under a medicalizing umbrella, regardless of how far we, as individuals, are conscious of this. A related factor is personal responsibility for health, whose rise accompanied growing control over infectious disease during the 20th century (Porter 1999, 314). Increasingly, our responsibility spans the prevention of disease, for our own sake and to promote societal well-being (Wikler 2007, 90; Juengst, Flatt, and Settersten 2012). Here, our accountability for prevention equally covers the measures we take and those we omit (Levin 2021, 136–37).

Although, thus far, the notion that we are responsible for preventing aging is not a matter of cultural or professional emphasis, the supporting ideas exist and are becoming more influential. Here, transhumanists are out in front. Since they believe that aging’s defeat is around the corner if we adequately commit to producing the relevant suite of biotechnologies, it makes sense that they see this endeavor as obligatory on the level of social policy. Also, insofar as the ethical rationale for their use is utilitarian (i.e., based on externalities related to public well-

being), and aging is conceptualized as humanity's gravest disease, individuals could be heavily pressured to employ biotechnologies to stave it off.

With aging seen increasingly as a medical problem, agelessness need not be technologically deliverable for the notion that we are responsible for doing what we can to prevent aging to take hold. Even now, there are signs that this idea is building culturally. For instance, cosmeceuticals, touted as youth preserving, are folded together with diet and exercise (Calasanti et al. 2018); this is readily taken to imply that cosmeceuticals are an integral component of an overall, rigorous regimen for maintaining youthfulness and health, a package deal. In addition, ads suggest that all of us are in the same boat, as persons who do, or at least should, wish to avail ourselves of potent anti-aging technologies, backed by science, that are available (Rachul, Percec, and Caulfield 2015).

If the notion that aging is a disease, together with confidence that it is addressable, becomes firmly rooted in our culture, then its handling will become a centerpiece of professional medicine and, in all likelihood, of social policy. Transhumanists have already labeled aging our most serious disease, claiming that, therefore, its cure (i.e., indefinite expansion of lifespan) should be the prime target of biomedical research (de Grey and Rae 2007, 22). This position diverges from the warranted, salient priority of increasing humans' healthy life expectancy via continued research on particular diseases, or pathologies, that become more common as humans age, together with dedication to vigorously addressing the full range of social determinants of health (i.e., not only healthcare, but also education, housing, caliber of the physical environment, and so on). Moreover, because the medicalization of aging, an emphasis on prevention, and personal responsibility for health are strengthening together, if unchecked, these pointers will be seen, in retrospect, as harbingers of our obligation to employ anti-aging measures deemed

efficacious. Again, transhumanism runs ahead because its advocates have already connected all of the preceding dots.

2.d. Perpetual Youth: Remediation or Enhancement?

Finally, as in transhumanism, ads for cosmeceuticals embody a potent ambiguity or apparent inconsistency. In addition to mentions of preemptive or therapeutic measures, perpetual youth is dangled before us as a possibly imminent product of science and technology. Even cosmeceuticals are touted as transformative, in the sense of delivering on “fairytale promises” of “eternal youth” (Smirnova 2012, 1240). Traditionally, making good on promises this extravagant has not been lodged under professional medicine, which has focused on remediation. Conceptualized as above, therefore, cosmeceuticals are not treatments but rather, in current parlance, “enhancements”:

Fairytale possibilities are transformed into scientific innovations[...]through the juxtaposition of scientific and fairytale images and phrases. Such fantasy-like suggestions use scientific testing/proof in order to legitimate their powers in a way so as to promote the idea that science may realize magic through progression.

(Smirnova 2012, 1241)

In a study by Christen M. Rachul, Ivona Percec, and Timothy Caulfield, the phrase “fountain of youth” was used to hype products and services reliant on stem-cell technology (2015, 733). This rubric calls to mind transhumanists’ claim that their favored scientific and technological program, if embraced, may deliver “an endless summer of literally perpetual youth” (de Grey and Rae 2007, 335).¹⁰

Contemporary culture sends mixed signals about the status of anti-aging measures: Are they treatments/preventive measures or enhancements, namely, augmentations of capacity or function absent prior deficiency? Reflecting the former classification, aging is presented as a pathology; manifesting the latter, science and technology will purportedly deliver on a long-familiar human aspiration to soar above the human parameter of aging altogether. Like transhumanist defenses of SENS, ads for cosmeceuticals seamlessly intermix the two, as when the promotion of Avon's *Anew Ultimate Age Repair Elixir* both conveys remediation (via the term "repair") and "connotes the idea of a potion through the word 'elixir' and the idea of a fountain of youth," delivered by a scientifically vetted protein (Smirnova 2012, 1241).

When we factor in the medicalization of aging itself, the above ambiguity is resolved. Seeing our susceptibility to aging as a biological defect fits hand in glove with its lodging under biomedicine. In this way, surpassing a defining parameter of human existence is reframed as a gargantuan health problem, or pathology, for which biomedical research "will" provide a cure. This is a potent example of where contemporary culture reinterprets what was traditionally conceived of as (in today's terms) a dramatic augmentation, not a treatment for a medical condition. This reinterpretation also helps to explain how a duty to embrace medically sanctioned measures could materialize.

3. A Reliance on Binaries

A dependence on starkly either-or conceptualizations and valuations is a second facet of today's cultural milieu. Before proceeding, we should distinguish this reliance on binaries from the unavoidably contrast-dependent nature of human thought, imagination, and experience (Kant 1998). When contrasts are drawn, one prong is viewed as more desirable or worthwhile. Built into the operation of human minds, contrast dependency allows for nuance, differences of

interpretation, and the applicability of one or the other prong in different respects. Thus, an act that seems merely unfeeling (e.g., a refusal to continue supporting a relative's newest, consuming passion) can have a caring dimension, and there can be legitimate disagreements over whether a particular decision is fair based on whether one looks for "fairness" primarily in processes or outcomes (Daniels and Sabin 1998).

When binaries are deployed, definitions of terms are seen as fixed and rationally incontestable, and applied unforgivingly. Moreover, valuations of all those covered by a given binary are determined by whether they are seen to fall under the dominant or subordinate pole. Though we may find it hard to resist this rigidity, a reliance on binaries is not built into the operation of human minds and impedes human flourishing (Levin 2021, 225–27).¹¹

3.a. Transhumanism: Binaries Relating to Our Biological Vulnerability

Binaries help to motivate and structure transhumanists' dependence on science and technology.¹² In their advocacy of removing our ultimate, biological vulnerability, "not aging" equates to "being forever young." One who is not young is conceptualized as old already or well ensconced on the path thereto. In this way, "young-old" functions as a binary. Moreover, when aging is conceptualized as humanity's paramount disease, being "ever-young" equates to being "healthy," at least in the paramount sense that one is free of humanity's gravest disease. Age-related damage starts even before puberty (de Grey et al. 2002). In this context, "healthy" means "free of evidence of aging;" if one is not free of this evidence, then, perforce, one is at some stage in the unfolding of humanity's gravest disease.

Thus far, we have focused on the specific transhumanist idea of aging's decimation. Transhumanists' overarching perspective on humanity includes an "abled-disabled" binary, according to which, if and when potent enhancement technologies emerged, remaining merely

human would qualify as a disability (Hauskeller 2016, 145). Though, at first, this sounds like a creation out of whole cloth, it has certain connections to the broader culture.

For transhumanists, gaps between being at peak capacity (e.g., cognitive ability, lifespan), as gauged by available technologies, and the capacities of actual persons are conceptualized as “disabilities,” aka “inabilities” (Chan and Harris 2006). Simply put, disability is “a harmed condition[...]defined[...]relative to possible alternatives” (Harris 2010, 91–92). If biotechnologies could make us and our progeny posthuman, refusing them would signify that one had actively chosen the disability/inability of being, or remaining, human. Insofar as “disability” is synonymous with “inability,” disability would be relative: one could augment certain capacities but not others or enhance abilities somewhat rather than maximally. Regardless, one is accountable for the presence of disability/inability, rendering one subject to moral critique (Levin 2021, 132–58). How substantial the disability—and, thus, the severity of moral criticism for associated harm to oneself and/or one’s progeny—would depend on the extent of empirical gaps between individuals’ capacities and the “alternatives” that biotechnologies could deliver at a given time (Harris 2010, 92).

When transhumanists focus on engineering agelessness, it is aging, not being human as such, that they conceptualize as a disease. Though their overarching assessments of humanity do not claim this, based on today’s conflation of disabled and diseased/ill (see further below), it might not be a major stretch for transhumanists to deem future, unenhanced humans at once disabled and diseased.¹³

3.b. Cultural Manifestations of These Binaries

What transhumanists associate with “disability” and “inability” when equating them is distinctive, but the equation itself bears marks of the broader culture, where our three binaries, young-old, healthy-diseased, and abled-disabled, are salient and intertwined.

Regarding the binary “abled-disabled,” our cultural focus is often on persons with visible disabilities, for instance, those who are blind or navigate the world in wheelchairs, with individuals divided into those who possess versus lack the relevant abilities (i.e., the “abled/capable” versus the “disabled/incapable”). Moreover, “disability” and “disease” are conflated, such that persons with disabilities are assumed, thereby, to be diseased, despite the fact that persons with disabilities like Down syndrome may have “no associated medical problems” (Shakespeare 1998, 669). On the flip side, those without perceptible disabilities and ailments, or with “invisible” ones (Davis 2005), may see themselves and be viewed by others as both fully capable and healthy. That “abled” and “healthy” are assimilated, as are “disabled” and “diseased/ill,” reflects the relevance of a binary between “healthy” and “diseased.”

Because how we are classified within the above binaries is deeply impactful—in terms of our self-regard, evaluations of others, and others’ assessments of us—the above scenario has serious ramifications, especially for persons with disabilities, who, however, potentially include us all. These ramifications include the persistent medicalization of disability, despite its vigorous disputation by the social model of disability, which emerged in the early 1980s (Hall 2017, 41); this contestation continues via critical disability studies, which incorporates the social model’s emphasis on social factors even as it rejects a binary between “disability” and “impairment.”

Meanwhile, those whose disabilities are not readily evident can present themselves as “abled,” reaping professional and personal boons of occupying that position (i.e., of not being classified under the disvalued pole of the “abled-disabled” binary). This situation is, however, far

from an unmixed boon. It adds to the burdens of those who have already been cordoned off under the “disabled” prong. In the process, it reinforces the “abled-disabled” binary itself, thereby serving the immediate interests of those classified under “abled,” either because they are not currently disabled or because they can “pass” as abled. It can also discourage persons with invisible disabilities from seeking aid, to the detriment of their health and well-being (Davis 2005, 212). Further, if individuals strive to make their situations known, they may be dismissed as malingerers (204n56). If, however, those with invisible disabilities are believed, then, depending on the source of the disability, a two-pronged demerit may result: for turning out to be “disabled” after all and for having disabilities that stem from conditions, such as mental illness and struggles with drug addiction, that remain especially stigmatized, including within the medical profession (Davis 2005; Santuzzi et al. 2014; Brower 2021).

It should be stressed, as well, that the above scenario is damaging to persons currently without disabilities, who may fancy themselves as somehow immune to them. Insofar as self-deception about weighty matters impedes our flourishing, such persons damage their own prospects by failing to appreciate that all human beings are at least potentially persons with disabilities/incapacities (Zola 1989), the odds of which rise with age.

Further, laypeople and medical professionals alike often automatically compartmentalize those who are “old” (e.g., over 65 or 70) as physically and/or mentally incapable. And a “young-old” binary is gaining force, as illustrated by the phenomenon of prejuvenation. Moreover, as noted, in ads for cosmeceuticals, “young” is a proxy for “healthy,” which can imply that “old” is a placeholder for “diseased/ill.” To recognize that being chronologically older brings greater susceptibility to diseases and deterioration in our capacities is to acknowledge a truth about us as biological beings. This recognition is also wholly in keeping with the contrast-dependent nature of human thought and experience. In contrast, starkly either-or conceptualizations and valuations

of human beings are not inevitable but, instead, damaging oversimplifications of complex human terrain.

Our understanding is shaped by the concepts and valuations embodied in these binaries, often without our conscious awareness. Further, our worth as human beings is gauged by which prongs of these binaries we are judged to embody. The intertwining of our three binaries— young-old, healthy-diseased/ill, and abled-disabled—helps to explain why ableism and ageism are so stubborn. The tight relationship between and among these binaries has much to do with the fact that their disvalued prongs are imbued with profound vulnerability.

4. Repudiating Our Ontological Vulnerability

To set the stage for discussing the felt urgency to keep “vulnerability” remote from oneself, we should first specify what we mean by the term. Quite simply, what is vulnerable is capable of being wounded or injured, physically and non-physically (Oxford English Dictionary 2022). In keeping with our illustrative focus on aging, disease, and disability, unrelated sources of injury (e.g., harmful interpersonal relationships) fall outside our purview here.

For individuals, circumscribed bases of susceptibility to damage can stem from avoidable sources, for instance, high-risk professions. But human vulnerability is “ontological” (Turner 2006, 29, 32), meaning that dispositions to physical and biological damage, ultimately fatal, are built into the sort of creature we are.

A quest to cordon ourselves off from our ontological vulnerability is involved both in transhumanism and in an intensifying cultural denial that aging and death are built into human existence. Transhumanists “deny that [human] vulnerability is a basic unalterable condition but consider it an unfortunate accident. Their envisioned technology is to enforce this denial” (Nordmann 2007, 37). Transhumanists appreciate that being human and being ageless are

incompatible and revel in the idea of our becoming a “higher” type of creature. But we can compare our human mode of existence with a hypothetical other solely from within our ensconced, invested positions as human beings. Contra transhumanists, therefore, what we can say with assurance is not that an ageless existence would be better but that it would be different (cf. Nussbaum 1990, 371).

Though they surpass the broader culture in their radical aim, transhumanists’ denial and eschewal of ontological vulnerability have strong cultural resonances. Moreover, we have seen that people resort increasingly to measures that would, or so they hope, freeze them in biological youth.

Avowedly in transhumanism and in effect in the broader culture, a key parameter of human existence is simply rejected. Insofar as our existence follows a complex life course in which meaning and purpose are possible only within a frame that interweaves what we love, hate, strive toward, and repel, we are saying “no” to being human, which is a tapestry, not a collection of detachable compartments.¹⁴ Transhumanists issue this “no” expressly, while, as of now, our cultural repudiation is more implicit.

4.a. A Flawed, Cultural Attraction to Agelessness

Culturally, the assumption, thus far, seems to be that we could have better *human* existences (e.g., fulfill more desires or important ones for longer) if only aging were removed. Since the character of Fosca in Simone de Beauvoir’s (1992) *All Men Are Mortal* is emblematic of this idea, I discuss the novel in some detail.

All Men Are Mortal addresses key questions: How do we envision an ageless existence? Is it reasonable to take it for granted that an ageless existence would remain a human one but more fulfilling? As we will see, this novel supports the view that, independent of whether

agelessness could be delivered technologically, shifting one's status to immortal would be a supremely risky and foolhardy path for humans to take.

As the novel opens, the actress Regina is enamored of her own youth and beauty, imagining that life would be joyful if only she could retain them unblemished. For his part, Fosca, originally an ambitious mortal eager to rule the world, accepted a "cure" for his anticipated vulnerability to aging and death, namely, "eternal youth" (Beauvoir 1992, 82, 114).¹⁵

Regina is Fosca's audience for his account of ageless existence, and she is poised to be regaled with tales of its wonders. As it turns out, Fosca's experience as invulnerable is nothing like he had taken for granted it would be: crucially, the sources of promise and fulfillment that he had presumed would remain available to him as ageless did not survive the transition. For instance, Fosca's invulnerability leaves him essentially unable to cherish other individuals *as* individuals; thus, Regina herself is "unique like all other women" (Beauvoir 1992, 55). In addition, Fosca's capacity to experience vitality, passion, and love can be activated only through his ties to mortals (1992, 32, 267).

In broader terms, stripped of his ontological vulnerability, Fosca loses the sense of meaning, purpose, and urgency that are part and parcel of humans' existence as finite beings (Beauvoir 1992, 26, 210, 339). Although he performs a host of actions, Fosca can no longer dedicate himself to any project wholeheartedly: first, none of his choices fosters commitment because the selected course was prioritized over others in which he could have invested his finite time and energy; second, he will endure to see victories rejoiced over as momentous turn to ash (1992, 117, 122–23, 211–12, 327). Moreover, Fosca is incapable of exemplary character, or virtue; for example, because he is ontologically invulnerable, he is incapable of courage, which can require a willingness to risk one's own irreplaceable life for something that one holds dearer still (1992, 309, 339). More generally, virtues are unavailable to him because, as Aristotle made

clear, they are excellences of humans' own mental faculties, in the case of the moral virtues, emotion and desire (Aristotle 1962, I 13).

Fosca dearly wishes that he had not said “yes” to the transformation, and Regina’s illusions about eternal youth are shattered. The novel’s presentation of what an ageless existence might be like is fantasy, to be sure, but it also extrapolates from a plausible view of what frames the quest for meaning, directionality, and commitment in human life. For better and worse, jeopardy, or the prospect of what Jean-Paul Sartre terms “non-being” in *Being and Nothingness*, is built into human existence: only the dead cannot be injured, and, among animals, the concept of vulnerability applies solely to us—and does so in a decisive way:

A being is fragile if it carries in its being a definite possibility of non-being. But[...]it is through man that fragility comes into being.[...]In order for destructibility to exist, man must determine himself in the face of this possibility of non-being, either positively or negatively.[...]Thus it is man who renders cities destructible, precisely because he posits them as fragile and as precious and because he adopts a system of protective measures with regard to them.[...]It is necessary then to recognize that destruction is an essentially human thing and that *it is* man who destroys his cities through the agency of earthquakes or directly.[...]But at the same time it is necessary to acknowledge that destruction supposes a prejudicative comprehension of nothingness as such and a conduct *in the face of nothingness*. (Sartre 2001, 314–15)

Note the organizing role in human experience that self-determination in relation to our ontological vulnerability possesses. Our conceptualization of what matters deeply to us as

“fragile” and prioritization of “protective measures” concerning its potential “destruction” signal an awareness of this self-determination. Moreover, this structuring and perspective always operate in some fashion, whether or not we are conscious that they do so: this is the force of “prejudicative” in “prejudicative comprehension.”

Fosca’s situation in *All Men Are Mortal* might be improved if he were not the only immortal being. But we also have no good reason to conclude that being surrounded by others who had made the same choice would accomplish anything other than obviate an immortal’s felt need to conceal her status (Williams 2010, 353). For what is crucial is that “the state in which I survive should be one which, to me looking forward, will be adequately related, in the life it presents, to those aims which I now have in wanting to survive at all” (2010, 353). This is what Fosca loses. Though we cannot conclude with confidence that this loss would accompany our becoming ontologically invulnerable, it is not unreasonable to imagine that the risk of it may be great.

4.b. An Awareness, Even if Tacit, of Our Ontological Vulnerability

Sartre’s remarks provide a backdrop for my claim that if we were not aware, on some level, of our ontological vulnerability, we would not attempt so vigorously to stave off its manifestation in ourselves and our confrontation of it in others. There is a monumental distinction between taking due care vis-à-vis our fragility and trying to cordon ourselves off from vulnerability. We can, do, and should take many measures to reduce our liability to damage, via the actions, experiences, and endeavors that we choose or decline. That we proceed in this way reflects an awareness, even if inchoate, of the kind of being we are. In addition to differing immensely from capitulation to stultifying fear, it diverges from trying to block out vulnerability altogether, which, in humans’ case, could not be done.

There are multiple ways in which people imagine that they could cordon themselves off from vulnerability. We may fantasize that we can make ourselves unavailable as loci of damage by studiously avoiding a host of scenarios (e.g., events, pursuits, or forms of travel) that we worry would expose us to it. Those hoping to forestall jeopardy are all too aware of their individual vulnerability, whether or not they conceptualize the vulnerability as species-wide. Either way, they certainly do not deny humans' ontological vulnerability. Their own fervent hope is highly focused, namely, that, through drastic caution and relentless vigilance, they can avoid or indefinitely defer the worst in their own case. The object of concern here tends to be sources of physical jeopardy, not biological aging. Moreover, in some of these cases, a treatable phobia may be at issue, as with a fear of flying.

A different sort of attempt to cordon ourselves off from vulnerability is at work in transhumanism and the associated cultural denial of our ontological vulnerability. A clear illustration of the distinction between the judicious avoidance of susceptibilities to damage and the denial of ontological vulnerability that concerns me here is aiming not merely to extend one's healthy life expectancy but craving, imagining as possible, and actively seeking out an indefinitely prolonged lifespan untouched by ailments and limitations that can affect any of us but whose frequency increases as we age. While transhumanists express the above repudiation and yearning in no uncertain terms, in the broader culture, they manifest themselves in several, overlapping ways:

- (i) in relation to oneself, as when one resorts voraciously to pharmaceuticals, surgical procedures, and cosmeceuticals, fantasizing that they genuinely are *age-defying*;
- (ii) in relation to other persons, as when one devalues and shuns older individuals and those with visible disabilities—a reflection of magical thinking, as though, through an avoidance of contact, one could avoid contamination by one's actual object of fear; and

(iii) apropos of groups, as when one depreciates, in the aggregate, those who are older as having lost their vigor and, thus, their human worth.

In the cases of (ii) and (iii), we speak of ageism and ableism, well-ensconced cultural attitudes that are influential within biomedicine.

When we display our shunning and longing in these ways, we have moved beyond contrast-dependent thought to a reliance on strict binaries. The failure manifest in this dependence on binaries is both epistemological and moral: it is epistemological because, thus reliant, we fail to glean that conceptualizing existence in these terms is unnecessary and distortional, and the shortcoming is moral because it signals a dearth of human sympathy and solidarity.

4.c. Sartre's "Bad Faith" and Gadamerian Understanding: A Potent Duo

In existentialist terms, we instantiate a form of self-deception that Sartre termed "bad faith," which arises through an imbalance between "facticity," or unalterable givens (e.g., where we were born, our height), and "transcendence," our irreducibility to these. By "transcendence," Sartre did *not* mean the "external" variety (Nussbaum 1990) that the quest for agelessness instantiates, namely, a refusal to accept that human existence is necessarily framed by a host of factors that cannot be left in the dust: those specific to us; those characteristic of our time and place; and, last but not least, those that apply to human beings across the board, namely, aging and eventual death. According to Sartre, people are typically in bad faith because they overemphasize facticity at the expense of transcendence. Where the yearning for aging's erasure that transhumanism and contemporary culture manifest is concerned, the imbalance operates dramatically in the other direction.¹⁶

Sartre's focus, in terms of bad faith, was on individuals, for instance, the waiter who tries to disappear so fully into his occupational role that it exhausts his identity (2001, 336). But our self-understanding and grasp of what is other than us are interwoven, such that the same thoughts, attitudes, emotions, and cravings that govern our self-regard also shape how we see and relate to others. The unavoidability stems from the fact that, as Hans-Georg Gadamer observes in *Truth and Method*, our understanding of what is other than ourselves does not precede its application to ourselves but, rather, always includes it (2013, 333). Here, he builds on Martin Heidegger's (1962) account, in *Being and Time*, of the "always already" character of our human understanding, expressed via his concepts of "Being-in-the-world" and "thrownness," according to which our interpretations of the meaning of our pasts, of who we are now, and of what count as desirable futures are unavoidably filtered through governing features of the context, historical and cultural, to which we belong. When we combine Sartre's concept of bad faith with Gadamer's insight about understanding and application, the interdependence of epistemological and moral factors in denials of our ontological vulnerability is reinforced.

Where ontological vulnerability is concerned, the featured binaries are precisely those at issue in prior sections: young-old, abled-disabled, and healthy-diseased. Not only are the divisions within the pairs unforgiving, but, in each case, one yearns for and may even believe practicable the very elimination of the disvalued prong. Here, in reality (transhumanism) or in effect (the broader culture), one fantasizes that one could be a different sort of creature: one unconstrained by, or invulnerable to, biological aging. The notion that we could and should be ageless manifests a broader, growing tendency to construe flourishing in perfectionist terms.

5. Human Flourishing Increasingly Tethered to Rigid Perfectionism

The point of this section is not that perfectionism, as such, is antithetical to human flourishing, for an expansive version of virtue ethics can, arguably, accommodate it (Levin 2021, 232–64). Rather, this section problematizes a form of perfectionism that typifies transhumanism and, increasingly, contemporary culture.

The “-ism” in “perfectionism” is normative through and through, unlike “descriptive” terms like “empiricism” (Oxford English Dictionary 2022). This section explores “perfection” in two senses. The first (what I call here “Perfectionism I”) builds in the idea that we are living things that come to be, develop, and mature, in no small part by cultivating capacities that are ours as the kind of being we are, as well as our particular gifts and interests. As such, this perfectionism has substantial merit in relation to human flourishing. Perfection, thus construed, goes back to Aristotle’s construction of it as the fulfillment of the promise represented by our human capacities; notably, a term he uses for the actualization of our human potential is *entelecheia*, whose roots include *telos*, “end,” or “goal” (Aristotle 1984, 1050a–b).

The second kind addressed here (“Perfectionism II”) makes quantitative maximization and flawlessness the standards against which we are judged. Perfection of this sort typifies transhumanism and, increasingly, the broader culture. Because it denies built-in parameters of human existence, in this case, aging, it is relentlessly harmful to human beings, whatever their age and phase of life. I unpack these two types in order.

Perfectionism I identifies fulfillment with being at the pinnacle of our unfolding as human beings. More generally, it is “[t]he most complete or perfect stage of growth or development of a person or thing; maturity; ripeness. Also of a flower: full bloom” (Oxford English Dictionary 2022). Unlike Perfectionism II, Perfectionism I regards humans’ own existence and capacities without apology or revulsion. That said, “ripeness” suggests a peak, after which fruit spoils and

flowers wilt. Humans' situation is often construed similarly: maturity means being at the pinnacle of one's mental capacities, physical functioning, and vigor, after which one becomes "old," meaning, in decline and frail.

Thus unpacked, Perfectionism I has a quite deleterious aspect: all of us are potentially, if not yet actually, "old." Moreover, as we saw, the age at which we are deemed to be "at risk" of, or vulnerable to, aging is decreasing. But the OED's definition contains a tension, or ambiguity (and, thereby, perhaps an opportunity). For, in the definition, "ripeness" and "full bloom" are preceded by "[t]he most complete or perfect stage of growth or development of a person or thing; maturity" (Oxford English Dictionary 2022). And this formulation is compatible with a commitment of sorts to seeing lives holistically and perhaps also with a view of being older that allows for it to offer distinctive boons.

The ambiguity in this definition is not new, for both lenses on Perfectionism I are represented already in Aristotle (see also Cottingham 2012, 383–84). On the one hand, humans' distinctive capacity is reason, with the contemplative dimension the single most elevated faculty we have; this is signaled by the fact that it is the one that we share, in our fashion, with Aristotle's god, the Unmoved Mover (Aristotle 1962, X 7–8; 1984, XII 7). It follows that impairment of this capacity, the chances of which rise in frequency with age, diminishes flourishing.

On the other hand, Aristotle identifies human flourishing (*eudaimonia*) with a "mixed life" of contemplative and moral excellence (1962, X 8–9; Whiting 1986), and believes that we can gauge how far individuals have flourished only when their lives are complete (1962, I 9). What's more, according to Aristotle, becoming and being virtuous is a project that organizes and permeates one's entire life:

Just as the beginning of virtue is not an isolated event but a matter of the right habits being laid down and reinforced over the extended years of childhood, so the flowering of virtue is not a sudden efflorescence that quickly withers, like the blooms of the daffodil or the rosebud, but is a continuous process that unfolds over a complete lifetime. (Cottingham 2012, 380)

In addition, Aristotle distinguishes moral virtue from excellence in mathematics: while young people can attain the latter, becoming a person of practical wisdom (*phronimos*) requires decades of life experience (1962, II 2, VI 8). Insofar as Perfectionism I allows for holism, it has untapped potential today.

Perfectionism II has two subtypes, both of which involve a relentless assessment of us, often from a young age, by rigid, external measures. Per our first subtype, perfectionism is “a combination of excessively high personal standards and overly critical self-evaluations” (Curran and Hill 2019, 410). This version operates where success is quantifiable and gauged by comparisons (with others and with what one’s own numbers “could” be) but lacks a ceiling. Here, our success as human beings is tied to reaching ever-higher targets of measurable achievement, for instance, ratings, followers, and “likes.” Our second subtype involves “[t]he condition, state, or quality of being free from defect; flawlessness, faultlessness; purity” (Oxford English Dictionary 2022). Where aging is concerned, increasingly, the blemish-free “freeze-framing” we seek is not middle-aged vitality but physical youth, mythologized as an unmarred state. When it comes to aging, this is the subtype of Perfectionism II at work in the prominent version of transhumanism that the present paper addresses and, increasingly, in contemporary culture. Though distinct, the two subtypes are related, to the extent that one’s prospects for advancement vis-à-vis the former depend on how one is perceived in the latter regard.

Both subtypes of Perfectionism II demand that we strive relentlessly for attainments that are incompatible with human flourishing. In this way, Perfectionism II differs substantially from Perfectionism I. But only the second subtype of Perfectionism II builds in the notion that we are defective in some way as a species and hence that flourishing requires, in effect, our becoming a different type of creature. This makes it especially pernicious. Though, today, the notion of a species-level defect remains implicit in the broader culture, versus explicit as in transhumanism, this could well change in the future.

6. Conclusion

Transhumanists' assurance that, if only we wholly committed ourselves to the endeavor, science and technology could spearhead a categorically superior, or "posthuman," existence is fantastical (Levin 2021). Approaching this prominent and highly contentious version of transhumanism through our four, interconnected factors adds a fresh line of critique to those previously offered, thereby strengthening the overall case for rejecting it. When set within the larger arena of discourse about "transhumanism" and "posthumanism," this version of transhumanism is extreme. At the same time, a commitment to these very factors ties it to the broader culture. As a result, if we contest only transhumanist extremity, we leave intact a cultural platform that transhumanists leverage to arrive at their radical conclusions.

In both transhumanism and the broader culture, the four commitments discussed here are problematic precisely because they are antithetical to human flourishing, the sole type that we are positioned to entertain and actualize. Because the conjoined operation of these commitments is a major obstacle to human flourishing, they must be vigorously contested.

To date, our interlocked quartet of cultural positions has been largely invisible precisely because it increasingly belongs to the tacit backdrop against which we decide what we should

esteem, depreciate, strive toward, and eschew. Put in the terms of Heidegger's (1971) "Origin of the Work of Art," this is the "world" dimension of our milieu. Thus, the first step to contesting these features is making them visible so that both they and what we depreciate or ignore as long as the factors hold sway—the latter being, in Heidegger's terms, the "earth" dimension of our cultural frame—can be faced head-on. Their reflective juxtaposition, which, on Heidegger's account, represents potentially fruitful "strife," "puts up for decision" the human future that we will deem most worthy of our aspiration (1971, 42).¹⁷

Illumination of our four factors and a grasp of their power is made more challenging because they are intertwined; thus, the more detrimental subtype of Perfectionism II features an eschewal of vulnerability, where what we shun and what we valorize occupy poles of related binaries. Moreover, we place our faith in science and technology to annul the poles we disavow.

To the extent that our factors fall under what Heidegger depicted as the background understanding in light of which we "always already" approach any situation (1962, 185), we cannot, by fiat, reject their hold. However, conscious awareness of the factors themselves, their harmfulness, and their interconnections can help us avoid heedless capitulation to the priorities, aims, and standards that they would otherwise increasingly impose. Although unmasking detrimental cultural views will not suffice to propel an unstinting dedication to human flourishing, this dedication cannot arise without it.

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Notes

¹ In practice, we can perhaps not entirely separate cultural threads in transhumanism from transhumanism’s cultural impact in turn. But the two are conceptually distinct and substantially distinguishable in their manifestations.

² Although my primary focus is the United States, the factors themselves have far wider application.

³ Though deeply interlinked today, the four factors are not intrinsically interconnected; for instance, a reliance on binaries need not be accompanied by an insistence that we can and should be liberated technologically from those binaries’ devalued poles.

⁴ Historical influences are also important. Thus, Levin (2021) considers transhumanism's close relationship to Anglo-American eugenics and its informational construction of the real and knowable.

⁵ On the appropriateness of applying the concept of salvation to transhumanism, see also Waters 2011, 168.

⁶ Religious scholars put the point in terms of death and resurrection (Davis 2010; Stump 2012; Zaleski 2014; Engelland 2015), not the defeat of aging, specifically, but this difference does not bear on my point.

⁷ There are additional, central differences between Christian theology and the version of transhumanism considered here. For transhumanists, our biological substratum is nothing but a burden. Also, death must be staved off entirely, while, in Christianity, death is a precondition for eventual immortality (Cole-Turner 2011, 198; Waters 2011, 164; Zaleski 2014, 122). Moreover, devotion to humanity's self-transcendence into posthumanity via science and technology removes all inherent value from the human per se, while Christianity is premised on our intrinsic worth, coupled with the fundamental insufficiency of human agency to deliver on our deepest yearnings. The answer to the far broader question of whether forms of transhumanism and religious belief are compatible is clearly "yes" (Hughes 2008, 15). For instance, the Christian Transhumanist Association defines "transhumanism" as "simply a philosophy which states that we should use science and technology to make the world (including humanity) better" (2023). This loose formulation joins "transhumanism" to any other endeavors that humans pursue, deploying science and technology, to improve their lot (e.g., elevating water quality, expanding public transportation, and making vaccinations more freely available worldwide). There is a salient distinction between such recourse to science and technology, with the aim of improving human existence, and "the technological pursuit of salvation" itself, which, arguably, is not compatible with Christian theology (Noble 1997, 208; see also Cole-Turner 2009, 942–43); this pursuit is distinctive of the version of transhumanism addressed in the present paper.

⁸ For some transhumanists, imperviousness to aging covers both an unblemished, biological mode and immortality delivered through mind uploading (More 2003; 2013). For skepticism about prospects for immortality via uploading, see Hopkins 2012; Sorgner 2021.

⁹ The ensuing discussion of Kant draws on Levin 2021, 223–26.

¹⁰ As Don Ihde suggests, our "desires, dreams and fantasies" related to the transcendence of human limits can help to drive support for technological research and development that caters—whether implicitly or expressly—to those yearnings (2008, 404). His point applies widely: to the phenomena that Michelle Hannah Smirnova (2012) and Christen M. Rachul, Ivona Percec, and Timothy Caulfield (2015) address; to cyborgization, Ihde's own focus; and to extravagant contentions by transhumanists.

¹¹ My focus is on conceptual distinctness: in practice, the exact point at which contrast dependency shifts into a reliance on binaries may not always be easy to detect.

¹² To be clear, my claim about transhumanists' reliance on binaries applies to the version of transhumanist advocacy under discussion here. It does not extend to all versions of "transhumanism" or to "posthumanism" as linked to literary studies and critical theory (on this posthumanism, see Wallace 2010; Braidotti 2016).

¹³ On the distinction between "disease" and "illness," a focus of debate in other contexts, see Boorse 1975; Sharpe and Greco 2019; Tesio and Buzzoni 2021.

¹⁴ For emphasis on the life course in a critique of transhumanists' advocacy of radically augmenting creativity, see Cruz 2018.

¹⁵ Fosca is physically invulnerable across the board, while the ageless beings under consideration here could perish due, e.g., to accidents or physical attacks. This difference is irrelevant here.

¹⁶ Individuals cannot permanently remove what Sartre views as a strong human tendency toward bad faith, which is "a type of being in the world, like waking or dreaming, which by itself tends to perpetuate itself.[...] If bad faith is possible, it is because it is an immediate, permanent threat to every project of the human being; it is because consciousness conceals in its being a permanent risk of bad faith" (2001, 345–46, 348).

¹⁷ Heidegger presented the instantiation of strife as typifying great works of art. Here, I make a broader application of his concepts.