

THE ENHANCED HUMAN AND THE HARMONY OF LIFE: ETHICAL LIMITS IN A TECHNOLOGICAL AGE

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Abstract

This article examines the ethical implications of Human Enhancement (HE), arguing that its underlying drivers, namely dissatisfaction with human limits, restlessness, and the drive against finitude, reveal a misguided pursuit. While HE promises improved health and longevity, it threatens human vulnerability, which is foundational to meaning, solidarity, and interconnectedness. Evaluating HE against the framework of "harmony of life", the article exposes concerns around justice, autonomy, authenticity, and social cohesion. It concludes that genuine fulfilment and harmony of life arise not from technological self-transcendence but from purposeful living, embracing vulnerability, and fostering solidarity within our shared human condition.

Keywords: Human Enhancement, Human Vulnerability, Harmony of Life, Meaningful Life, Bioethics, Solidarity, Transhumanism

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Introduction

Human Enhancement (HE) refers to “any deliberate technological and/or biomedical intervention on the healthy human body or mind to improve our physical and/or mental capabilities above the level that is typical of human beings, with a view to increasing our welfare.”¹ The pursuit of HE has become contentious in modern society, prompting deep inquiries into humanity, morality, and meaningful life. This article scrutinises the underlying dispositions driving the enhancement project and its ethical implications. At its core, this discussion centres on the human condition. Desires for improvement have historically driven humans, now focused inward on modifying the body through various enhancements. This relentless pursuit transforms cultural, economic, social, political, ethical, and personal aspects of life, revealing deep-seated dissatisfaction with natural human limits and an unyielding desire to transcend them. Human vulnerability, characterised by susceptibility to change, chance, luck, and the natural lottery, is pivotal in this analysis. It fosters interconnectedness and gives life meaning. However, attempts to overcome vulnerability through HE raises critical ethical concerns, potentially jeopardising the essence and values of human nature that make life meaningful. This article examines the purpose and limits of HE, questioning whether the promised benefits, such as better health, greater advantages, and longer life, contribute to a more meaningful existence. It argues that harmony of life and fulfilment arise not from technological enhancements but from living purposefully, facing challenges optimistically, and valuing inherent vulnerabilities. Ultimately, it posits that meaningful life involves adding more life to our years rather than endlessly prolonging lifespan or eliminating difficulties.

1. The Dispositional Foundations of the he Project

1.1 Dissatisfaction with the Given

Human history is marked by a relentless desire for change, a drive that has shifted inward, with efforts to modify the human body itself. This relentless pursuit of enhancement has transformed our cultural, economic, social, political, ethical, and personal spheres.² The mantra “enough is enough” no longer applies; each fulfilment creates new

¹ Arnald Mahesh Irudhayadhasan, “Human Enhancement and Its Ethical Concerns,” *Omega: Indian Journal of Science and Religion* 21, 2 (2023), 8-9.

² Jack Woodall, “Programmed Dissatisfaction: Does One Gene Drive all Progress in Science and the Arts?” *The Scientist* 21, 6 (2007) 63, at 63.

desires, and any novelty becomes outdated almost immediately.³ As Alvin Toffler noted, rapid change can cause stress and disorientation.⁴ HEs have accelerated dramatically, from natural enhancements such as healthy diets, to external tools like binoculars, then to bodily assimilations like pacemakers and direct biological interventions like kidney transplants. Now we are tampering with genetics and dreaming of designer babies, even aiming for immortality. This reveals a deep dissatisfaction with natural limits and an unrelenting desire to overcome them. The answer is not to reject HEs outright, but to reassess our relentless pursuit of them. This pursuit is not a suitable moral response to our inherent discontent. While our survival instinct may make some degree of HE inevitable, it also risks undermining the survival and identity of the human species, potentially transforming us into transhumans and eventually posthumans. The current acceleration of HE may make this transformation inevitable, leading us to confront posthumanity with profound moral apprehensions.

1.2 The Drive Against Finitude

The pursuit of HEs is deeply rooted in human finitude. Our bodies are the foundation of our goals and dreams, yet life's natural lottery gives us unequal gifts, and we face additional mental, social, and psychological limitations. HEs promise to reduce these obstacles, fuelling confidence in overcoming inherent limitations. Many people are ashamed of their shortcomings, which are exploited for commercial profit.⁵ This raises ethical concerns: addressing shortcomings is not wrong in itself, but the methods used are troubling; we must reassess how we define "shortcomings" and avoid treating normal human limitations as deficiencies; and comparing ourselves to commercially promoted norms can lead to seeking HEs to eliminate perceived imperfections.⁶ Commercial markets portray HEs as a means to liberate us from bodily limitations, but this is misleading. HEs do not free us from limitations; they create new ones. Yesterday's normality becomes today's limitation, and today's liberation may become tomorrow's constraint. Existential finitude is

³ Alfred Marshall, *Principles of Economics: An Introductory Volume*, eighth edition, London: Macmillan and Co. Ltd., 1920, 112.

⁴ Alvin Toffler, *Future Shock*, New York: Bantam Books, Inc., 1970, 2.

⁵ Arthur Caplan and Carl Elliott, "Is It Ethical to Use Enhancement Technologies to Make Us Better than Well?" *Public Library of Science Medicine* 1, 3 (2004) 172-175, at 174.

⁶ Caplan and Elliott, "Is It Ethical to Use Enhancement Technologies to Make Us Better than Well?" 174.

in fact essential for freedom; without constraints, there would be no choice, and freedom and responsibility would lose their meaning. Our finitude, social dependence, and capacity for error are inherent and beyond human control; ignoring these aspects renders HE interventions unproductive and inhumane. We should resist social pressures that promote HE as a path to perfection, recognising the importance of our limitations in a meaningful life.⁷

1.3 Modern Restlessness

A contemporary trend of restlessness and the pursuit of “the easy way” has infiltrated every aspect of personal and social life, driving the development of HEs. (i) Our restlessness is evident in instant coffee, fast food, express buses, and jet planes, all aimed at saving time, a trend consumer society promotes and exploits. The mountain-climbing analogy is instructive: reaching the summit by helicopter misses the discipline, concentration, and stamina that make the achievement meaningful. Similarly, HE shortcuts may deprive us of the lessons and satisfaction derived from the process itself. (ii) Technological advancements have made our lives easier in countless ways, but when the pursuit of ease extends to healthcare, it becomes disquieting. We seek to achieve our plans and dreams without effort or pain, escaping suffering rather than facing it with fortitude, empathy, and solidarity. This culture of haste undermines traditional values such as hard work, patience, and interdependence, giving rise to an independent individualism that resists mutual dependence. Medicine, pharmacology, biotechnology, and genetic engineering have all been shaped by this consumerist trend, which has driven the development of HEs. “Going fast” is not always necessary or wise. Just as speeding on some road’s demands slowing down for safety or ecological reasons, HEs are not a path to be rushed. We must carefully discuss, explain, and justify their promises while addressing their potential perils.

2. Human Enhancement: What for and How Far?

2.1 Why Enhance?

When the purpose is clear, setting limits becomes easier. However, individual purposes for HE can vary significantly. The ultimate aims of HE can be diverse: (i) some seek HE to correct perceived defects or

⁷ Sitter-Liver, “Finitude – A Neglected Perspective in Bioethics,” in *Bioethics in Cultural Contexts: Reflections on Methods and Finitude*, eds. Christoph Rehmann-Sutter et al., Dordrecht: Springer, 2006, 48-50.

imperfections;⁸ (ii) others aim to augment already healthy traits or become “better than well;”⁹ (iii) some pursue HE for happiness, success, profit, competitive advantage, or biological perfection;¹⁰ (iv) others may use HE to compensate for natural selection’s shortcomings in a rapidly changing environment;¹¹ (v) some choose HE to create genetically superior children with better life opportunities; (vi) finally, some may aim for overall well-being or even posthuman status as the ultimate end of HE. These varied objectives highlight the complexity in defining and limiting HE. Some of the ends targeted by HE are not ends in themselves but rather means to achieve other goals. For example, a film actress might enhance her features not just for attractiveness but to gain more acting opportunities. Similarly, enhancing capabilities could be a means to gain a competitive edge (enhancement certificate).¹² Regardless of whether these purposes are achievable, the key question is whether it is possible to determine when enough is enough or when enhancements become excessive. These questions are crucial for limiting HE. However, proponents of radical enhancement argue for continuous advancement in HE technology. Bostrom believes that the development of HE requires persistent transformation into something new.¹³ Caplan warns that setting limits on HE, as suggested by anti-meliorists, would cause us and future generations to miss out on significant opportunities offered by biotechnologies.¹⁴

2.2 How Far Should Enhancement Go?

Setting limits in HE is essential for several reasons: (i) it allows us to address ethical concerns, particularly the long-term effects of altering human traits and capacities; (ii) it helps manage the socio-cultural changes brought about by the continuous development of HE

⁸ Alex Rajczi, “One Danger of Biomedical Enhancements,” *Bioethics* 22, 6 (2008) 328-336, at 333.

⁹ Bengt Brülde, “Human Enhancement and Well-Being,” in *The Good Life in a Technological Age*, eds. Philip Brey et al., New York: Routledge, 2012, 253.

¹⁰ Rajczi, “One Danger of Biomedical Enhancements,” 331, 333.

¹¹ Paul Miller and James Wilsdon, “Stronger, Longer, Smarter, Faster,” in *Better Humans? The Politics of Human Enhancement and Life Extension*, eds. Paul Miller and James Wilsdon, London: Demos, 2006, 14.

¹² Allen Buchanan et al., *From Chance to Choice: Genetics and Justice*, Cambridge: Cambridge University Press, 2000, 3-4, 97-98.

¹³ Nick Bostrom, “Human Genetic Enhancements: A Transhumanist Perspective,” *The Journal of Value Inquiry* 37, 4 (2003) at 493-506.

¹⁴ Arthur Caplan, “Is It Wrong to Try to Improve Human Nature,” in *Better Humans? The Politics of Human Enhancement and Life Extension*, eds. Paul Miller and James Wilsdon, London: Demos, 2006, 39.

technologies;¹⁵ (iii) it enables us to create a "scenario planning" for the future, avoiding overvaluation of HE and preparing for potential consequences if such overvaluation occurs.¹⁶ These limits are necessary to respond appropriately to the ethical and societal implications of HE. The purpose and limits of HE are closely intertwined. Our analysis suggests that the ultimate purpose of HE is unrealizable, making the pursuit endless and meaningless. Even if achievable, we do not endorse its desirability for ethical reasons. Our examination of the 'issue of limits' addresses three key questions: (i) Are there constraints to the development of HE technologies? (ii) Is there a limit to an individual's use of HEs? (iii) Can the state regulate individuals' pursuit of HE? **Constraints on HE technology development:** We must evaluate HE technologies like any other, but their unique nature, purpose, and potential to alter human life set them apart. Given other pressing social and personal needs, there is no urgency to develop HE technologies, especially in economically self-sufficient states. **Individual use of HE and state regulation:** The second and third questions are interrelated. Controlling individual use of HE is challenging due to potential underground development and backdoor entry. State legitimisation of HE does not fully address this issue; instead, state regulation through various social and legal institutions is necessary to avoid ethical and social problems. In summary, we argue against the unregulated pursuit of HE and advocate for state regulation to mitigate ethical and social issues.

3. The Moral Weight of Human Nature and the Harmony of Life

3.1 What is Human Nature?

Norman Daniels defines human nature in three ways: as a population concept (shared traits among members of a species), a dispositional concept (traits people exhibit under various conditions), and a selective, theory-laden concept (distinctive traits of humans).¹⁷ Human nature can be seen as a set of common properties humans possess,¹⁸ shaped by evolution. We argue that one of the key and distinctive properties of human nature is 'vulnerability.' While all living beings are vulnerable, humans are unique in their

¹⁵ Miller and Wilsdon, "Stronger, Longer, Smarter, Faster," 14.

¹⁶ Rajczi, "One Danger of Biomedical Enhancements," 328.

¹⁷ Norman Daniels, "Can Anyone Really Be Talking About Ethically Modifying Human Nature?" in *Human Enhancement*, eds. Julian Savulescu and Nick Bostrom, Oxford: Oxford University Press, 2009, 28-32.

¹⁸ Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution*, London: Profile Books Ltd., 2002, 171-172.

consciousness of this vulnerability, their ability to cope with it, and their ability to find meaning in it. Human vulnerability is not value-neutral but is both inherently and socio-culturally valuable. Attempting to alter this vulnerability¹⁹ through HE interventions threatens human nature, which Sandel describes as the deepest form of disempowerment and Erik Parens as an impoverishment of humans.²⁰ In this sense, human nature is normatively significant and morally pertinent.

3.2 Why Human Vulnerability Matters Morally?

Vulnerability is an inherent property of human nature, characterised by the subjectivity to change, chance²¹, luck, and the natural lottery. This vulnerability drives our technological inventions, as our aims and desires are contingent on the unreliable condition of our bodies. HE aims to reduce these limitations imposed by our bodily existence. However, the promise to overcome vulnerability risks denies a fundamental aspect of human nature.²² Our concern is more about the ethical significance of human vulnerability rather than just mastering it. Ultimately, we must question what we would lose if we substantially reduced our vulnerability.

(i) HE threatens vulnerability to change and chance, potentially undermining valuable aspects of human experience. Lifespan extension aims to overcome ageing but could radically alter intergenerational relationships, eroding the value of caregiving, care-receiving,²³ and the recognition of human neediness.

(ii) Reducing vulnerability to chance carries significant implications. If everyone had all desired traits, there would be no need

¹⁹ Jürgen Mittelstrass, "Science and the Search for a New Anthropology," in *Rethinking Human Nature: A Multidisciplinary Approach*, ed. Malcolm Jeeves, Grand Rapids, MI: William B. Eerdmans Publishing Company, 2011, 68-69.

²⁰ Erik Parens, "The Goodness of Fragility: On the Prospect of Genetic Technologies Aimed at the Enhancement of Human Capacities," *Kennedy Institute of Ethics Journal* 5, 2 (1995) 141-153, at 141, 143.

²¹ Parens, "The Goodness of Fragility: On the Prospect of Genetic Technologies Aimed at the Enhancement of Human Capacities," 143.

²² Donna J. Haraway, *Simians, Cyborgs, and Women: The Reinvention of Nature*, London: Free Association Books, 1991, 1-4, 208-215, 224-230.

²³ Stephen Gerrard Post, *Spheres of Love: Toward a New Ethics of the Family*, Dallas, TX: Southern Methodist University Press, 1994, 52-54, 92-96, 104-107.

for further improvement,²⁴ leading to a "tyranny of the normal."²⁵ Eliminating natural imperfections would relieve society of responsibility toward the disadvantaged and marginalised, expressing a fear of difference and advocating for engineered sameness at the cost of species diversity and tolerance for inherent human differences.

(iii) Reducing vulnerability to chance could also diminish the value of human excellence, particularly in sports. Athletic excellence is most appreciated when achieved without enhancement,²⁶ as it reflects a unique combination of chance and effort. Without this unpredictability, sports would be reduced²⁷ to a mere scientific measurement of physical ability, diminishing the excitement and thrill that define authentic competition.

(iv) Valuing vulnerability highlights the delicate balance within individuals, our species, and between our species and the natural world. Vulnerability fosters connectedness and solidarity, particularly with the less privileged, as experiencing bad luck develops empathy for those facing similar challenges. Mastering vulnerability would erode this solidarity and shift us toward an exclusive individualism, weakening communal bonds and deepening isolation.

(v) Human vulnerability is closely tied to moral agency.²⁸ The designer-child project, in which traits are selected through genetic engineering, challenges the notion that individuals can be held responsible for their actions if those actions are attributable to a genetically predetermined structure. This could fundamentally alter our social, moral, and legal institutions and undermine authentic human interrelatedness.

Human vulnerability *cannot be fully overcome*; attempts to achieve invulnerability are ultimately futile. Human life is multidimensional,

²⁴ Parens, "The Goodness of Fragility: On the Prospect of Genetic Technologies Aimed at the Enhancement of Human Capacities," 143-145, 146.

²⁵ Leslie A. Fiedler, "The Tyranny of the Normal," in *Which Babies Shall Live? Humanistic Dimensions of the Care of Imperiled Newborns*, eds. Thomas H. Murray and Arthur L. Caplan, Clifton, NJ: Humana Press, 1985, 158.

²⁶ Parens, "The Goodness of Fragility: On the Prospect of Genetic Technologies Aimed at the Enhancement of Human Capacities," 144-147.

²⁷ Frans De Wachter, "In Praise of Chance: A Philosophical Analysis of the Element of Chance in Sports," *Journal of the Philosophy of Sport* 12, 1 (1985) at 52-61.

²⁸ J. O'Higgins, "Introduction," in Anthony Collins, *Determinism and Freewill: Anthony Collins' A Philosophical Inquiry Concerning Human Liberty*, ed. J. O'Higgins, The Hague: Martinus Nijhoff, 1976, 1-45.

encompassing physical, mental, psychological, moral, familial, social, political, cultural, and religious or non-religious aspects. Vulnerability is inherent in all these dimensions and fosters the interconnectedness of our social nature, making life meaningful. Considering death as the ultimate form of vulnerability, it is clear that it cannot be mastered. Death can result from various factors, including senescence, accidents, natural calamities, and others' actions. Since mastering vulnerability is unlikely, there is no purpose in trying to control it. Happiness is not inversely related to vulnerability; instead, it involves integrating vulnerability and experiences of loss. Happiness does not mean eliminating vulnerability; it means living with it. The deepest moral objection to HE lies not in the perfection it seeks but in the human disposition it expresses and promotes.²⁹

4. Can Enhancement Serve the Harmony of Life?

To properly examine this concept, we must first understand harmony of life as a multifaceted philosophical idea that transcends mere peace or balance. It refers to the creation of a coherent, meaningful whole from the diverse aspects of human existence, achieved through alignment and mutual flourishing rather than uniformity or suppression of difference. At its core, the harmony of life operates across three interconnected dimensions. *Inner harmony*³⁰ involves finding peace within oneself through authenticity, self-acceptance, and integrating one's various capacities and aspirations. *Relational harmony*³¹ encompasses peaceful, cooperative relationships with others, grounded in reciprocity and mutual respect, and celebrates rather than eliminates differences. *Cosmic harmony*³² refers to purposeful living in alignment with nature and the broader order of existence, recognising our interconnection with the world beyond ourselves.

²⁹ Michael J. Sandel, *The Case Against Perfection: Ethics in the Age of Genetic Engineering*, Cambridge, MA: The Belknap Press of Harvard University Press, 2007, 46.

³⁰ John Kehoe "Inner Harmony: What Is It and Why It's Important," *JohnKehoe Mind Power*, <https://www.learnmindpower.com/inner-harmony/> (accessed January 2, 2026).

³¹ Valeric Jardon and Sally Augustin, "The Harmonic Principles: Relational Harmony," <https://interiorarchitects.com/the-harmonic-principles-relational-harmony/> (accessed January 2, 2026).

³² Pyura A., "Cosmic Harmony: Finding Meaning in the Dance of Life and the Cosmos," *Linkedin* (April 24, 2024), <https://www.linkedin.com/pulse/cosmic-harmony-finding-meaning-dance-life-cosmos-tif-gbflf> (accessed January 2, 2026).

As a *social concept*,³³ harmony means balanced coexistence where diverse groups and institutions function together constructively, managing conflict without demanding absolute consensus. As a *moral framework*,³⁴ it recognises that individuals exist in webs of relationships, and ethical life involves cultivating these relationships wisely by balancing competing values: individual freedom with collective responsibility, justice with mercy, and tradition with innovation. More comprehensively, harmony of life denotes the *integration of all spheres of existence*: material and spiritual, work and leisure, individual and community, and humanity and nature. A harmonious life or society is one in which the parts support rather than undermine one another. Economic activity sustains rather than destroys the environment; technological advancement enhances rather than erodes human connection; efficiency serves rather than crowds out meaning. Such wholeness creates conditions for genuine, sustainable flourishing.

Advocates of HE contend that these interventions can augment a wide range of human capacities and characteristics. According to our working definition, such enhancements seek to elevate human capabilities beyond normal functional levels, potentially diminishing various forms of vulnerability.³⁵ On the other hand, HEs pose significant challenges to the harmony of life due to the numerous ethical concerns they raise, such as principle-based concerns, concerns related to justice, concerns related to freedom and autonomy, and consequentialist concerns.³⁶ Consequently, there are diverse perspectives on whether HEs genuinely promote harmony of life. While HEs might make us “better than well,” the question remains whether this “improved” state truly improves our lives.

4.1 Justice and Equality

HE raises profound concerns about justice and equality that threaten societal harmony. When societies invest limited public resources in enhancement technologies at the expense of urgent medical needs, they violate distributive justice. States with national

³³ Adarsh Kumar, “Social Harmony,” *Medium: Penny for Thoughts* (May 6, 2017), <https://medium.com/@brca.iitdelhi/social-harmony-e7cbacc76287> (accessed December 28, 2025).

³⁴ Fred Feldman, “The Principle of Moral Harmony,” *The Journal of Philosophy* 77, 3 (1980) 166-179, <https://www.jstor.org/stable/2025668> (accessed December 28, 2025).

³⁵ Arnald Mahesh Irudhayadhasan, *The Ethics of Human Enhancement*, Chennai: Don Bosco Publications, 2017, 2-3

³⁶ Irudhayadhasan, *The Ethics of Human Enhancement*, 18-22, 278-285.

healthcare systems have a moral duty to prioritise basic medical needs before pursuing enhancement interventions. As expensive market commodities, HEs will remain accessible only to the wealthy, exacerbating existing inequalities. The enhanced will gain competitive advantages in employment and productivity, while the unenhanced, though perfectly normal by current standards, will be rendered effectively disabled in an enhanced society. In employment systems that offer health insurance, candidates with “enhancement certificates” will be preferred, creating systemic discrimination against those who cannot afford enhancements.³⁷

Life-extension technologies further create intergenerational imbalances, straining social security systems as older populations³⁸ disproportionately burden younger generations, thereby obstructing necessary social and political reforms.³⁹ The fundamental injustice is clear: as long as enhancements remain enabling technologies for a wealthy minority, they simultaneously function as disabling technologies for the majority, fragmenting rather than harmonising social life and undermining the collective flourishing essential to true harmony of life.⁴⁰

4.2 Autonomy and Coercion

HE threatens individual autonomy through subtle yet pervasive forms of coercion.⁴¹ When enhancements become widespread in competitive contexts such as educational institutions, workplaces, or sports, individuals opposed to enhancement face enormous pressure to conform, effectively coercing the unwilling into cognitive or performance enhancements merely to remain competitive. Parental selection of children’s traits represents a troubling “despotism” within families, where parents impose their preferences on children unable to consent, depriving them of developmental autonomy and the

³⁷ Buchanan *et al.*, *From Chance to Choice: Genetics and Justice*, 97.

³⁸ Daniel Callahan, “Why We Must Set Limits,” in *A Good Old Age? The Paradox of Setting Limits*, eds. Paul Homer and Martha Holstein, New York: Simon & Schuster Inc., 1990, 27.

³⁹ Gaia Barazzetti, “Looking for the Fountain of Youth: Scientific, Ethical, and Social Issues in the Extension of Human Lifespan,” in *Enhancing Human Capacities*, eds. Julian Savulescu *et al.* (Chichester: Wiley-Blackwell, 2011), 344.

⁴⁰ Gregor Wolbring, “The Unenhanced Underclass,” in *Better Humans? The Politics of Human Enhancement and Life Extension*, eds. Paul Miller and James Wilsdon (London: Demos, 2006), 126.

⁴¹ The President’s Council on Bioethics, *Beyond Therapy: Biotechnology and the Pursuit of Happiness. A Report by the President’s Council on Bioethics* (New York: ReganBooks, 2003), 283. Henceforth to be referred to as PCB (2003).

freedom to be a child.⁴² In societies that legitimise enhancement, what appears to be free choice may become a practical necessity; parents who fail to enhance their children cognitively risk being judged negligent.

Certain professions⁴³, such as surgeons and pilots, may legitimately require enhancement to reduce risks, coercing professionals who would prefer not to enhance.⁴⁴ Enhancement culture also pressures individuals toward market-driven standards of beauty and perfection, producing homogenisation that compromises genuine freedom. Even moral bioenhancement, intended to improve character, undermines the freedom and responsibility essential to authentic moral agency. HE thus cannot be separated from concerns about violations of autonomy and coercion, which threaten the authentic, freely chosen lives necessary for true harmony of life.⁴⁵

4.3 Costs and Benefits

While HE promises various improvements, safety remains the primary ethical consideration. Even proponents of enhancement acknowledge that determining safety is extraordinarily difficult;⁴⁶ interventions may be administered safely yet yield uncertain long-term effects on individuals and society. Existing enhancements pose significant physical and mental risks. Performance enhancements may boost athletic ability but cause liver tumours, hypertension, infertility, and stunted adolescent growth.⁴⁷ Cognitive enhancements that improve memory may prevent forgetting, but paradoxically, the capacity to forget is as valuable as the ability to remember, and enhanced memory forces individuals to relive painful experiences indefinitely.⁴⁸

⁴² Irudhayadhason, *The Ethics of Human Enhancement*, 279.

⁴³ Hannah Malsen *et al.*, "With Cognitive Enhancement Comes Great Responsibility?" in *Responsible Innovation 2: Concepts, Approaches, and Applications*, eds. Bert-Jaap Koops *et al.*, Cham: Springer, 2015, 121-124.

⁴⁴ Filippo Santoni de Sio *et al.*, "How Cognitive Enhancement Can Change our Duties," *Frontiers in Systems Neuroscience*, 8, article 131 (July 17, 2014), [journal online], <http://journal.frontiersin.org/article/10.3389/fnsys.2014.00131/abstract> (accessed August 27, 2023), 1.

⁴⁵ Irudhayadhason, *The Ethics of Human Enhancement*, 280.

⁴⁶ Julian Savulescu, "Genetic Interventions and the Ethics of Enhancement of Human Beings," in *The Oxford Handbook of Bioethics*, ed. Bonnie Steinbock (Oxford: Oxford University Press, 2007), 528.

⁴⁷ PCB (2003), 137.

⁴⁸ Malsen *et al.*, "With Cognitive Enhancement Comes Great Responsibility?" 125-126.

Mood enhancements raise questions about authenticity and spontaneity, creating dependency and troubling questions about genuineness. When drugs suppress guilt, individuals may fail to feel appropriate remorse for harmful actions, and suppressing grief undermines meaningful mourning practices. Moral bioenhancement would further compromise the moral fabric of the human community, sacrificing freedom, intention, and moral reasoning, the very elements constituting authentic moral agency.⁴⁹ Assisted reproductive technologies, while helping infertile couples, increasingly enable trait selection in “designer babies,” changing traditional meanings of sex and childbearing, and imply the abortion of embryos with disabilities, raising profound moral concerns.⁵⁰ While acknowledging enhancement’s promises, many of which are arguably barren, we cannot underestimate the profound costs in both monetary terms and fundamental moral values, ultimately threatening rather than promoting harmony of life.

4.4 Individual and Social Well-Being

HE technologies often promote individual well-being at the expense of crucial social goods, threatening harmony at the communal level. The pursuit of “best possible” children promotes eugenic ideologies and creates superior classes,⁵¹ while efforts to enhance capabilities foster a morally objectionable enhanced elite. Similarly, correcting “Asian eyes” or lightening “dark” skin perpetuates harmful racist ideologies,⁵² and selecting disease-free genes or desired traits subtly devalues disabled persons as less productive and burdensome. Sex selection, particularly male preference in gender-biased societies like India, creates imbalanced ratios⁵³ and threatens societal diversity.⁵⁴

If widespread life extension becomes reality, extended senescence may necessitate birth rate restrictions,⁵⁵ ironically creating a new

⁴⁹ PCB (2003), 47-51.

⁵⁰ Irudhayadhasan, *The Ethics of Human Enhancement*, 282.

⁵¹ Silver, *Remaking Eden: How Genetic Engineering and Cloning Will Transform the American Family*, 4.

⁵² Caplan and Elliott, “Is It Ethical to Use Enhancement Technologies to Make Us Better than Well?” 174.

⁵³ Mary Caprioli and Mark A. Boyer, “Gender, Violence, and International Crisis,” *The Journal of Conflict Resolution*, 45:4 (2001) 503-518, at 503-504.

⁵⁴ Navtej K. Purewal, *Son Preference: Sex Selection, Gender and Culture in South Asia*, Oxford: Berg, 2010.

⁵⁵ Larry S. Temkin, “Is Living Longer Living Better?” *Journal of Applied Philosophy* 25, 3 (2008) 193-210, at 363.

disabled class from the aged.⁵⁶ Pervasive enhancement may also redefine disability itself; if transhumanism triumphs, the enhanced will view the unenhanced as disabled,⁵⁷ rendering the enhancement project self-defeating. Creating "perfect" babies through anonymous donor gametes fundamentally alters parenthood's meaning, raising questions about children's psychological development upon learning their biological origins. In sports, performance enhancements violate fairness principles, degrading competition by commodifying athletes and undermining the natural talent and unpredictability that define authentic sporting ethos.⁵⁸ These concerns demonstrate how individual enhancement pursuits fragment rather than foster the collective harmony essential for genuine social flourishing.

4.5 Responsibility and Solidarity

Responsibility and solidarity constitute interrelated social values whose observance could prevent most ethical concerns related to HE. Understanding solidarity encourages responsible use of enhancement technologies while preserving personal responsibility. However, enhancement paradoxically both explodes responsibility, making us "hyperresponsible,"⁵⁹ and simultaneously diminishes our agency. Enhancement increases personal responsibility in troubling ways. Mothers-to-be bear responsibility for choosing or rejecting preimplantation genetic diagnosis. Professionals using cognitive enhancements to improve alertness must accept greater duties and heightened culpability for any mishaps in their enhanced state.⁶⁰

Yet enhancement simultaneously diminishes responsibility by compromising authenticity. Post-enhancement accomplishments cannot be entirely attributed to the enhanced person, only to her "inauthentic" self,⁶¹ reducing her responsibility as both doer and moral agent. Enhancement also undermines social solidarity, essential

⁵⁶ *Human Development Report, 2014. Sustaining Human Progress: Reducing Vulnerabilities and Building Resilience*, New York: United Nations Development Programme, 2014, <http://hdr.undp.org/en/2014-report/download> (accessed December 28, 2025), 70.

⁵⁷ Wolbring, "The Unenhanced Underclass," 126-127.

⁵⁸ Irudhayadhasan, *The Ethics of Human Enhancement*, 283-284.

⁵⁹ Nicole A. Vincent, "Enhancing Responsibility," in *Neuroscience and Legal Responsibility*, ed. Nicole A. Vincent, Oxford: Oxford University Press, 2013, 306-307; and Malsen *et al.*, "With Cognitive Enhancement Comes Great Responsibility?" 123.

⁶⁰ Malsen *et al.*, "With Cognitive Enhancement Comes Great Responsibility?" 123.

⁶¹ Malsen *et al.*, "With Cognitive Enhancement Comes Great Responsibility?" 126.

for promoting the common good and societal stability. Proponents argue that widespread enhancement increases productivity, providing resources for redistribution to disadvantaged populations. However, this reasoning ignores reality: despite tremendous technological advancement, global inequality has widened alarmingly.⁶² The Human Development Report 2014 reveals our dreadfully unequal world, demonstrating that enormous growth has not augmented solidarity.

Technological advancements like HE may produce more resources, but abundance has not created a disposition to share; those who gain more tend to amass even more. Genetic enhancement particularly threatens solidarity, as knowledge of our prospective medical history makes us less inclined to share risk through mechanisms like medical insurance. Reviving solidarity demands refraining from overvaluing HE while undervaluing moral purpose.⁶³ Instead of squandering resources on unnecessary enhancements, we could responsibly share with those in need by supporting education, paying medical bills, or assisting disaster victims.

We must recognise our duty to practice solidarity. As Callahan⁶⁴ emphasises, solidarity entails recognising human misfortunes as shared problems and acknowledging that we belong to one human family. Gandhi's concept of *Sarvodaya*,⁶⁵ "welfare of all," reminds us (in the spirit of Gandhi's philosophy): "The world has enough for everyone's need, but not enough for everyone's greed." Pursuit of HE, an expression of hardwired discontent, may feed our greed while blinding us to others' needs. One who understands the true meaning of solidarity will hesitate to pursue enhancement when countless others struggle to achieve normal health and secure lives.⁶⁶ These ethical concerns prevent us from defending HE as morally justified.

5. Vulnerability as Foundation for Meaning and Harmony

(i) *Living well over living long*. Based on our analysis, we argue that a "claimed" better life does not necessarily promote harmony. Instead,

⁶² Jack Stilgoe, "Foreword: Why Responsible Innovation?" in *Responsible Innovation: Managing the Responsible Emergence of Science and Innovation in Society*, eds. Richard Owen et al. (Chichester: John Wiley and Sons, Ltd., 2013), xi.

⁶³ Rajci, "One Danger of Biomedical Enhancements," 325.

⁶⁴ Daniel Callahan, *False Hopes: Overcoming the Obstacles to a Sustainable, Affordable Medicine* (New Brunswick, NJ: Rutgers University Press, 1999), 172.

⁶⁵ Ishwar C. Harris, "Sarvodaya in Crisis: The Gandhian Movement in India Today," *Asian Survey*, 27:9 (1987), 1036, footnote no. 1.

⁶⁶ Irudhayadhasan, *The Ethics of Human Enhancement*, 286.

a life well lived is more likely to promote harmony. What is important is not how *long* we live, but how *well* we live our lives. Learning to live *well* is more important than learning to live *longer*; once we have mastered the art of living well, living longer may no longer interest us.⁶⁷ When one has lived one's life to the full for a good cause, then it would be easier to welcome death. Contrarily, death would be an unwelcome guest for a person who still has her life projects unfulfilled.⁶⁸ Hence, we assert that a good life does not necessarily imply a longer life in which one's life dreams are realised and everything is brought to fulfilment or completion. Although medicine and healthcare have contributed to an increase in the average lifespan, they cannot guarantee harmony of life.

(ii) *What makes life meaningful?* While HEs promise healthier lives, expanded opportunities, and profits, they cannot create meaning or foster harmony. Meaning arises from what genuinely matters to us.⁶⁹ A meaningful life is not solely defined by good health, greater opportunities, or longevity, though these may contribute to it. Such a life transcends these factors, encompassing deeper values and significance. One can lead a meaningful life even with poor health, limited achievements, or a shorter lifespan, so long as the will to live endures. True meaning arises not from external measures but from the resilience and purpose found within lived experience. A life is well-lived when it exhibits characteristics we consider pertinent. A meaningful life may encompass the following: (i) fulfilment of basic needs; (ii) cultivating self-love through self-affirmation; (iii) striving to creatively actualize one's potential; (iv) exercising freedom to make rational choices; (v) taking responsibility for shaping the future through a commitment to life's projects;⁷⁰ (vi) pursuing a greater purpose that guides everyday decisions;⁷¹ (vii) caring for the common

⁶⁷ Temkin, "Is Living Longer Living Better?" 364.

⁶⁸ Yvonne Denier *et al.*, "Justice and Responsibility in Health Care - An Introduction," in Yvonne Denier *et al.* (Ed.), *Justice, Luck and Responsibility in Health Care: Philosophical Background and Ethical Implications for End-of-Life Care*, Dordrecht: Springer, 2013, 20.

⁶⁹ Thaddeus Metz, "Recent Work on the Meaning of Life," *Ethics* 112, 4 (2002) 781-814, at 794.

⁷⁰ Paul Kurtz, *In Defense of Secular Humanism*, New York: Prometheus Books, 1983, 162-168.

⁷¹ Alasdair MacIntyre, *After Virtue: A Study in Moral Theory*, Notre Dame, IN: University of Notre Dame Press, 1981, 197-202.

good of society and the world; and (viii) fostering happiness by living ethically and promoting moral ends.⁷²

(iii) *Happiness as a by-product, not a product.* By projecting a “meaningful” life as one devoid of pain and suffering, HEs futilely attempt to eliminate our difficulties and create a painless paradise on earth. HEs promises to create happiness as a *product*, but trying to create happiness, for instance, through taking a pill, belittles the value of a *meaningful* life. Happiness in itself is a by-product – “something which can only *happen* to us.” Some people’s striving to produce “happiness” according to their whims and fancies will surely fail.⁷³ When someone leads a meaningful life, they are plausibly also happy. ‘Making happy people’ through biomedical interventions is like giving someone a fish rather than teaching them to fish – it deprives them of the experience. Similarly, achieving a meaningful life through HEs encourages shortcuts that avoid the challenges and experiences people would otherwise face.”

(iv) *Finding meaning through solidarity.* Beyond pursuing personal goals, people find meaning by fulfilling moral ends within the context of “universal humanhood.” Instead of searching for meaning through expensive HEs, we could invest our resources, such as money, talents, skills, and energy, in acts of solidarity: contributing to communities through outreach and social programmes, joining movements for justice and peace, and championing ethical leadership. These actions foster harmony in vulnerable contexts, helping those struggling to meet fundamental needs like food, shelter, health care, and education.

(v) *Communal harmony requires individual harmony.* HEs promise to improve individuals yet overlook a fundamental truth: communal harmony cannot be built upon fragmented lives. A society of enhanced yet restless individuals, each striving endlessly for self-optimisation, cannot achieve genuine cohesion. Individual harmony emerges when we accept vulnerabilities alongside strengths, balance personal aspirations with responsibilities to others, and find contentment in who we are rather than perpetually seeking to become something else. When individuals are at peace with their human condition, they contribute to rather than undermine social harmony. Enhancement culture, by constantly pushing individuals to transcend

⁷² Rajczi, “One Danger of Biomedical Enhancements,” 333.

⁷³ Herman De Dijn, “Technology in Health Care: A Philosophical Ethical Appraisal,” in Chris Gastmans (ed.), *Between Technology and Humanity: The Impact of Technology on Health Care Ethics*, Leuven: Leuven University Press, 2002, 29.

their current state, risks creating perpetually dissatisfied strivers who struggle to build the trust and solidarity that communal life requires. Those who achieve inner harmony naturally become sources of stability, fostering collective flourishing.

(vi) *Becoming authentic agents of harmony.* One of the most profound ways to find meaning is by helping others cultivate happiness and lead fulfilling lives. A meaningful life is not a product of HE but a by-product of how well we live for ourselves and for others. True meaning emerges from cultivating purpose that fosters harmony within ourselves and in our relationships with others and the world, embracing life’s blessings alongside its challenges with resilience and joy. When we live this way, we become authentic agents of harmony, contributing to a legacy that extends beyond our own years. A meaningful life is not about endlessly prolonging our lifespan but about enriching the years we have. To be agents of harmony requires living harmoniously: integrating individual flourishing with communal well-being, balancing aspirations with vulnerabilities, and finding meaning not in transcending our human nature but in living it fully. This comes not through technological transformation but through daily choices about how to live and what to live for.

Conclusion

The quest for HE has brought us to a critical juncture that requires a reassessment of our existential foundations. This article uncovers profound ethical and philosophical implications arising from the interplay among HE, human nature, and the pursuit of a meaningful, harmonious life. The drive for HE often stems from a misguided attempt to transcend human limitations, risking the erosion of the intrinsic values that sustain harmony. Human vulnerability is not a flaw to be corrected but a fundamental aspect of our humanity that fosters interconnectedness and depth. The creation of posthumans through genetic enhancement poses significant risks to social harmony and human dignity, underscoring the need for cautious, regulated approaches. True meaning and harmony are not achieved through technological enhancement alone, but through purposeful living, resilience in the face of challenges, and an embrace of our vulnerabilities. While HE promises better health and longer life, it does not inherently contribute to a harmonious existence. The true path to fulfilment lies in acts of solidarity and contribution to the common good, an approach that ensures the pursuit of HE does not compromise our humanity but enriches it.