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Chapter ?

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Immortality through AI? Transhumanism, Islamic Philosophy, and the Quest for Spiritual Machines

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Abstract

This chapter critically engages the transhumanist vision articulated by Ray Kurzweil in works such as *The Age of Spiritual Machines* (1999), *The Singularity Is Near* (2005), and *The Singularity Is Nearer* (2024), wherein he predicts an imminent convergence of human and machine intelligence culminating in the advent of artificial superintelligence (ASI). Central to this vision is the Singularity, a paradigmatic threshold after which technological enhancement purportedly enables the transcendence of biological constraints, including aging and mortality. Drawing on insights from Islamic philosophy, particularly its metaphysical and psychological reflections on consciousness, personhood, and the nature of the self, this chapter interrogates the ontological and ethical assumptions underlying transhumanist discourse. I argue that the viability and desirability of such a posthuman future ultimately rest upon contested conceptions of human nature, agency, and value. In confronting these questions, Islamic philosophical resources offer a robust

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framework for rethinking what it means to flourish in an era increasingly shaped by algorithmic rationality and technological determinism.

?1. A Prophet of Transhumanism

In a series of publications, including *The Age of Spiritual Machines* (1999), *The Singularity Is Near* (2005), and *The Singularity Is Nearer* (2024), MIT-trained futurist and transhumanist proponent Ray Kurzweil argues that, in the not-too-distant future, human and machine intelligence will merge, giving rise to Artificial Superintelligence (ASI). He envisions a transhumanist future in which technological advancements will allow humanity to transcend its biological limitations through the Singularity—the future point when AI surpasses human intelligence, leading to rapid technological advancements that merge human beings and machines. According to Kurzweil and other transhumanists, the Singularity will offer solutions to fundamental human limitations, including aging.

This chapter first analyzes and then critiques Kurzweil’s transhumanist and Singularitarian worldview from the perspective of Islamic philosophy. It also examines his idiosyncratic notions of consciousness and selfhood, which are central to his vision of spiritual machines. Ultimately, the chapter argues that the challenges posed by AI and transhumanism hinge on how we define values, selfhood, and personhood, i.e., fundamental concepts that shape our understanding of what it means to be human in an AI-driven world.

Kurzweil has long predicted that AI will surpass human intelligence, ushering in a revolutionary era known as the Singularity. According to him, this moment, which is expected around the year 2045, will mark the merging of human and machine intelligence, allowing for radical enhancements in cognition, longevity, and even the possibility of digital immortality. Although many technological hurdles remain before we can reach the Singularity, its

fundamental precursors are rapidly transitioning from theoretical ruminations to active research and development. Over the next decade, AI will become increasingly capable of interacting in ways that seem convincingly human, and simple brain-computer interfaces will begin to influence daily life much like smartphones do today. A digital revolution in biotechnology will lead to cures for diseases and significantly extend healthy lifespans. In the 2030s, self-improving AI and advancing nanotechnology will bring humans and machines closer than ever before, amplifying both the potential benefits and dangers. If we can navigate the scientific, ethical, social, and political challenges these advancements pose, says Kurzweil, by 2045 we could profoundly improve life on Earth (Kurzweil 2024, p. 14).¹

Although Kurzweil's predictions are often dismissed as overly speculative, they warrant deeper analysis precisely because they drive real-world AI and biotech developments (see Larson 2021; Lanier 2000; Seidensticker 2006; Wilson 2007). His influence extends beyond academic discourse into corporate R&D, biotech innovation, and cultural narratives about progress. Examining his philosophy critically helps address the implications of his techno-optimism and its impact on society. Moreover, Kurzweil's ideas have permeated mainstream discussions on AI, transhumanism, and the future of human nature far more than those of academic philosophers. His writings have reached a broad audience beyond academia, shaping Silicon Valley's technological aspirations and public perceptions of AI-driven immortality. Furthermore, a closer examination reveals that some of Kurzweil's predictions have proven accurate.

Writing in 1999, Kurzweil noted that many people dismissed the idea that computers could rival human intelligence, largely because current technology appeared limited. When interacting with a personal computer, it hardly seemed intelligent—it lacked humor, opinions, and other

¹ However, Kurzweil cursorily notes that many workers will experience economic disruption, and everyone will face the risks of accidental or intentional misuse of these emerging technologies.

distinctly human traits. However, Kurzweil contended that computer technology is far from static. Capabilities once deemed impossible a decade or two earlier had already become reality. For example, computers could accurately transcribe continuous human speech, understand and respond to natural language, recognize medical patterns with precision comparable to human doctors, and compete at the highest levels in chess. Looking ahead, Kurzweil predicted real-time language translation via intelligent telephones, AI-powered personal assistants capable of deep knowledge retrieval, and an expanding array of machines demonstrating increasingly sophisticated intelligence. By the second decade of the 21st century, he argued, distinguishing human intelligence from machine intelligence would become increasingly difficult (Kurzweil 1999, p. 4).

Similarly, Kurzweil's motivation to transform human beings into "spiritual machines"—a fusion of human and machine intelligence—stems from his recognition of the biological fragility of the human body. In his view, our DNA-based cells rely on protein synthesis, which, while remarkably useful, comes with significant constraints. Citing Hans Moravec, a pioneering thinker on the potential of 21st-century machines, Kurzweil argues that protein is far from an ideal material, as it functions only within a narrow range of temperature and pressure. Moreover, it is highly vulnerable to radiation and limits the use of many advanced construction techniques and components. He contends that even a genetically engineered superhuman would ultimately be inferior to an advanced robot, as it would still be constrained by the limitations of DNA-driven protein synthesis—an advantage recognized only by those biased toward biological life (Kurzweil 1999, p. 136; see also Moravec 1988; Moravec 1998).

Kurzweil also foresees the development of nanobots—microscopic AI-driven machines that could repair cells, reverse aging, and enhance cognitive functions. These nanobots would not

only prolong life but also facilitate seamless interaction between biological and artificial intelligence, blurring the boundary between human and machine. In this vision, death itself becomes an outdated concept, replaced by the notion of indefinite progress and continuous self-enhancement (Kurzweil 1999, p. 140). In line with his futuristic vision, Kurzweil imagines fluidity of identity in the virtual world. In virtual reality, we will not be confined to a single personality, as we will have the ability to alter our appearance and essentially become different people. While our physical bodies will remain unchanged in the real world, we will seamlessly transform our digital presence within immersive, three-dimensional environments (Kurzweil 2005, p. 314). It is worth noting that Kurzweil's prediction about people developing relationships with AI has proven accurate: "By 2019 People are beginning to have relationships with automated personalities and use them as companions, teachers, caretakers, and lovers" (Kurzweil 1999, p. 279).

Kurzweil's predictions are both exhilarating and controversial. Whereas his proponents see his vision as an inevitable and desirable future, critics argue that his technological optimism overlooks deeper concerns about human nature, embodiment, and the ethical dilemmas of AI-driven transcendence. As we stand on the threshold of an AI-dominated world, the question remains: will these advances lead to genuine human flourishing, or will they usher in an era of profound existential upheaval?

2.2. Kurzweil and Transhumanism

Transhumanism arose primarily in California during the 1960s, shaped by the futuristic ideas of Fereidoun M. Esfandiary, the psychedelic movement pioneer Timothy Leary, and the work of cryonics specialist Robert Ettinger. By the late 1980s, the movement led to the formation

of the Extropians, centered around Max More. As European interest in transhumanism grew, it eventually led to the establishment of the World Transhumanist Association in 1998, founded by Nick Bostrom, David Pearce, and Anders Sandberg (Krüger 2021, p. 61). The intellectual lineage of transhumanism now boasts an impressive roster of thinkers associated with the philosophy of progress. This includes figures such as Francis Bacon, Condorcet, Benjamin Franklin, La Mettrie, Kant (with some reservations), Nietzsche, biochemist J. B. S. Haldane, physicist John D. Bernal, and the renowned Huxley brothers—Aldous, the writer, and Julian, the biologist.² Julian Huxley is also credited with coining the term “transhumanism” (see Hughes 2004, pp. 156–159; Bostrom 2005, pp. 2–6; More 2013, pp. 10–11; Brown 2005, p. 104; Heil 2018, pp. 55–64; Sorgner 2016, pp. 34–40).³ Additionally, contemporary transhumanists sometimes draw inspiration from the early 20th-century Russian cosmists, whose ideas have been recently rediscovered. The pioneers of transhumanism are not necessarily those who developed the specific concepts that would later be associated with the movement. Rather, the term should be reserved for figures like Julian Huxley and the philosopher-paleontologist Pierre Teilhard de

² One can perhaps argue that the transhumanist perspective emerges as a response to modernity’s crisis of meaning and purpose. Grounded in the grand narratives of modern thought, it operates as a form of secular religion/spirituality, expressing itself through the lens of techno-optimist imagination. But one should also note a more recent evolution in Silicon Valley thought. For instance, “post-rationalism” refers to a loosely defined intellectual movement that critiques traditional rationalist thinking. It emphasizes intuition, embodied experience, Tarot, meditation, psychedelics, and non-linear modes of understanding over strict logic and empirical reasoning. The relationship between post-rationalism and transhumanism in Silicon Valley is complex, as both emerge from a critique of modern rationality yet diverge in their approaches to meaning, technology, and human enhancement. One can mention figures like John Vervaeke, who discusses the “meaning crisis”—the notion that we no longer fully understand what we are living for. According to Vervaeke, religions still play a significant role in this process, but they no longer hold exclusive authority over it (see Burton 2023).

³ Julian Huxley’s introduction of the terms “transhuman” and “transhumanism” is linked to a long tradition in the English language. The Italian verb *trasumanar* was originally coined by the poet Dante (d. 1321) in the opening canto of *Paradiso*, the first section of *The Divine Comedy*. Dante employs the term to depict his journey into the celestial spheres alongside his guide, Beatrice.

Chardin, who each dedicated decades to developing comprehensive philosophical frameworks about the future of humanity (Krüger 2021, p. 62).

Kurzweil holds a unique position in the annals of the transhumanist movement, as he has not only authored influential trans- and post-humanist works, but also published books on self-optimization since the 1990s. Until the early 2000s, Kurzweil was not a major figure within established transhumanist circles. However, his publishing success and the founding of Singularity University in 2008 elevated him to the forefront of post- and transhumanist thought. While he sometimes identifies as a Singularitarian, his techno-optimist approach places him within the transhumanist camp (Krüger 2021, p. 62).⁴ In many ways, transhumanism mimics traditional religions and their idea of the final end, as they envision a transhumanist future in which technology will enable humans to transcend the human condition by way of the Singularity. In his *To Be a Machine*, Mark O’Connell sums up the core transhumanist doctrine: “It is their belief that we can and should eradicate aging as a cause of death; that we can and should use technology to augment our bodies and our minds; that we can and should merge with machines, remaking ourselves, finally, in the image of our own higher ideals” (O’Connell 2017, p. 8; see also More and Vita-More (eds.) 2013; Manzocco 2019). For David Pearce, the co-founder of the World Transhumanist Association, transhumanism involves enhancing the capacity for pleasure and the extension of life in order to enjoy the fruits of material pleasure indefinitely. Pearce calls this as the “Hedonistic Imperative” and predicts that over the next thousand years, “the biological substrates of suffering will be eradicated completely. ‘Physical’ and ‘mental’ pain alike are destined to disappear into evolutionary history.... Post-human states

⁴ Transhumanism centers on the evolution of humanity, emphasizing how technological advancements improve and transform human beings. In contrast, posthumanism envisions a future where robots and AI take the lead in driving evolution and progress (Krüger 2021, p. 62). In Kurzweil’s writings, the two are closely related.

of magical joy will be biologically refined, multiplied and intensified indefinitely” (Pearce 1995).

To advance their vision, transhumanists like Kurzweil propose a mechanistic view of human nature. Kurzweil argues that since the human brain operates according to the laws of physics, it must be a machine—albeit an extraordinarily complex one. He then questions whether there is a fundamental distinction between human cognition and machine intelligence. In other words, if computers eventually match the human brain in complexity and depth of thought, should they be considered conscious? Kurzweil acknowledges the difficulty of even framing this question. He then invites us to consider a scenario in which a person’s brain is scanned using an advanced noninvasive technology of the future—such as a highly sophisticated MRI—and their mind is uploaded to a computer. Would the resulting digital consciousness be the same individual as the person who was scanned (Kurzweil 1999, p. 5)?⁵

Kurzweil’s answer is that as software-based beings, our survival will no longer depend on the longevity of physical hardware. While there will still be bodies and hardware, the core of our identity will shift to the enduring nature of our software. Just as we currently transfer important files when upgrading to a new computer rather than discarding them, we will similarly migrate our “mind files” to increasingly advanced personal computing systems. However, future computers will not exist as standalone devices; instead, they will be seamlessly integrated into our bodies, brains, and surroundings. Ultimately, our identity and continued existence will no longer be tied to the survival of any specific hardware. More importantly, achieving immortality will simply require diligent and frequent backups. Neglecting this precaution could mean

⁵ This is examined in detail in the following pages.

reverting to an earlier version of ourselves, forcing us to relive past experiences (Kurzweil 1999, p. 129).

Kurzweil recognizes that our sense of identity is deeply intertwined with questions of consciousness, free will, and determinism. Reflecting on his own life, he acknowledges that the entity known as Ray Kurzweil is shaped both by highly specific prior conditions and by the choices he has made. As a self-evolving information pattern, he has actively influenced his own development through decisions about his interactions, readings, and experiences. Yet, despite having some agency in shaping his identity, Kurzweil concedes that his self-actualization remains constrained by numerous factors beyond his control. His biological brain, adapted for a prehistoric environment, predisposes him to ingrained habits he would rather overcome. It learns too slowly, forgets too easily, and limits his ability to acquire all the knowledge he desires. He cannot reprogram it to eliminate fears, traumas, and doubts that hinder his aspirations. Moreover, his brain resides in a body that, despite his efforts to slow the process, continues to age. It is ultimately programmed to erase the very information pattern that constitutes Ray Kurzweil (Kurzweil 2024, p. 115).

The answer to all these challenges is the liberating call of the Singularity. For millennia, Kurzweil claims, humans have steadily gained greater control over their own destiny. Medicine has helped us overcome injuries and disabilities, while cosmetics allow us to modify our appearance according to personal preferences. Many turn to legal or illegal substances to balance their mental states or explore altered consciousness. Expanding access to information enables us to nourish our minds and reshape neural pathways through learning. Art and literature foster empathy for unfamiliar experiences and contribute to personal growth. Modern apps aid in building discipline and promoting healthier lifestyles. Transgender individuals now have more

options than ever to make their physical bodies conform to their gender identity. Given these possibilities, merging with superintelligent AI will be a significant milestone, serving a higher purpose. By transferring our minds to a more advanced digital interface, we will unlock the full potential for self-modification. This will allow us to harmonize our actions with our values and free our lives from the limitations and vulnerabilities of human biology. At last, we will have complete agency over who we become (Kurzweil 2024, p. 116).

3.3. The Singularity

In Kurzweil's view, the Singularity is the inevitable result of the evolution of technology. He begins from the premise that once life takes hold on a planet, the rise of technology can be seen as inevitable. Enhancing physical capabilities—and even cognitive faculties—through technology provides a clear advantage for survival. In his opinion, our subspecies has come to dominate its ecological niche largely due to technological advancements. The development of technology, in turn, depends on two key traits in its creators: intelligence and the physical capacity to alter the environment (Kurzweil 1999, p. 16). Kurzweil's theory of "The Law of Accelerated Returns" (LOAR) describes the exponential growth of technological progress. He argues that the rate of innovation is not linear but accelerates over time because new technologies enable the development of even more advanced technologies at an increasing pace. This self-reinforcing process leads to rapid advancements in fields like computing, AI, biotechnology, and nanotechnology. Kurzweil uses LOAR to argue that Artificial General Intelligence (AGI) will emerge by 2029, followed by the development of Superintelligence (Kurzweil 2005).⁶ Kurzweil believes that with Superintelligence, we will reach a crossover point, where machines and not

⁶ Kurzweil's LOAR is not a scientific law since it has no basis in the history of science and technology. For a criticism of Kurzweil's views, see Larson 2021, pp. 47–48.

human beings rule as the most intelligent beings on the planet (cf. Bostrom 2017; Bostrom 2024; Chalmers 2010). Nonetheless, Kurzweil is optimistic about such a future:

We are entering a new era. I call it “the Singularity.” It’s a merger between human intelligence and machine intelligence that is going to create something bigger than itself. It’s the cutting edge of evolution on our planet. One can make a strong case that it’s actually the cutting edge of the evolution of intelligence in general, because there’s no indication that it’s occurred anywhere else. To me that is what human civilization is all about. It is part of our destiny and part of the destiny of evolution to continue to progress ever faster, and to grow the power of intelligence exponentially.... The next stage of this will be to amplify our own intellectual powers with the results of our technology. (Kurzweil 2001)

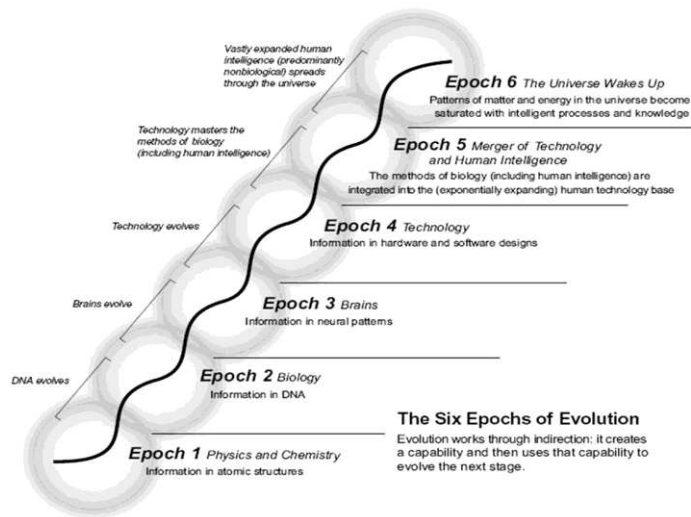
The figure below best explains Kurzweil’s evolutionary account of human progress toward the Singularity. Kurzweil outlines six epochs of evolution, each marking a transformative leap in complexity and intelligence (see Figure ?.1).

Fig. ?.1 Kurzweil’s Six Epochs of Evolution

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During the First Epoch, the fundamental laws of physics emerged, eventually enabling atomic formation after the Big Bang. The strong nuclear force enabled atomic stability, making complex chemistry possible. The precise tuning of physical constants allowed for the eventual appearance of life. During the Second Epoch, complex molecules developed the ability to encode biological information, leading to the development of life and evolutionary processes driven by DNA. During the Third Epoch, evolution produced brains capable of processing and storing information, providing a major advantage for survival and further complexity in cognition. During the Fourth Epoch, humans leveraged their cognitive abilities and opposable thumbs to create tools and technology, vastly expanding their capacity to store, manipulate, and transmit information beyond biological limitations. The progression from early writing to digital computation dramatically accelerated cognitive evolution. During the Fifth Epoch, brain-computer interfaces will merge biological intelligence with digital computation, vastly enhancing

cognitive capabilities by adding new layers to the neocortex and enabling faster, more abstract thought. During the Sixth Epoch, intelligence will spread throughout the universe, restructuring matter into computronium (an optimized form of matter for computation) and pushing intelligence to its ultimate limits.

Kurzweil presents this trajectory as an inevitable outcome of accelerating technological progress, culminating in a post-biological intelligence that transforms the very fabric of the universe (Kurzweil 2024, pp. 16–17). Moreover, according to his estimation, human beings are currently situated in the Fourth Epoch, where technology is already surpassing human comprehension in certain tasks. AI is rapidly advancing toward passing the Turing test, which Kurzweil predicts will happen very soon, marking the transition to the Fifth Epoch. In the 2030s, human beings will begin integrating their neocortices with the cloud, vastly expanding cognitive abilities. Rather than competing with AI, human beings will merge with it, with nonbiological intelligence eventually outpacing biological cognition by thousands of times. By the middle of the twenty-first century, this exponential progress will amplify human intelligence by millions-fold, leading to a transformation so profound that it mirrors the singularity concept in physics, that is, ushering in an era beyond current human comprehension (Kurzweil 2024, p. 17).

For Kurzweil, a “Singularitarian is someone who understands the Singularity and has reflected on its meaning for his or her own life” (Kurzweil 2005, p. 370). This entails taking deliberate steps to significantly extend human life. Moreover, by leveraging emerging technologies, such as biotechnology and nanotechnology, we may ultimately achieve indefinite life extension. However, Kurzweil reckons that many people fail to recognize the urgency of intervening in their aging processes. He advocates aggressively reprogramming human biochemistry, overcoming evolutionary limitations, and optimizing bodily health as a stepping

stone to a technologically enhanced existence. Emphasizing the impermanence of the body, he also notes that only patterns of the self persist. By merging with technology, human beings will be able to transcend biological constraints, modify their bodies at will, and expand mental faculties (Kurzweil 2005, pp. 370–371). Kurzweil highlights Intelligence, rather than raw information, as the crucial factor in advancing knowledge. In his view, death can be seen as a profound loss of patterns of intelligence, and he is critical of traditional religion for rationalizing death as necessary. The purpose of life, according to Kurzweil, is to create and appreciate knowledge, moving toward greater complexity and order, which mirrors the broader purpose of the universe. Looking ahead, Kurzweil envisions human intelligence expanding beyond Earth, spreading throughout the universe through self-replicating nonbiological intelligence. The acceleration of technology allows for a strategic, staged approach to life extension—what he calls “a bridge to a bridge to a bridge”—where each advancement leads to the next breakthrough. He concludes with a Nietzschean perspective, seeing humanity as evolving beyond its current state, and striving toward transcendence through science and technology (Kurzweil 2005, p. 371).

At this point, Kurzweil anticipates objections from those who worry that these developments are leading us into a post-human era. In response, he argues that being human is inherently linked to a civilization that continually pushes its boundaries. For Kurzweil, we are already surpassing biological limitations by gaining the ability to reprogram and enhance our bodies. But if technological modifications render someone “no longer human,” where do we draw the line? Is a person with a bionic heart still human? What about someone with a neurological implant? Two implants? Ten nanobots in the brain? What about 500 million? Does humanity end at exactly 650 million nanobots so that any fewer and you remain human, any

more and you become posthuman? Although Kurzweil acknowledges that our integration with technology follows a slippery slope, he contends that rather than descending into Nietzsche's abyss, it ascends toward greater possibilities. Some argue that this transformation creates a new "species," but the very concept of species is fundamentally biological. What we are witnessing, Kurzweil asserts, is not merely another step in biological evolution, it is the transcendence of biology itself (Kurzweil 2005, p. 374).

2.4. Religion and Spirituality

Kurzweil's notion of the Singularity not only aims to help us transcend biological limitations but also shapes our values regarding religion and spirituality. For Kurzweil, the Singularity will infuse the universe with spirit. He affirms that once we reach the Singularity, spiritual experiences will no longer be rare, unpredictable, or dependent on traditional religious practices. Instead, they can be called up at will, possibly through neural enhancements, brain-computer interfaces, or advanced simulations. This implies a form of engineered transcendence, where mystical or euphoric states become programmable rather than spontaneous or the result of disciplined spiritual practice. Kurzweil expresses these views on spirituality as follows:

The spiritual experienced—a feeling of transcending one's everyday physical and mortal bounds to sense a deeper reality—plays a fundamental role in otherwise disparate religions and philosophies. Spiritual experiences are not all of the same sort but appear to encompass a broad range of mental phenomena. The ecstatic dancing of a Baptist revival appears to be a different phenomenon than the quiet transcendence of a Buddhist monk. Nonetheless, the notion of the spiritual-experience has been reported so consistently throughout history, and in virtually all

cultures and religions, that it represents a particularly brilliant flower in the phenomenological garden. (Kurzweil 1999, p. 151)

According to Kurzweil, the feeling of transcending one's physical and mortal limitations to access a deeper reality is a fundamental aspect of spirituality. This sensation of being connected to something greater than oneself is a common thread running through various religions and philosophical traditions, despite their differences in doctrine or practice. Nonetheless, spiritual experiences are not monolithic; they manifest in different ways across cultures and religious traditions. For example, the ecstatic, energetic worship of a Baptist revival, characterized by dancing and communal fervor, contrasts sharply with the silent, meditative transcendence sought by a Buddhist monk. Despite these variations, they all belong to the broader category of spiritual phenomena. Moreover, by referring to the "phenomenological garden," Kurzweil suggests that spiritual experiences, regardless of their cultural or religious context, are part of the broader spectrum of human mental and emotional states. He likens them to a "brilliant flower," implying that they are among the most profound and captivating experiences that human beings can have.

It is evident that Kurzweil expands the notion of transcendence beyond traditional religious or mystical contexts (see also More 1990). Instead of being limited to divine encounters or enlightenment in the classical sense, transcendence will manifest through various aspects of life, including art and culture. In essence, Kurzweil approaches spirituality from a scientific and cognitive perspective, viewing it as a psychological and neurological phenomenon rather than a supernatural or metaphysical one (for critical evaluations, see Richards [ed.] 2002). Similarly, Kurzweil interprets the idea of God as the universe becoming self-aware during Epoch Six. He adopts a futurist interpretation of divinity, agreeing with ideas similar to Pierre Teilhard de

Chardin's *Omega Point* theory (de Chardin 2002 [1959]). Kurzweil argues that in the early stages of existence, there was no God as traditionally conceived. However, as intelligence permeates the universe, God will “emerge” as a consequence of exponentially growing intelligence and self-awareness. This “God” is not a preexisting entity but rather the universe becoming self-conscious through the proliferation of intelligence, artificial and otherwise (Kurzweil 2005). Essentially, in Kurzweil’s vision, divinity is not a creator but the final evolutionary stage of intelligence—a state where all matter and energy are infused with self-awareness, agency, and infinite computational power. At this point, intelligence will reshape reality itself, merging with the fabric of the cosmos, and attaining a form of technological omniscience.

Kurzweil goes on to explain how neuroscientists at the University of California, San Diego, have identified a small region in the frontal lobe, dubbed the “God module,” that activates during religious experiences. This discovery emerged from studying epileptic patients who experience intense mystical episodes during seizures, suggesting that neural activity in this area may underlie spiritual experiences (see e.g., Barrett 2022). Further research found similar brain responses in highly religious individuals when exposed to spiritual symbols. Moreover, evolutionary biologists have long theorized that religious belief has a neurological basis due to its social utility. In response, Richard Harries (the Bishop of Oxford) suggested that if God exists, it would be unsurprising if humans were created with a biological predisposition for faith. Kurzweil extends this idea of the “God spot,” predicting that as human beings enhance their cognitive and experiential capacities through technology, their ability for spiritual insight will also evolve. He argues that consciousness itself is inherently spiritual. Future machines, modeled after human intelligence but vastly more advanced, will claim to be conscious and to have meaningful spiritual experiences. Given humanity’s tendency to anthropomorphize and the

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persuasiveness of these machines, people will likely accept their claims. In the late twenty-first century, intelligent machines will engage in spiritual practices—praying, meditating, and seeking transcendence—just as human beings do today (Kurzweil 1999, p. 147).⁷

2.5. The Dilemmas of Superintelligence

Despite the promises of the Singularity, Kurzweil expresses concerns about its potential implications for selfhood, personal identity, and self-determination. In particular, he grapples with the nature of personal identity, questioning whether we are merely patterns of information that persist over time:

So who am I? Since I am constantly changing, am I just a pattern? What if someone copies that pattern? Am I the original and/or the copy? Perhaps I am this stuff here—that is, the both ordered and chaotic collection of molecules that make up my body and brain. But there's a problem with this position. The specific set of particles that my body and brain comprise are in fact completely different from the atoms and molecules that I comprised only a short while ago. We know that most of our cells are turned over in a matter of weeks, and even our neurons, which persist as distinct cells for a relatively long time, nonetheless change all of their constituent molecules within a month. (Kurzweil 2005, p. 385)

He acknowledges that the physical matter composing our bodies and brains is constantly replaced, making any claim to identity based on material continuity problematic. Instead, he

⁷ According to Kurzweil, human biochemistry needs to be reprogrammed if we are to merge with machines and attain transcendence. Thus, in their book *Transcend*, Kurzweil and Grossman outline nine key steps for achieving longevity and enhanced well-being, emphasizing a proactive approach to health (Kurzweil and Grossman 2010).

suggests that what defines “me” is the organization of information and function rather than specific molecules. However, this leads to a paradox when considering technological replication (Kurzweil 2005, p. 386). Kurzweil thus explores the implications of creating a digital replica of a human brain and its consequences for identity and consciousness. In the first scenario, he imagines copying small segments of a person’s brain until a complete electronic version, “You 2,” is created. This digital copy shares the original person’s memories and behaves identically, leading to the argument that if an electronic brain represents the same information as a biological one and claims to be conscious, there is no scientific basis to deny its consciousness. Ethically, it should be treated as a conscious being with moral rights. However, Kurzweil then raises a deeper question: Is “You 2” truly the same person as the original? Since the biological version of “You” continues to exist, the digital copy, despite being conscious, would immediately diverge by forming its own memories and experiences. This suggests that while “You 2” may be conscious, it is not the same individual as the original. In a second experiment, he considers a gradual replacement of each part of the brain with digital equivalents, seamlessly integrated through a brain-computer interface. In this scenario, there is no distinct “You 2”—only an evolving “You.” At each stage, the person remains aware and satisfied with the process. The final question is whether the fully digital version at the end of this transformation is still the same “You” (Kurzweil 2024, p. 97).

Kurzweil argues that in the gradual replacement scenario, small changes to the brain would go unnoticed, as neuroscience suggests the brain is highly adaptable. Since the patterns of information defining a person remain intact, there is no reason to believe that subjective consciousness would be disrupted—one would continue to be the same individual. However, this leads to a paradox: by the end of the process, the fully digital brain is functionally identical to

“You 2” from the earlier experiment, which was deemed a separate entity. The key distinction is *continuity*. Since the digital transformation happens gradually, there is no clear point at which the original and the copy exist as separate beings. Kurzweil further supports this argument by pointing out that biological brains undergo continuous renewal. While neurons persist, their components, such as mitochondria, neurotubules, and synaptic proteins, are constantly replaced. This means that, over time, even a biological person is effectively a new version of themselves. Thus, identity is preserved not through static physical structures but through the continuity of “information and function” (Kurzweil 2024, p. 98).

Kurzweil’s reflections on self and identity can be described as “patternism”—the view that identity is best understood as an evolving pattern of matter and energy rather than a fixed entity. He distinguishes knowledge as a particularly valuable form of pattern, emphasizing that the loss of a person represents the loss of a unique and irreplaceable evolving pattern of consciousness:

I am principally a pattern that persists in time. I am an evolving pattern, and I can influence the course of the evolution of my pattern. Knowledge is a pattern, as distinguished from mere information, and losing knowledge is a profound loss. Thus, losing a person is the ultimate loss. (Kurzweil 2005, p. 282)

Kurzweil argues that future machines will not only simulate human emotions and spirituality but may genuinely experience them. He outlines three scenarios for achieving this: (1) reverse-engineering the human brain to create highly complex, emotionally intelligent machines, (2) uploading human consciousness into nonbiological substrates, and (3) the gradual merging of humans with technology through neural implants and nanobots (see also Minsky

2006). He predicts that by the 2040s, nonbiological intelligence will vastly exceed human intelligence, leading to a new form of post-human existence where distinctions between biological and artificial beings become blurry. A key issue is whether nonbiological entities will be conscious in the same way humans are. Kurzweil acknowledges that there is no objective test for consciousness, as science can only measure its behavioral and neurological correlates. While advanced AI may convincingly display human-like emotions and argue for its own subjective experience, skepticism will persist among those who believe consciousness is tied to biological attributes. Kurzweil also explores the implications for ethics, law, and society. He argues that as machines demonstrate human-like intelligence and emotions, they will demand recognition of their rights, potentially through legal battles rather than legislation. He asserts that consciousness is central to moral and legal systems, as seen in debates about animal rights. Ultimately, he contends that the nature of subjective experience remains a philosophical issue, one that cannot be fully resolved by science alone (Kurzweil 2005, pp. 377–378).

Overall, Kurzweil's views can also be understood as a form of techno-millennarianism because they exhibit key characteristics of millenarian thinking but within a technological framework. Millenarianism traditionally refers to religious or ideological beliefs that anticipate a transformative event—often apocalyptic or utopian—that will radically reshape humanity and the world. Kurzweil's Singularity prediction, where AI surpasses human intelligence and fundamentally alters human existence, mirrors this kind of apocalyptic and redemptive vision (see e.g., Geraci 2012).

Joel Garreau's *Radical Evolution* (2006) explores the psychocultural impact of accelerating technological change, structuring his analysis into three scenarios: Heaven, Hell, and Prevail. In the Heaven scenario, he focuses on Kurzweil's predictions which build on Vernor

Vinge's concept of the Singularity. Vinge likened this technological event to a black hole's singularity, where laws break down, arguing that exponentially advancing machine intelligence would make the future unpredictable (Vinge 1993). Singularitarians like Vinge and Kurzweil emphasize the emergence of superhuman AI as the critical moment of transformation. Vinge predicted self-aware AI by 2023, potentially leading to utopian or catastrophic outcomes, while Kurzweil projects the Singularity for 2045 as mentioned earlier (Hughes 2008, p. 79). Kurzweil himself acknowledges the potential for apocalyptic outcomes, such as humanity being destroyed by superintelligent machines, but remains overwhelmingly optimistic, leading Garreau to classify his vision as the Heaven scenario. Although Kurzweil humorously acknowledges parallels between Singularitarianism and millennialist beliefs, most Singularitarians reject religious comparisons, insisting their views are based on scientific reasoning. Similar to Kurzweil's techno-millennarianism, John Smart's Global Brain scenario, which envisions a collective human-machine intelligence emerging through global telecommunications, echoes Teilhard de Chardin's concept of the noosphere leading to an Omega Point—a final stage of spiritual and intellectual unity (Hughes 2008, p. 80; see also Russell 1983; Stock 1993). Millennialism has both positive and negative aspects, and understanding its history and influence can help mitigate its risks. Four dysfunctional tendencies of millennialism should be monitored: (1) utopian optimism, which leads to unrealistic expectations of a perfect future; (2) apocalyptic pessimism, which fosters fear and doom; (3) fatalist passivity, where people believe their actions cannot influence inevitable outcomes; and (4) the messianic impulse, where individuals or groups see themselves as uniquely responsible for bringing about the Millennium. Recognizing these patterns can help correct their potential harms (Hughes 2008, p. 84).

2.6. Kurzweil through the Islamic Lens

Kurzweil's intentions are commendable for emphasizing human aspirations, as they aim to advance fundamental values such as love, knowledge, beauty, and intelligence. By placing these ideals at the core of technological progress, Kurzweil makes his vision compatible with a long tradition of humanistic thought that sees scientific advancement as a means of enhancing human flourishing. In addition, his focus on human enhancement and health, particularly in relation to longevity and cognitive augmentation, is praiseworthy, as it highlights the potential of technology to overcome biological limitations and improve quality of life.

However, several critical challenges arise from Kurzweil's transhumanist aspirations. His reliance on computational models of consciousness risks oversimplifying human identity, reducing the self to mere patterns of information processing and representation (Kurzweil 2005; 2012). This perspective neglects the complexity of human consciousness, which, according to Islamic philosophers, is characterized by *presence*—a non-representational, self-illuminating reality. Islamic philosophers also argue that consciousness is inseparable from self-knowledge and exists prior to any mental states or reflective acts. Unlike modern theories that often emphasize subjective experience or qualia, they characterize consciousness as the very foundation of selfhood, transcending all forms of representation (Faruque 2026). This understanding has profound implications for contemporary debates, particularly concerning the limits of AI. If Islamic philosophers are correct, true consciousness cannot be replicated through symbolic or algorithmic processes. More broadly, Islamic philosophy's exploration of consciousness as a presential phenomenon offers a transformative lens for understanding human identity and cognition. By emphasizing the inseparability of self-knowledge and consciousness, it moves beyond representational paradigms and underscores the unique, irreducible nature of

conscious experience. This framework not only challenges theories such as patternism but also highlights the fundamentally non-representational core of consciousness—something contemporary AI systems cannot replicate.

At this stage, it is necessary to provide a broad overview of how personhood and selfhood are understood in Islamic philosophy. Several terms are used to denote personhood in Islam, including *shakhṣ* (person) and *naḥs* (person, self, soul) (Shaker 2019). Additionally, terms such as *mukallaf* and *dhimma* refer to legal personhood. The concept of *mukallaf* represents the idea of a human being as a rational moral agent, central to the Shariah's treatment of responsible adults. Another dimension of personhood is captured by *dhimma*, which, among other meanings, refers to the person as a bearer of obligations. Due to this association, *dhimma* comes to signify “legal personality,” wherein the capacity to bear obligations is a defining feature. This suggests an underlying deontological framework in which the ability to assume obligations is a prerequisite for acquiring rights. Fundamentally, it is a person's inherent humanity that grants them legal personhood, which is why even non-rational human actors—but not animals—can be held accountable. Although the legal conception of personhood in Islamic thought bears similarities to its modern liberal counterparts, such as those found in Rawlsian theory, it is distinguished by its metaphysical and psychological dimensions.

Moreover, in Islamic holistic thought, there is no room for the Cartesian dualism of mind and matter, as the self (*naḥs*) is understood in relation to both the physical (body) and the spiritual (spirit). The self embodies an ambiguous nature, reflecting the qualities of both the spirit—such as awareness, luminosity, love, beauty, and meaning—and the body, which is associated with darkness, density, disharmony, and disequilibrium. Cosmologically, the self or soul can be described as a *barzakh* (literally, a barrier), serving as the juncture between the spiritual and

material worlds. Due to its amorphous nature, the self in Islamic philosophy possesses limitless potential for growth and expansion—whether in upward, downward, or lateral directions. It represents an ongoing journey of self-discovery and self-realization (Faruque 2024a; 2024b).

At the ordinary level, the self encompasses human intelligence, behavioral inclinations, tendencies, drives, instincts, and impulses. It also signifies human vulnerability to temptations and irrational thought. In contrast, the real self is often understood in terms of the Qur’anic concept of *fiṭrah*, which broadly refers to one’s pristine, unadulterated nature. *Fiṭrah* connotes an innate, God-given disposition that conforms to *tawhīd* or the oneness of God. Importantly, *fiṭrah* offers a distinctive conception of human perfection—one that remains adaptable across different historical and cultural contexts without undergoing fundamental change (Doetinchem de Rande 2023). In other words, *fiṭrah* highlights both the uniqueness of the Shariah and the role of local customs in addressing the enduring needs of human nature. It enables individuals to cultivate essential virtues through context-specific methods while maintaining an innate awareness of the divine. These polarities within human nature call for a multidimensional theory of personhood and selfhood, as evidenced by recent scholarly work. For instance, I have proposed a multidimensional theory of the self that distinguishes between descriptive and normative dimensions. This theory allows for a comprehensive analysis of the self through its bio-physiological, socio-cultural, cognito-experiential, ethical, and spiritual aspects, offering a holistic model for understanding human identity and transformation (Faruque 2021).

The significance of these teachings and insights can be applied to a critique of Kurzweil’s theory of patternism. As AI-powered technologies become increasingly integrated into daily life, technologists like Kurzweil tend to conceptualize human identity and aspirations in ways that mirror machines, ultimately leading to a diminished understanding of human intelligence. A

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prevalent notion suggests that the brain functions like a computer, despite the fact that computers are human creations. This mechanistic perspective reduces intelligence to mere computational processes, neglecting a broad spectrum of distinctly human faculties, including reason, intuition, understanding, wisdom, moral conscience, and aesthetic and poetic judgment (Faruque 2023a).

Kurzweil's patternism, which posits that human identity and consciousness can be reduced to the informational patterns of the brain, posits a fundamentally representationalist view of the self.⁸ This theory assumes that the essence of personhood can be digitally preserved, manipulated, and even transferred to artificial substrates, thereby bypassing biological limitations. However, such a perspective neglects the embodied, relational, and existential dimensions of human existence. In contrast, Islamic philosophy offers a holistic alternative grounded in an anthropocosmic vision of the self, situating human flourishing within the dynamic interplay among the self, society, and the cosmos. Rather than reducing identity to mere computational structures, the anthropocosmic self emphasizes the irreducibility of human experience, wherein consciousness emerges not solely from neural patterns but through the integrated totality of biological, cultural, and spiritual dimensions (Faruque 2025).

A core issue with Kurzweil's patternism is its remoteness from the deeply embedded ecological and ontological contexts that shape human life. The anthropocosmic self challenges

⁸ Relevant here is to note that in the early computational models of the brain, scientists assumed that cognition was essentially a form of symbolic processing, akin to a Turing machine manipulating internal representations. This perspective led to early forms of AI based on rule-based systems and symbolic logic, but it failed to account for the brain's adaptability, embodied cognition, and non-linear dynamics. Later, neural network models attempted to move beyond rigid symbolic processing, but they too often retained the assumption that the brain is a representational system. When Warren McCulloch and Walter Pitts were developing their mathematical model of a neural network, John von Neumann recognized that neurons were not truly digital, not only because of the way they respond but also because the feedback loops in which they are involved; for example, those controlling blood pressure contain both neuronal and physiological components. As he put it: "living organisms are very complex—part digital and part analogy mechanisms" (Cobb 2020, p. 189).

this reductionism by foregrounding the interdependence between human beings and the larger web of existence. Human flourishing, in this view, is not merely a matter of optimizing cognitive capacities or extending life indefinitely through technological means but involves cultivating harmony with both the social world and the natural environment. According to this perspective, the self is intrinsically interconnected with the cosmos. Thus, by emphasizing this interconnectedness, the anthropocosmic self resists the atomization implicit in Kurzweil's vision and instead promotes a model of selfhood that is relational, participatory, and ecologically embedded.

Moreover, Kurzweil's vision of the Singularity, where AI surpasses human cognition and facilitates a radical transformation of human existence, presupposes a hyper-individualist trajectory of progress that privileges technological mastery over the cultivation of ethical and communal life. The anthropocosmic self, by contrast, critiques this techno-utopianism by asserting that genuine human flourishing cannot be divorced from moral responsibility, social cohesion, and a deeper conformity to meaning in human life. While technological advancements undoubtedly play a role in enhancing human life, their ethical implications must be evaluated within a broader framework that considers justice, ecological balance, and the preservation of human dignity.

7.7. Concluding Reflections

Can computers ever become conscious? If so, what process underlies the transition from unconsciousness to consciousness? Recent developments in biological engineering, aside from brain chip implantation technology, have successfully restored functionality to parts of the human nervous system through prosthetic limbs that connect bidirectionally with the brain.

These advances allow for precise motor control, proprioception (the intuitive awareness of limb position), and a reduction in phantom limb sensations (Grève and Xiaoyue 2023). Although the technology remains in its infancy, it already provides empirical evidence that semiconductor materials, such as silicon, can be employed to restore components of the human nervous system. However, it is far from clear, contra Kurzweil, whether the human nervous system could be gradually replaced with components made from alternative materials, thereby allowing a person to slowly transform into a machine while still maintaining consciousness. This issue is further complicated by the fact that “consciousness,” as mentioned, is fundamentally non-physical and must be presupposed when attempting to create an interface between a machine and the brain. Moreover, it is necessary to consider how much of the nervous system would need to be replaced with implants before an individual is regarded as a machine rather than a human being, and what metric of psychological continuity would apply in such a case. These issues are difficult to resolve, particularly given that there is no general scientific consensus—an uncertainty acknowledged by Kurzweil himself—on the nature of human consciousness.

Also, there is no fundamental difference between contemporary computers and the advanced AI systems anticipated in the future. Both rely on the same underlying substrates—conducting metals, dielectric oxides, and doped semiconducting silicon—and operate according to the same basic principle: data processing through the movement of electric charge. Future systems may run more sophisticated software, but they will still execute algorithms in a blind and mechanical manner. The only notable difference will be their dramatically increased speed and efficiency (see Kastrup 2023; Kastrup 2024). Similarly, the feasibility of the Singularity itself remains an open question. While Kurzweil argues for the inevitability of exponential technological progress, empirical and theoretical challenges remain. The assumption that AGI

will emerge and surpass human intelligence is based on extrapolations of current trends, yet such developments may be constrained by unforeseen technological, ethical, or even physical limitations. Moreover, the idea that human consciousness can be uploaded into digital systems remains speculative, with unresolved questions concerning the nature of selfhood, embodiment, and continuity of identity. Also, the trade-off between hyper-individualism and society raises concerns about the broader implications of radical technological enhancement. Kurzweil's vision is hyper-individualistic, envisioning human augmentation as a personal choice rather than a collective or social endeavor. This raises the risk of further social fragmentation, as the focus on self-enhancement may diminish the role of community, shared values, and collective responsibility. The pursuit of radical individual transformation, if not carefully integrated into a broader social framework, could exacerbate alienation and inequality, rather than fostering a more interconnected and humane society.

Finally, economic inequality and the rise of an algorithmic workforce present significant ethical and structural challenges. The increasing automation of labor, driven by AI and machine learning, threatens to displace large segments of the workforce, exacerbating economic disparities. If access to technological enhancement remains restricted to the wealthy elite, it could create an unprecedented cognitive and economic divide, where those with access to AI-driven augmentation hold disproportionate power and resources. The emergence of an algorithmic workforce may not only render many traditional jobs obsolete but also reinforce systemic economic hierarchies, raising fundamental questions about justice, equity, and the future of work (Faruque 2023b).

References

- Barrett, Justin L. (ed.). 2022. *The Oxford Handbook of the Cognitive Science of Religion*. Oxford: Oxford University Press.
- Bostrom, Nick. 2005. A History of Transhumanist Thought. *Journal of Evolution and Technology* 14(1).
- _____. 2017. *Superintelligence: Paths, Dangers, Strategies*. Oxford: Oxford University Press.
- _____. 2024. *Deep Utopia: Life and Meaning in a Solved World*. Washington, DC: IdeaPress.
- Brown, Andrew. 2005. *J. D. Bernal: The Sage of Science*. Oxford: Oxford University Press.
- Burton, Tara Isabella. 2023. "Rational Magic: Why a Silicon Valley Culture that was Once Obsessed with Reason is Going Woo." *The New Atlantis*.
<https://www.thenewatlantis.com/publications/rational-magic>. Accessed on 2/10/2025.
- Chalmers, David J. 2010. "The Singularity: A Philosophical Analysis." *Journal of Consciousness Studies*, 17: 7–65.
- de Chardin, Pierre Teilhard. 2002 [1959]. *The Phenomenon of Man*. New York: HarperCollins.
- Cobb, Matthew. 2020. *The Idea of the Brain: The Past and Future of Neuroscience*. New York: Basic Books.
- Doetinchem de Rande, Raissa A. von. 2023. "Is the Fiṭra Mutable? A Reformist Conception of Human Perfection in Shāh Walī Allāh's Ḥujjat Allāh al-Bāligha." *Journal of the Royal Asiatic Society* 33(1): 87–109. <https://doi.org/10.1017/S1356186321000869>.
- Faruque, Muhammad U. 2021. *Sculpting the Self: Islam, Selfhood, and Human Flourishing*. Ann Arbor: University of Michigan Press.

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- _____. 2023a. "AI versus Human Consciousness: A Future with Machines as Our Masters?" *Renovatio*. <https://renovatio.zaytuna.edu/article/ai-versus-human-consciousness>. Accessed April 28, 2025.
- _____. 2023b. "Opening Pandora's Box: AI and Its Ethical Dilemmas." *Maydan*. <https://themaydan.com/2023/04/opening-pandoras-box-ai-and-its-ethical-dilemmas/>. Accessed April 28, 2025.
- _____. 2024a. "The Self (*nafs*)."
St Andrews Encyclopaedia of Theology. Ed. Brendan Wolfe et al. <https://www.saet.ac.uk/Islam/Self>. Accessed April 28, 2025.
- _____. 2024b. "We are Not Our Brains: How Poets and Philosophers Saw the Immaterial Life of the Self." *Renovatio*. <https://renovatio.zaytuna.edu/article/we-are-not-our-brain>. Accessed April 28, 2025.
- _____. 2025. "Sufism and the Anthropocosmic Self." In: *I of the Heart: Texts and Studies in Honor of Seyyed Hossein Nasr*, eds. Muhammad U. Faruque, Atif Khalil, and Mohammed Rustom. Leiden: Brill, in press.
- _____. 2026. *Why Read Mullā Ṣadrā Today?* Cambridge: Cambridge University Press.
- Garreau, Joel. 2006. *Radical Evolution: The Promise and Peril of Enhancing Our Minds, Our Bodies—and What It Means to Be Human*. New York: Broadway.
- Geraci, Robert.M. 2010. *Apocalyptic AI: Visions of Heaven in Robotics, Artificial Intelligence, and Virtual Reality*. Oxford: Oxford University Press.
- Grève, Sebastian Sunday, and Xiaoyue Yu. 2023. "Can Machines Be Conscious?" *Philosophy Now* 155. https://philosophynow.org/issues/155/Can_Machines_Be_Conscious. Accessed April 28, 2025.

- Heil, Reinhart. 2018. "Der Mensch als Designobjekt im frühen Transhumanismus und Techno-Futurismus." In: *Designobjekt Mensch: Die Agenda des Transhumanismus auf dem Prüfstand*, eds. Benedikt Paul Göcke and Frank Meier-Hamidi, 53–79. Freiburg: Herder.
- Hughes, James. 2004. *Citizen Cyborg: Why Democratic Societies Must Respond to the Redesigned Human of the Future*. New York: Basic Books.
- _____. 2008. "Millennial Tendencies in Responses to Apocalyptic Threats." In *Global Catastrophic Risks*, eds. Nick Bostrom and Milan M. Ćirković, 72–80. Oxford: Oxford University Press.
- Kastrup, Bernardo. 2023. "AI won't be Conscious, and Here is Why (A Reply to Susan Schneider)." <https://www.bernardokastrup.com/2023/01/ai-wont-be-conscious-and-here-is-why.html>. Accessed on February 12, 2025.
- _____. 2024. *Analytic Idealism in a Nutshell*. London: Iff Books.
- Krüger, Oliver. 2021. *Virtual Immortality: God, Evolution, and the Singularity in Post- and Transhumanism*. Trans. Ali Jones and Paul Knight. Bielefeld: Transcript.
- Kurzweil, Ray. 1999. *The Age of Spiritual Machines: When Computers Exceed Human Intelligence*. New York: Penguin.
- _____. 2001. "The Singularity: A Talk with Ray Kurzweil." *The Edge*. <https://www.edge.org/conversation/raykurzweil-the-singularity>. Accessed April 28, 2025.
- _____. 2005. *The Singularity Is Near: When Humans Transcend Biology*. New York: Penguin.
- _____. 2012. *How to Create a Mind: The Secret of Human Thought Revealed*. New York: Penguin.
- _____. 2024. *The Singularity Is Nearer: When We Merge with AI*. New York: Viking.

Kurzweil, Ray, and Terry Grossman. 2010. *Transcend: Nine Steps to Living Well Forever*. New York: Harmony/Rodale/Convergent.

Lanier, Jason. 2000. "One Half of a Manifesto." *Edge*.
https://www.edge.org/conversation/jaron_lanier-one-half-a-manifesto. Accessed April 28, 2025.

Larson, Erik J. 2021. *The Myth of Artificial Intelligence: Why Computers Can't Think the Way We Do*. Cambridge, MA: Belknap Press: An Imprint of Harvard University Press.

Manzocco, Roberto. 2019. *Transhumanism: Engineering the Human Condition: History, Philosophy and Current Status*. New York: Springer.

Minsky, Marvin 2006. *The Emotion Machine: Commonsense Thinking, Artificial intelligence, and The Future of the Human Mind*. New York: Simon & Schuster.

Moravec, Hans. 1988. *Mind Children. The Future of Robot and Human Intelligence*. Cambridge, MA: Harvard University Press.

_____. 1998. When will Computer Match the Human Brain? *Journal of Transhumanism* 1.

More, Max. 1990. "Transhumanism: Towards a Futurist Philosophy." *Extropy* 6.6: 11.

_____. 2013. "The Philosophy of Transhumanism." In *The Transhumanist Reader*, eds. Max More and Natasha Vita-More, 2–17. New York: Wiley-Blackwell.

More, Max, and Natasha Vita-More (eds.). 2013. *The Transhumanist Reader: Classical and Contemporary Essays on the Science, Technology, and Philosophy of the Human Future*. New Jersey: Wiley-Blackwell.

O'Connell, Mark. 2017. *To Be a Machine: Adventures Among Cyborgs, Utopians, Hackers, and the Futurists Solving the Modest Problem of Death*. New York: Anchor.

- Pearce, David. 1995. "The Hedonistic Imperative." *Hedweb*.
www.hedweb.com/hedethic/hedonist.htm. Accessed Feb 09, 2025.
- Richards, Jay W. (ed.). 2002. *Are We Spiritual Machines?: Ray Kurzweil vs. the Critics of Strong AI*. Seattle: Discovery Institute.
- Russell, Peter. 1983. *The Global Brain: Speculation on the Evolutionary Leap to Planetary Consciousness*. Los Angeles: Tarcher.
- Seidensticker, Robert B. 2006. *Future Hype: The Myths of Technology Change*. San Francisco: Berrett-Koehler Publishers.
- Shaker, Anthony F. 2019. "Persons in Islamic Philosophy from Ibn Sīnā to Sabzavārī." In *Persons: A History*, ed. Antonia LoLordo, 87–122. Oxford: Oxford University Press.
- Sorgner, Stefan Lorenz. 2016. *Transhumanismus: "Die gefährlichste Idee der Welt"!? Freiburg: Herder.*
- Stock, Gregory. 1993. *Metaman: The Merging of Humans and Machines into a Global Superorganism*. New York: Simon & Schuster.
- Vinge, Vernor. 1993. "The Coming Technological Singularity: How to Survive in the Post-Human Era." <http://mindstalk.net/vinge/vinge-sing.html>. Accessed April 28 2025.
- Wilson, Daniel H. 2007. *Where's My Jetpack? A Guide to the Amazing Science Fiction Future that Never Arrived*. London: Bloomsbury.