*Journal of Philosophy of Life* Vol.15, No.2 (July 2025):73-77

[Essay]

# From Humanity to Posthumanity
## An Ontological Barrier

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**Abstract**

Humanity is described as a system at the edge of chaos, a balance between order and disorder. The essay also discusses the ontological barrier in artificial intelligence systems that lack the awareness of their own finitude.

Humanity refers to a concept, as well as to a physical reality. As a concept, it refers to all human beings, a range of virtues, and moral principles. Its meaning thus depends on context. The term also describes common human traits.

Like other complex systems, such as the human brain and society, humanity can be described as being on the "edge of chaos", where the equilibrium between order and chaos coexists. This balance enables the emergence of adaptability and creativity.

Many systems, including humanity and society, are fluctuating between order and chaos, or between stability and instability. Within a society, an individual human being exhibits capacity for both enlightenment and darkness, good and evil, creativity and destruction, cooperation and conflict, tilting toward one side or the other, and often finding equilibrium between the two. These also apply to humanity.

Each individual lives with uncertainty and in a unique reality. This human life is filled with conflicts on different levels, which are typically related to ego and desire, as well as to the limited understanding of both the self and other individuals. As humanity is divided on many things, the development of technological innovations having unintended consequences, combined with this fragmentation of humanity, can become increasingly dangerous for its survival. This is because humans can get humanity into trouble, but they cannot solve the resulting problems. This is also compounded by the inability of humans to anticipate the

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unintended consequences of their actions. All of these indicate that humans are not only the greatest danger to humanity, but to themselves as well.

The concept of humanity also denotes various virtues, which do not really represent inherent qualities of human beings, but emerge when required for adaptation in society. Humans are capable of having these virtues; however, these virtues, these concepts, are nearly impossible to permanently realize in practice. It is also difficult to form a universal framework for humanity, since it would require merging multitudes of experiences and views within a single system. There are no standardized units or scales to classify thoughts and experiences for detailed analysis or universal agreement. But even if there were such units and scales, it would only be useful for theoretical descriptions, but futile for the resolution of the dilemma of "how to fix humanity." This is because, although it is possible to temporarily influence human behavior, it is impossible to change fundamental human nature.

It is also important to consider some vital limitations of human societies. This includes short-term thinking. Despite existential threats from various sources, human beings are so short-sighted that their inability to think in terms of, for instance, 100 years can lead to catastrophic consequences for humanity.

Another limitation is the combination of ignorance and conformity, which is expected to be one of the factors that makes humanity highly ineffective and susceptible to stagnation and inhibition of critical thinking, causing democratic processes to decline.

For human beings, some of the persistent goals have been to extend their capabilities and lifespan. It is possible that in the foreseeable future, technological developments could lead to the emergence of posthumans imbued with artificial intelligence (AI). The question is, can AI truly replicate the whole spectrum of human intelligence, including its different types? These types of human intelligence include, for example, emotional intelligence that will be hard to replicate without having the senses of parents and the finitude of human life. In addition, lacking various biological limitations, it will be impossible for posthumans to have empathy that is derived from lived experiences, rather than learned through training algorithms.

Another important question is whether the absence of emotional intelligence would impede the human-like senses of imagination, creativity, purpose, and meaning in posthumans, and if they lacked all of these attributes, would the posthuman intelligence stagnate and also fade away with time?

It is instructive to compare the neural network of the human brain with electronic processors employed in AI systems. The dynamic processing in the neural networks of the brain is characteristic of systems at the edge of chaos, and this explains how imagination and creativity emerge from these networks. In contrast, electronic processors used in AI systems employ predictable algorithms that lack such random processes. These differences explain the presence of creativity in the human brain and its absence in AI systems. In this context, it is important to note that there is ongoing research to introduce random elements into electronic systems and AI algorithms.

Humans exist in the shadow of mortality. The end of existence can come anytime as life unfolds in uncertainty and struggle for survival. Throughout life, from the beginning, one experiences the passing of grandparents and then parents. These real-life experiences and this sense of human finitude from an early age imbue humans with a certain urgency to live and strive toward some meaning.

In contrast, artificial intelligence and posthumanity based on it would not only lack such senses and experiences, but they would also not have any notion of parents and associated emotional connections. More importantly, AI systems cannot conceptualize, comprehend, and internalize such existential realities as their own existence, conscious awareness, and selfhood. Thus, as AI systems cannot understand their state of being, they also cannot comprehend their own finitude or mortality. All of these lead to what can be referred to as the "AI ontological barrier" (or, alternatively, as the "AI finitude barrier"). This barrier highlights the fundamental difference between human and artificial states of being. Thus, this AI ontological barrier represents a conceptual limit that prevents AI systems from achieving human-like existential awareness and the comprehension of mortality or finitude.

Since the AI ontological barrier limits existential understanding, in effect it prevents the full spectrum of human consciousness, and essentially this barrier separates the artificial from the existential. Therefore, this barrier is a fundamental limit to artificial intelligence. This can be compared to analogous limits in physics and mathematics, related to the Heisenberg uncertainty principle and the Gödel incompleteness theorem. These theorems establish the limits in describing reality, as they define the limits of measurement and knowledge. The inability of AI to grasp the finite nature of existence is a structural limit, rather than a technical problem.

The AI systems lack an experiential foundation. It is this experiential basis

that gives meaning to human life. Importantly, for humans, meaning arises from the personal experience of finitude. Crucially, AI lacks understanding of its own transience, which prevents it from comprehending human existential meaning. This meaning could originate, for example, from pursuing elusive truths, creating art, lightening the burden of life for others, or contributing to a greater cause.

Some of the defining elements that are essential for human intelligence are self-awareness, consciousness, and emotion, which AI lacks, and this in effect constrains it to achieve the full spectrum of different types of human intelligence. If posthumans develop some sort of imagination and creativity and meaning, without needing human-like emotional intelligence that gives rise to these human attributes, then humanity will simply fade away completely and remain just relics of history. In a way, posthumans, with their emotionless logic, would be better attuned to the universe, which is indifferent to human emotions. Thus, it will end up in a more coherent relationship between emotionless posthumans and an indifferent universe. And what is remarkable is that it is a match made by humans themselves, who invented AI.

However, in the final analysis, from a cosmic perspective, all comparisons and advantages and disadvantages and limits of intelligence in general, whether human or artificial, become insignificant or irrelevant. This is because in the end, all things change and fade away.

In deep time, all things, including biological life and digital posthumanity, have an expiration date. The thing that matters most for both humans and posthumans is not how long they exist, but how meaningful, with emotions and experiences, their finite existence is. And although the human emotional journey through life is often painful and filled with loss and disappointment, it has some moments that make the journey itself more meaningful, as compared to posthumanity, which may end up having dull and emotionless existence without experiencing genuine elation from creativity, art, and music.

Futurology is fruitless. The future is uncertain, since it involves a countless number of both known and unknown variables. Thus, in general, the future of humanity is also uncertain. However, one development is fairly plausible. With technological developments, humanity may eventually transform into more survivable synthetic systems imbued with artificial intelligence. If this happens, and if humanity transforms into posthumanity, the only solace will be that humanity had a great passage through time, although lasting only briefly in cosmic terms.

Humanity will eventually fade away, but its legacy will endure. Humans discovered the laws of the universe and created art, decoded the human genome and explored the quantum world, and sent probes into space and developed artificial intelligence that surpasses their skills in certain domains. Above all, humans introduced morality and created a concept of meaning, which seems to be missing from the design of the universe.

Humans create meaning through striving for something. This striving, rather than arriving, is what gives life some meaning. But, because of various limits, including physical and cognitive constraints, humans will never completely understand the universe. They will never arrive. However, in the final analysis, it is the pursuit of understanding that matters, even if it will end in oblivion due to the entropy law. But this is not absurd. It is human fortitude in creating meaning in the presence of the unknown and the inescapable human condition, in which the universe provides a stage, and the human mind narrates the story.