California Institute of Integral Studies

THE POST-HUMAN –

TECHNOLOGICAL VS. SUBJECTIVE PERSPECTIVES

Bergon, Aurobindo, and Teilhard

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ABSTRACT

With humans, evolution became aware of itself and with this awareness the desire to predict, control, and shape the next phase of evolution, known as post-humanism. The different worldviews have brought diversity of perspectives on post-humans and their evolutionary journey. While Ray Kurzweil, an American contemporary futurist and technocrat, believes in using the exponential technological growth, also called singularity, to create, and control the post-human personhood in the form of human-machine, Sri Aurobindo, an Indian philosopher and mystic, proposed subjective psychological praxis to prepare individuals for the descent of Supermind. Some of the French philosophers such as Teilhard de Chardin and Gilbert Simondon navigated the position of future psycho-social development through the proper usage of technology. As the future carries a certain probability for all potential hypotheses to be true, this paper explores the technological and subjective perspectives on post-humanism, with an intention to enable a constructive dialog among seemingly divergent viewpoints.

Introduction

"Man is a rope, tied between beast and overman—a rope over an abyss … what is great in man is that he is a bridge and not an end."

Nietzsche, Thus Spoke Zarathustra[1]

Nietzsche's notion of a human as a rope stretched across the abyss between the animal and overman, calls for the definition, idea or type for "overman." For centuries, humankind has been fascinated with the idea of either surpassing the current capabilities of the individual human or speculating the new collective after-human species. In essence, Gilgamesh's search for "immortality" in the *Epic of Gilgamesh*, one of the earliest surviving great works of literature (circa 2100 BCE), is not much different than "tackling of aging" by Google's current research company *Calico Life Sciences*. The concepts of *Avatar* (the divine on Earth in human form) in various religions such as Hinduism, Buddhism, and Christianity, provide a picture beyond human capabilities. Krishna's knowledge of all his prior births, Buddha's birth from the side of his mother, and Jesus's resurrection, in their respective communities, could also indicate the human fascination towards more developed capabilities.

Even though different religions have their own cosmology of genesis, most of the philosophers and the scientists agree on evolution from matter, to plants and animals, and finally to humans. Sir Julian Huxley said, "biological evolution produces more varied, more intense, and more highly organized mental activity and awareness, .. until in (hu)mankind it becomes the

[1] Nietzche, *Thus Spoke Zarathustra*, Zarathustra Prologue, part 3-4

most important characteristic of life."[2] Through humanity, evolution was, at last, becoming conscious of itself[3]. At this critical point, the human attempt to know itself started a psychosocial process which was characterized by cultural changes in the historical and pre-historical period.[4] The scientific revolution, started by Copernicus in the 15th century, provided new scientific tools for humankind to become more aware of themselves and their surroundings. The human being became much more powerful to create and destroy their own evolution through advancements in various fields such as biotechnology, genetic engineering, and nuclear physics. The infiltration of new technologies created new psychosocial landscapes where human beings were more connected than ever, similar to McLuhan's "global village," [5] where our globe can be viewed as a village through electric technology. The new awareness generated from the availability of global information makes a human more conscious of their becoming. The human desire to predict and to control the next becoming has generated a series of technological startups and capitalistic ventures striving to create and catch "the next wave," examples include creating human-like robots or sending humans into the stars. It is a hard struggle to be a human of the 21st century if one has a desire to escape technology. If there is a sphere of human thought, like "noosphere" as introduced by Pierre Teilhard de Chardin, then it must include the impact of technology.

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[2] Sir Julian Huxley in the forward for Teilhardde Chardin's *The Phenomena of Man*, 27

[3] Ibid., 20

[4] Ibid., 27

[5] McLuhan used the term "Global Village" in his book *The Gutenberg Galaxy: The Making of Typographic Man (1962)*

As growth in technology becomes exponential, there are futurists like Ray Kurzweil (b. 1948) who predicts the imminence of *singularity*, and the age of the spiritual machines. As a concept, singularity is based on Moore's Law where George Moore, the inventor of the integrated circuit, claimed in 1975 that every two years, one can pack twice as many transistors in the integrated circuit.[6] Drawing the equivalence of Moore's Law to the growth in technological expansion, Ray Kurzweil explains singularity as, "the nearly vertical phase of exponential growth that occurs when the rate is so extreme that technology appears to be expanding at infinite speed."[7] This infinite technological expansion in the "near" future can create new levels of consciousness where human-machine interactions can create the equivalence of new "healthier," "smarter," and "long living" post-human species. Ray Kurzweil's objective concept of the post-human seems to be in sharp contrast with Sri Aurobindo's (1872-1950) subjective methodology for a post-human personhood. This personhood is based on developing the capacities of the source of individuation, the psychic being, to transcend cosmic existence in an identity with a transcendental source, the Supermind.[8] Sri Aurobindo refers to this process of practical psychology as a triple transformation. Both Ray Kurzweil and Sri Aurobindo posited ideas on the stages of human evolution, where they broadly agree on first three (matter, life, and mind), but they then take a different course on future scenarios. While Ray Kurzweil's focuses on further development of brain power in humankind and creation of such capabilities in machines to further co-create the new human, Sri Aurobindo focuses on the internal transition in

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[6] Kurzweil, *The Age of Spiritual Machines*, 27.

[7] Kurzweil, *The Singularity is Near*, 24.

[8] Banerjee, *Critical Post-humanism and Planetary Future*, 258.

becoming one with cosmic knowledge to develop integral human capabilities of which the brain (mental) will be just one part. However, there are philosophers such as Teilhard (1881-1955), and Simondon (1924-1989), who believed that the post-human person will be a result of a transfer of information between the subjective individual and the exterior world.

This paper explores the divergent philosophies of American contemporary futurist and technocrat, Ray Kurzweil, and late 19th century Indian philosopher, yogi, and poet, Sri Aurobindo on the future evolution and characteristics of post-human personhood, in the following first two sections respectively. The third section reviews the ideas, based on co-dependency, of late 19th century French philosopher and Jesuit priest, Teilhard and 20th century French philosopher, Simondon. The last section concludes with my hopes and fears of the potential post-human. The paper is an attempt to respect the different views on post-humanism, as Niels Bohr famously said, "it is difficult to predict, especially the future."

Ray Kurzweil

"At the age of five, I had the idea that I would become an inventor," states Ray Kurzweil in his book *The Singularity is Near* (2005).[9] Kurzweil grew up in New York City, reading science fiction and building robotics games. When he discovered the computer in 1960 at the age of 12, his life-long fascination with their ability to model and recreate the world started. After graduating from MIT in 1970, in Computer Science and Literature, Kurzweil became an inventor and entrepreneur. During the 1990s he gathered empirical data on the apparent acceleration of all information related technologies and sought to refine the mathematical models underlying those

[9] Kurzweil, *The Singularity is Near*, 1

observations.[10] These observations enabled him to reflect and predict the future of civilization and its relationship to humans in the universe. Currently (2017), Kurzweil is Director of Engineering at Google, co-founder of Singularity University, and world leading thinker and futurist. He describes technology as a study of crafting (Greek *tekne* meaning craft or art), in which crafting refers to the shaping of resources for a practical purpose, and requires two attributes of its creator: intelligence and the physical ability to manipulate the environment.[11]

Per Kurzweil[12], evolution is a process of creating patterns of increasing order, which may or may not increase complexity, but usually does. A primary reason evolution speeds up is that it builds on its own increasing order, with even more sophisticated means of recording and manipulating information, increasing "returns," such as speed and efficiency, of an evolutionary process at least exponentially over time. Evolution applies positive feedback with more capable methods resulting in one stage of evolutionary progress used to create another. An evolutionary process is not a closed system and draws upon the chaos in the larger system. Based on these conditions, Kurzweil divides evolution into six epochs. The first epoch is "Physics and Chemistry," in which information is provided in atomic structures, followed by "Biology," starting several billion years ago where complex aggregation of molecules forms self-replicating mechanisms and life originated. Ultimately, biological systems evolved a precise digital mechanism (DNA), to store information describing a larger society of molecules. The second epoch mechanisms (DNA, and RNA), enabled the third epoch information processing

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[10] Ibid., 3

[11] Kurzweil, *The Age of Spiritual Machines*, 16,18

[12] Kurzweil, *The Singularity is Near*, 14, 40-41

mechanisms of “Brains” and the nervous system of the organisms, to arise. We are currently living in the fourth epoch of "Technology," where the human brain created technology, which was itself capable of sensing, storing, and evaluating elaborate patterns of information. The speed of change in this technology epoch has become exponential. If we go back fifty thousand years, not much happened over a one-thousand-year period. Now, new paradigms like the worldwide web, progresses from inception to mass development within only a decade.

In the fifth epoch, starting several decades, not centuries, ahead, Kurzweil predicts the merger of human technology with human intelligence. This merger is expected to integrate the vast knowledge embedded in our brains with the vastly greater capacity, speed, and knowledge sharing abilities of technology. This human-machine civilization will overcome the profound limitations of biological evolution, and will allow us to overcome age-old human problems, however, it has the potential to amplify our destructive inclinations. The beginning of the singularity is expected to be marked by three revolutions in Genetics, Nanotechnology, and Robotics, (GNR[13]). By understanding the information processed in our genetics, human biology could be reprogramed to achieve the virtual elimination of disease, dramatic expansion of human potential, and radical life extension. Natural humans would only be “second class robots.” The nanotechnology revolution will redesign and rebuild, molecule by molecule, bodies, brains, and the world with which we interact, going far beyond the limitations of biology. The human-level robots, with intelligence derived from a human, can be redesigned to far exceed human intelligence, making them smart enough to anticipate and overcome any obstacles that stand in its path. The fifth epoch will enable humans to live healthier, longer, and smarter, if the destructive potentials of the advancements can be put in check. For example, genetics can bring

[13] Kurzweil, *The Singularity is Near*, 205-206

new bioengineered viral threats, nanotechnology can create possibilities of its own self-replicating dangers, and human-level robots could try to overcome humans.

The sixth epoch according to Kurzweil, is called “The universe wakes up.” In the aftermath of singularity, intelligence derived from its biological origins in human brains and its technological origins in human ingenuity, will begin to saturate matter and energy in its midst, and will reorganize to spread out from its origin on Earth. The speed of light as a bounding factor for transfer of information could be circumvented. Human civilization could potentially infuse the rest of the universe with its creativity and intelligence, where the "dumb" matter and mechanisms of the universe would be transformed into exquisitely sublime forms of intelligence. The future-human body will be more durable and almost ever-lasting. The billions of nanobots in this body, will travel in bloodstreams to destroy pathogens, correct DNA error, eliminate toxins, enabling the possibility of indefinite life without aging. The interaction of nanobots with biological neurons will provide full-immersion virtual reality and will incorporate all the senses. The future-human brains will be able to download new knowledge and skills, and there won't be a clear distinction between work and play. As we approach the limits of the corner of our galaxy, the future-human has the potential to saturate the universe with vastly expanded intelligence, developing a universe-scale computer.[14] As per Kurzweil[15], “this is the ultimate destiny of the singularity and of the universe.”

[14] Kurzweil, *The Singularity is Near*, 364.

[15] Ibid., 21

Sri Aurobindo – A vast universal self-delight must be the cause, essence, and object of cosmic existence[16]

While Kurzweil focused on "what" is on the cutting edge of the next evolution, Sri Aurobindo dwelled on "why" evolution happens. Sri Aurobindo sought the essential significance of the bare, outward observed facts, what is meant by evolution, what is it that evolves, from what, and by what force of necessity.[17] Sri Aurobindo (1872-1950) was born in Calcutta, India, and received a classical British education in London and Cambridge from 1879-1893. When he returned to India in 1893, he spoke English and French, and read Greek, Latin, and Italian, as foreign languages. During his years as Professor of English at Baroda College, India (1893-1905), he achieved proficiency in Sanskrit, Marathi, Gujarati, and Bengali, wrote numerous poems, and developed a deep identification with Indian culture. In the first decade of the twentieth century, he became involved with the Indian movement of independence from British rule, and spent time in Alipur jail where he meditated on the Gita, felt the presence of Krishna, the inspiration of Vivekananda, and resolved to work for the renewed spiritualization of Indian culture. Soon after his year in prison (1908-1909), Sri Aurobindo settled in Pondicherry until his death in 1950, where he developed his systematic philosophy, literary works, and integral yoga systems. His positive blending of Western and Indian values and his urge to transcend the limitations of any particular culture, has provided a critical philosophical system drawn out of Indian spirituality and Western intellectualism.[18]

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[16] McDermott, *The Essential Aurobindo*, 87

[17] Ibid., 71

[18] McDermott, *The Essential Aurobindo*, 13-25.

Sri Aurobindo believed that the word *evolution*, in its intrinsic sense, includes the necessity of the previous involution. Though he trusted the stages of evolution from matter to life and finally to mind, he argued against the mechanistic process of evolution. For him, the evolution of life out of matter was the slow bringing out of what already existed in suppressed facts and in eternal potentiality[19]. Therefore, what manifests itself here in a body must be involved from the beginning in the whole of matter, and whatever is above mind must be latent.[20] In this argument, the mind (humans), is just a stage in cosmic physical and spiritual evolution. Physical evolution is moving towards more complex and subtle development of a supporting structure, while spiritual evolution is producing self-creation, by bringing out what was implicit in the Being.[21] Per Sri Aurobindo[22], "The creation depends upon and moves between the biune principle of unity and multiplicity; it is a manifoldness of idea, force, and form, which is the expression of an original unity, and it is an eternal oneness which is the foundation and reality of the multiple worlds and makes their play possible." The higher trinity is source and basis of all existence, which is what Sri Aurobindo called it, leveraging from the ancient Indian scripture called "The Vedas", as *Sach-chid-ananda*: Existence, Consciousness-Force, and Bliss. The entire cosmos is an expression and action of *Sach-chid-ananda's* essential reality, with matter being the subordinate function of Existence, life as Consciousness-Force, and the psyche as Bliss[23]. Pure

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[19] Ibid., 72.

[20] Ibid., 73.

[21] Ibid., 75.

[22] Ibid., 83.

[23] Sri Aurobindo though talk about another level of psyche in the stages of evolution i.e. from matter to life, from life to psyche, and from psyche to mind, for simplicity purposes sometimes he skips "psyche" stage and moves from life to mind.

Existence descends through the interplay of Consciousness-Force and Bliss, while matter ascends through developing life, psyche, and mind. At the knot of two, the higher and lower realms, the mind meets the Supermind,[24] with a veil between.[25] Sri Aurobindo defines Supermind as, "the Truth or Real-Idea, inherent in all cosmic force and existence, which is necessary, itself remaining infinite, to determine and combine and uphold relation and order and the great lines of manifestation."[26] The next stage in the evolution of mind (humans), is the Supermind which is in-between the ascent of mind and descent of *Sach-chid-ananda.*

The intellectual conception of what Supermind is could be a daunting task, as new language might be required to go beyond the poor abstracts of the mind. This highlights a key difference between Sri Aurobindo's and Kurzweil's philosophy. While Kurzweil's stages of future evolution are based on the intensification of the strengths of human mind, Sri Aurobindo's future evolution requires an individual psychological praxis to go beyond mind by ascending towards Supermind, participating in creative evolution, and transforming the descent of *Sach-chid-ananda* into a human. To permanently establish this, the new order of existence requires a radical change in the entire human nature, which would be achieved through a process which Sri Aurobindo describes as "the triple transformation" of psychic, spiritual, and supra-mental consciousness. These three conditions are required for ascension towards Supermind.

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[24] In Vedas, the higher hemisphere is known as *Vidya* (Knowledge) and the lower hemisphere is known as *Avidya* (Ignorance). The Supermind is known as Vijnana

[25] McDermott, *The Essential Aurobindo*, 85

[26] Ibid., 88.

The first condition is an increasing control of the individual over their own nature and conscious openness to *Sach-chid-ananda* is needed, which could be achieved through the paths of the intellect, heart, or will.[27] The second condition consists of conscious obedience and surrender of the whole being to the light, truth, and force from above. While the third condition is unification of the whole being around the true self, achieved by breaking down the wall between inner and outer nature.[28]

There are four steps of the ascent, with conditions increasingly becoming satisfied, , that lead from human intelligence to Supermind. These four steps are Higher Mind, Illumined Mind, Intuitive Mind, and Overmind. Each step entails increased openness of faculties beyond the mind, opens and unveils the boundary between the lower and upper realms, and enables nature to ready for the descent of Supermind in order to create the post-human. Sri Aurobindo describes the moment the creation of the post-human happens as[29], "the Truth Consciousness, finding evolutionary nature ready, has to descend into her and enable her to liberate the supramental principle within her: so must be created the supramental being as the first unveiled manifestation of the truth of the Self in the material universe."

Sri Aurobindo's vision of the post-human is in stark contrast with the vision of Kurzweil. Sri Aurobindo propagates the individual subjective psychological praxis to achieve post-human personhood, while Kurzweil focuses on the global usage of objective technology. Sri Aurobindo investigates the essence of the universe, and Kurzweil works on changing the existence of the

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[27] The three paths are also provided in the Gita as *Jnana Yoga*, *Bhakti Yoga*, and *Karma Yoga*

[28] Sri Aurobindo, *The Future Evolution of Man*, 77-83

[29] Ibid., 76.

universe. Sri Aurobindo solicits going beyond mental faculties to enable ascension towards the Supermind (the Truth or Real-Idea), as Kurzweil insists on using human brains to create superior human-machine brains, capable of circumventing even the limits of the speed of light for information transfer. The post-human of Sri Aurobindo will be the descent of Supermind, which exists in the upper realm, into the humans, while the post-human of Kurzweil will the human built human-machines. Sri Aurobindo asks humanity to be open to *Sach-chid-ananda,* infinite Existence, Consciousness-Force, Bliss), while Kurzweil suggests the building of human-machines to control finite existence. Sri Aurobindo builds his philosophy around spirituality, and Kurzweil has no need for such hypotheses.

Synthesis: Teilhard de Chardin and Simondon

According to Hegel, the contradiction between Being and Nothing does not lead to the rejection of both concepts, but rather to a positive result, namely to the introduction of a new concept, a synthesis which unifies the two earlier opposed concepts.[30] The synthesis of the divergent ideas of Kurzweil and Sri Aurobindo could lead to a philosophy of evolution where both technological and subjective development would create a post-human person. French philosophers, such as Teilhard de Chardin and Simondon have worked with such perspective.

Sri Aurobindo's post-human person is based primarily on the development of individual psychological consciousness. Though he has written social texts on an evolution of collective universal conditions and their relationship with human agency, his social and psychological text

[30] Hegel's Dialectic, Stanford encyclopedia, https://plato.stanford.edu/entries/hegel-dialectics/

are mainly separated.[31] Kurzweil, on the other hand, has focused mainly on the development of collective universal conditions through technology which would ultimately impact the changes in individual consciousness. He works on the further development of the fields of Genetics, Nanotechnology, and Robotics, using human consciousness, only to further integrate this new knowledge back into this consciousness, creating a recursive loop to attain exponential growth and singularity. However, where Sri Aurobindo circumvents the power of collective consciousness in shaping individual consciousness, Kurzweil bypasses the need of individual psychological development to develop collective universal conditions.

Teilhard de Chardin (1818-1955), a French Jesuit, philosopher and a paleontologist, conceived humankind to be an unfinished product of past evolution, and firmly believed that in the future humanity would become a transcendent result of psychosocial development. The evolution for Teilhard, has meaning. He argues that just as living organisms sprung from inorganic matter and evolved into ever more complex thinking beings, humans are evolving toward an "Omega Point." This Omega Point has been illustrated[32] as a precursor to Kurzweil's. However, unlike Kurzweil, for Teilhard, the Omega Point also has spiritual and religious significance[33]. According to Teilhard, over time the unification of consciousness in the noosphere would lead to an intelligence explosion, called the Omega Point. This would then

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[31] Banerjee, *Critical Post-humanism and Planetary Future*, 273, "In 1973, the year of her passing, the Mother gave a New Year message which tied the goal of psychic evolution to a collective yoga at the planetary level."

[32] Eric Steinhart, The Singularity: Beyond Philosophy of Mind, http://ericsteinhart.com/articles/singularity.pdf

[33] Teilhard leveraged the term "Omega Point" from St John's Revelation of "the Alpha and Omega.."

enable humanity to break through the material framework of time and space, and merge seamlessly with the Divine, transcending to post-humanity. Teilhard believed that the entire cosmos is in constant evolution, hence he preferred the term "cosmogenesis," rather than cosmology. Cosmogenesis for Teilhard is a process of increasing complexity, self-organization, and self-awareness of the cosmos,[34] and humans collectively participate in this process.

Teilhard developed the theory of the *noosphere*, which acts as a transforming agency promoting individual and collective development. Teilhard's noosphere is a thinking layer[35], superposed on the living layer of the biosphere, and was developed as a result of increased complexity and consciousness with the evolution of mind. Sir Julian Huxley said[36], "In Teilhard's view, the increase of human numbers combined with the improvement of human communications has fused all the parts of the noosphere together." Social phenomena for Teilhard are part of the noosphere, and the growth of technology and networking may lead to the development of noosphere. As per McLuhan[37], "The externalization of our senses creates what de Chardin calls the 'noosphere' or a technological brain for the world. Instead of tending towards a vast Alexandrian library the world has become a computer, an electronic brain, exactly as in an infantile piece of science fiction." Teilhard's theory of the noosphere is also considered a prediction of the world wide web, where the unified consciousness of humankind is stored in an invisible thinking layer, further shaping the individual consciousness.

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[34] Banerjee, *Critical Post-humanism and Planetary Future*, 258.

[35] Teilhard, *The Phenomenon of Man*, 182.

[36] Ibid., 17.

[37] Mcluhan, *The Mechanical Bride*, 32

Gilbert Simondon (1924 - 1989), a French philosopher well known for his theory of individuation, sees a techno-genetic individuation co-evolving with psychic individuation in the human.[38] In *Du Mode, D'existence Des Objects Techniques*, (On the Mode of Existence of Technical Objects), which was his supplementary thesis for his doctorate, Simodon considers the individuation of technical beings in that they are also a genesis. According to Simondon, "The genesis of the technical object appertains to its being…The petrol engine is not just any such engine in time and space, but the fact that there is a development, a continuity from the first engines to those that we know, which are still evolving."[39] It is possible then, to bring out the sense of technical objects, and to reinstate technics with respect to its participation in culture,[40] and hence technical objects are in the constant process of evolution.

Simondon sees the individuation of technical objects following three orders related to three historical phases of human individuation - the premodern agrarian phase marked by artisanal manual tools; the modern industrial phase marked by a thermodynamic engine driven machines; and the postmodern and postindustrial phase marked by information processing.[41] While the pre-industrial phase brought harmonious relationships between humanity, nature, and technical objects, the industrial phase with its mass production has brought alienation. Simondon percieved the next phase of information processing will bring harmonization, as human beings in the future would be able to creatively interact with nature through an invisible technological

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[38] Banerjee, *Critical Post-humanism and Planetary Future*, 273

[39] Simondon, *Du mode d'existence des objets techniques*, 19.

[40] Barthélémy, *Life, and Technology: Beyond Simondon*, 51

[41] Banerjee, *Critical Post-humanism and Planetary Future*, 274

layer. As for Simondon[42], an individual subject is the result of psychic and collective individuation, and the collective societal action will in turn impact the development of the individual through technological progress.

Conclusion

Whether one loves or hates it, technology is going to stay and develop in the world. Technology has become a part of the paradigm we are living in, and one of the tasks of this generation is to constructively integrate it with the transformation of individuals and society. However, this task is quite daunting, as the divergent viewpoints of technological and subjective thought-process can lead to "othering," and the formation of "cults" based on a particular belief. With the scientific revolution, the debate between facts and beliefs, science and religion, and technology and spirituality had become a central facet of the modern and post-modern human. The post-human should transcend this debate, and bring unity to the opposites. Teilhard's belief in the ability of technology to shape the individual consciousness, and Simondon's trust in information processing as bringing harmonization in the world, highlights a desire in uniting the perceived opposites. However, both Teilhard and Simondon wrote about technology between the 1920s and the 1960s, and one can only imagine their viewpoints in the twenty-first century where technology has grown exponentially. A revised perspective, leveraging the past, is required in current times.

In the fifth epoch, a few decades from now, Kurzweil predicts the merger of humanity and technology. The merger is expected to create a human-machine, a post-human, where the

[42] In his doctoral thesis on "Psychic and Collective Individuation"

machine will be used to further increase the capacities of the human body and mind. One should ask whether human beings will be able to sustain this new intelligence in their current material form. Sri Aurobindo predicted the descent of Supermind, and in 1956 his spiritual partner and collaborator, Mirra Alfassa, aka The Mother, announced the descent of Supermind through her body.[43] To believers, this incidence serves as an indicator of the future evolution of human-kind through the triple transformation of psychic, spiritual, and supramental consciousness, with Mother's body acting as a container. Whether it is a descent of the Supermind or a merging of human consciousness with machines, humans are expected to participate in paving the way for the post-human; this is quite different than evolution so far, such as from animals to humans, where evolution was not consciously shaped. The perceived participatory role of humans in further evolution posits additional importance to the decisions humans will collectively make, hence, furthering the need for debates and discussions on *all* viewpoints, rather than "othering."

Since the beginning, human consciousness has created, controlled, and used technology as a tool, to enhance our abilities. However, we have reached a stage where technology has thepotential to create, modify, control, and use us. Even Kurzweil states, "We can protect ourselves from the biological hazards, but what will protect us from the pathological intelligence that exceeds our own"[44] If technology is capable of attaining such a power, the human also needs to rise-up to create a human body as a container able to hold such a power. The subjective psychological praxis of Sri Aurobindo could provide the solution. The cerebral intelligence, though a special feature of human consciousness, is one of the faculties of humans, along with the different senses and emotions which humans share with animals. As animals cannot envision

[43] McDermott, *The Essential Aurobindo*, 24
[44] Kurzweil, *The Singularity is Near*, 206

what humans are doing, it is difficult for us to envision what post-humans might be doing. Anthropologically, animals also developed the body structure to hold the development of the brain. Kurzweil's evolution suggests the development of intelligence, but not overall humanity to rise up to that level of evolution. The integral yoga of Sri Aurobindo entails integrating various facilities to enable descent of the Supermind. Integration of the philosophies of Kurzweil and Sri Aurobindo could help in enhancing human intelligence through the use of technology and developing the human body to contain that intelligence through the descent of Supermind. Potentially, this is what Nietzsche meant when he described his uebermensch, "as an 'idealistic' type of a higher kind of man, half 'saint,' half 'genius.'"[45]

[45] Nietzsche, *Thus Spoke Zarathustra*, 261

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