

Religion, Transhumanism and the Vision of Teilhard de Chardin

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Bostrom's Thesis

In his sweeping discussion of the history of transhumanism, philosopher Nick Bostrom traces the cultural and philosophical roots of transhumanist thought by saying “we have always sought to expand the boundaries of our existence, be it socially, geographically, or mentally.”¹ The term “transhumanism” refers to technologies that can improve mental and physical aspects of the human condition such as suffering, disease, aging and death, “the belief that humans must wrest their biological destiny from evolution’s blind process of random variation. . . favoring the use of science and technology to overcome biological limitations.”² The term was first used in the 1950s by Julian Huxley, brother of Aldous Huxley, advocate of evolution and friend of Pierre Teilhard de Chardin. In his *Religion without Revelation* Huxley wrote:

The human species can, if it wishes, transcend itself—not just sporadically, an individual one way, an individual there in another way—but in its entirety, as humanity. We need a name for this new belief. Perhaps transhumanism will serve: man remaining man, but transcending himself, by realizing new possibilities of and *for his human nature*.³

Huxley’s introduction of transhumanism is of interest for several reasons: first is the corporate nature of transhumanism. Huxley sees transhumanism as a positive step for the whole of humankind rather than as individual perfection or enhancement. The second reason is the openness of transhumanism to new possibilities and thus a deepening of human nature. The

human person is in process of becoming something new because humanity, like evolution itself, possesses a vital unfolding of spirit through matter. Huxley was a good friend and an influence on Teilhard de Chardin and together they grappled with human history within the larger cosmic evolutionary universe “despite their opposing views on whether evolution had a direction.”⁴ The interest of transhumanism for these two scientists was in view of evolutionary progression and they were less concerned about human perfection than the direction of human life.

Although Huxley discussed transhumanism within the broad process of evolution, the term has come to be associated with technology, especially as Bostrom and the transhumanist movement have defined it. One of the early transhumanists, F. M. Esfandiary wrote that a transhumanist is a “transitional human, someone who by virtue of their technology usage, cultural values and lifestyle constitutes an evolutionary link to the coming era of posthumanity.”⁵ Esfandiary’s description is of interest because of its focus on the individual human as the point of technological enhancement. Transhumanists, as Bostrom writes, “emphasize the enormous potential for genuine improvements in human well-being and human flourishing,” through technological transformation.⁶ The object of transhumanism is to overcome biological limitations and strive for a better quality of life. Bostrom and other transhumanists seek to overcome human limitations that prevent the fullness of enduring life. Yet, it is precisely the natural limits of suffering and death that make evolution possible. Hence the aim to transcend humanity through technology bears within it the aim to end the evolution of organic life.

While transhumanists applaud developments in technology, they lose sight of the role of technology in evolution. The word technology, from the Greek word *techne*, translates as art or craft, and was considered a domestic science in the ancient world, compared to intellectual science or the study of things that furthered intellectual knowledge. As a domestic science,

technology was at the service of humankind, to alleviate the burden of work or to make work more efficient. David Noble claims that technology and religion have developed together in humankind. The human person created *imago Dei* is matter opened to spirit with a vocation to express this image by an evolving dialogue with the material cosmos. The Incarnation imparts the perfect archetype and model of openness of matter to spirit and the ability of matter to serve as the medium of the spirit's self-expression and creative power. Noble draws a particular link between technology and Christianity, especially monastic life, where salvation and the development of useful knowledge were linked together. Technology was a means to enhance the whole of life, to perfect the spiritual nature of matter itself. By alleviating the burden of work, technology had as its aim the unfolding life of the spirit. It became a means of spiritual liberation insofar as the efficiency of work could create more time devoted to prayer and the contemplation of God. Technology and religion have evolved together and, as a result, the technological enterprise is suffused with religious belief.⁷

Did Modern Science Displace Religion?

Bostrom identifies the rise of transhumanism with the rise of modern science and technology which, as Francis Bacon wrote, promised “to achieve mastery over nature in order to improve the living conditions of human beings.”⁸ He maintains that as modern science developed in the Renaissance, medieval religion was dispensed; God became the unnecessary hypothesis. According to Bostrom: “The otherworldliness and stale scholastic philosophy that dominated Europe during the Middle Ages gave way to a renewed intellectual vigor in the Renaissance. . . Renaissance humanism encouraged people to rely on their own observations and their own judgment rather than to defer in every matter to religious authorities.”⁹ Bostrom’s sweeping

dismissal of the Middle Ages fails to do justice to the fact that the roots of modern science *began* in the Middle Ages and developed in the Renaissance and Enlightenment. If one looks at the University of Oxford, for example, one can discover a rich, fertile period of medieval science in the thirteenth century which combined Aristotelian science *and* religious belief.¹⁰ Robert Grosseteste (d. 1253), a lector at Oxford, was one of the first Scholastics to employ Aristotle's vision of scientific reasoning to the study of light and optics, describing a physics of light that resonated with the modern Big Bang theory of the universe.¹¹ Grosseteste's scientific pursuits however were deeply religious, since he considered light as a metaphor of God. His student Roger Bacon (d.1292) used a combination of mathematics and detailed experiential descriptions of discrete phenomena in nature which set the stage for critical realism. Bacon was certain that scientific knowledge would someday give humans mastery over nature and envisioned the technical world of the future including submarines, automobiles, airplanes and other inventions that have become part of daily life.¹² For Bacon, scientific knowledge was in the service of theology, the purpose of which was to help prepare for the second coming of Christ.

Science and technology arose within Christianity not only because of contingency and the sense of linear time but also because of beliefs in salvation and immortality. The relationship between technology's development and immortality became prominent after the Black Plague which devastated Western Europe, marking a paradigm shift in cultural and intellectual endeavors. Thomas Berry viewed Christendom's turn towards salvific Redemption in the fourteenth century as a response to the Black Death in Europe.¹³ After the Black Plague the nature of human flesh to succumb to disease was every reason to distrust it. Millennial expectations were high as death lingered and technology developed as a means to foster spiritual preparedness for the coming of Christ. In the fourteenth century the Franciscan John Rupescissa

(d. 1362), known as the Father of Modern Chemistry, produced a significant volume of writings on alchemy. He claimed that knowledge of the natural world and alchemy in particular could act as a defense against the plagues and wars of the last days. His melding of apocalyptic prophecy and quasi-scientific inquiry gave rise to a new genre of alchemical writing and a novel cosmology of heaven and earth. He developed the idea that evangelical men had to be provided with appropriate means of living, not only on a spiritual level but also on a material level which included the maintenance or the restoration of health; hence the need for alchemy.¹⁴ Technological innovations that could control nature and perfect the spirit could help prepare one for the second coming of Christ. Bostrom's focus on science's achievement at the expense of religion obscures the fact that modern science arose out of deep religious convictions. While metaphysical principles of causality and contingency provided a basis for scientific progress, the stark reality of suffering and death also contributed to the development of practical science. Technology became more sophisticated in light of religious beliefs rather than as a substitution for those beliefs.

Whereas the Black Death gave new impetus to the rise of science in the Middle Ages, the prevalence of war and the rise of totalitarianism in the 20th century gave new impetus to the rise of technology. Just as an apocalyptic mentality emerged after the Black Plague, so too, a new apocalyptic *zeitgeist* arose in the 20th century marked by war, industrialization and the rise of nuclear power. At the time Huxley and Teilhard de Chardin coined the term "transhumanism," the computer or "thinking machine" was being developed. While its distal roots are in Renee Descartes' *cogito ergo sum* and the priority of the mental over the material, the computer was developed by Alan Turing, a British intelligence officer and cryptanalyst who developed the computer to decipher German codes. Turing believed that a thinking machine could be made to

mimic human intelligence. In 1950 he developed a test in which a computer was set up to fool judges into believing that it could be human. The test was performed by conducting a text-based conversation on a subject. If the computer's responses were indistinguishable from those of a human, it had passed the Turing test and could be said to be “thinking.” John McCarthy coined the term “artificial intelligence” in 1956, defining it as “the science and engineering of making intelligent machines.” Although the computer was invented for the purpose of intelligence, the potential of its power was quickly seized upon in a century of violent wars and rampant death. It is interesting that Bostrom highlights this point as well. He writes: “In the postwar era, many optimistic futurists who had become suspicious of collectively orchestrated social change found a new home for their hopes in scientific and technological progress.”¹⁵ The success of the computer to process complex information at speeds beyond human mental power has made its development attractive. Within a short span of fifty years, computer-based technology has become the principal organizer of modern life. Does technology now aim to fulfill what religion promises?

PostHuman Dreams

Although the development of modern science depends on technology, technology differs from modern science. We might describe technology today as the new philosophy of our time. Carl Mitcham notes, “a thousand or two thousand years ago the philosophical challenge was to think nature—and ourselves in the presence of nature. Today the great and the first philosophical challenge is to think technology. . .and to think ourselves in the presence of technology.”¹⁶ If the ancients grappled with the problem of being, today we must grapple with technology which has come increasingly to define being. Technology has become the mirror of

our deepest desires. In its various forms, it is changing the human person. Noreen Herzfeld writes:

In today's world, technology is central to our understanding of ourselves and the environment around us. . . .Technology plays an undeniably greater role in our lives than it has at any previous time in human history. That greater role is also seen in the power to create something new. . . .To create the new is to go outside of nature. . . the German existentialist Martin Heidegger observes that the ancient craftsman certainly made something new when he constructed a chair. A doctor might bring new health to a patient. However, neither imposed a new form on nature; rather, each worked with what is already implicit in the wood or the body. . . .The new products of modern technology do not simply "disclose" or shape nature but transform and replace nature. In this way, modern technology gives us heretofore undreamed of power.¹⁷

Transhumanism is distinctive in its particular focus on the applications of technologies to improve human bodies at the individual level. The futurist Ray Kurzweil anticipates an increasingly virtual life in which the bodily presence of human beings will become irrelevant because of artificial intelligence (AI). Kurzweil claims that machine-dependent humans will transcend death through the virtual reality of eternal life, possibly by "neurochips" or simply by becoming totally machine dependent. As we move beyond mortality through computational technology, our identity will be based on our evolving mind file. We will be software not hardware. By replacing living bodies with virtual bodies capable of transferral and duplication, we will become disembodied superminds.¹⁸

Margaret Wertheim notes that AI is spawning a philosophical shift, from reality constructed of matter and energy to reality constructed on information.¹⁹ Books such as *Digital Being* point in the same direction: information has come to define reality. This leads to the notion that “the essence of a person can be separated from their body and represented in digital form—an immortal digital soul waiting to be freed—an idea she [Wertheim] sees as medieval dualism reincarnated.”²⁰ A new term *cybergnosticism* has been coined to describe the “belief that the physical world is impure or inefficient, and that existence in the form of pure information is better and should be pursued.”²¹ Michael Heim sees strong links between AI and Platonic, Gnostic and Hermetic traditions insofar as they emphasize the goodness of spiritual reality and corruption of material reality, an idea consonant with cyber life and posthumanism. Heim writes:

Cyberspace is Platonism as a working product. The cybernaut seated before us, strapped into sensory-input devices, appears to be, and is indeed, lost to this world. Suspended in computer space, the cybernaut leaves the prison of the body and emerges in a world of digital sensation.”²²

The myth of technology is appealing and the power of technology is seductive. We now have the power not only to evolve ourselves but to direct the course of evolution. Whereas in biological evolution nature influences or mutually interacts with the species, in technological evolution, species controls nature. In the human person biological evolution has become technological evolution, and evolution has become directed toward a new, emerging posthuman species, *techno sapiens*. Are we heading towards a postbiological world?

Alfred Kracher opines that nature and technology have become at odds with each other, forming competing myths. “Nature is not an object that we must strive to overpower by our inventiveness,” he writes, “but rather that we are ourselves are part of nature and need to acknowledge nature’s autonomy for the sake of our own survival.”²³ The influence of computer technology on human organic connectedness is cause for concern. Once people of the earth, we have become a people of the screen. Is web-based technology uniting us more together through a new sense of community or is it creating a new dualism of mind and body, matter and spirit that opposes the whole ecological movement of interrelatedness? Not all technologies are culprits of dualism, however, since there are areas of technology that can promote the good of the earth. Those technologies which enforce an unhealthy dualism, however, draw our attention away from the earth, stoking our desires for more perfect and controlled lives. R. Cole-Turner points to the pelagian lure of technology which “offers the illusion of a managed grace”; the self that can fix itself up without changing itself.²⁴ Technologies of the self, whether a cyber self or new genetic self, “are self-asserting rather than self-transforming, enhancing the ego rather than surrendering it to a greater reality and purpose.”²⁵ The illusion of self-control through technology, according to Cole-Turner, is a selfish control. We believe we have created the means to control the self when in truth we have only increased the power of the self to control, leaving the self unchanged yet self-changing, uncontrollable yet more controlling. Technology is not out of control because it is a real power, he states, but because “we cannot control what it is suppose to control it: namely, ourselves.”²⁶

Technologies which promise a world liberated from suffering and death aim towards a postbiological world, seeking to transcend biological limits and uncertainties. R. Louv points out that nature means natural wildness, biodiversity and abundance. It serves as a blank slate upon

which a child draws and reinterprets the culture's fantasies....a creation that is somehow richer than the scientifically accessible world, because it interacts more intimately with a person.²⁷ A thoroughly domesticated nature, he states, can no longer fulfill this role. When the artificiality of a random number algorithm such as a computer game replaces the surprises of natural richness, we lose something of human biological life. We lose the sense of what it means to be created, dependent, contingent and finite. Kracher writes: "Nature offers healing... but it can frighten... and this fright serves a purpose, to awaken in us our dependency on God, the earth and other people."²⁸ He goes on to say that "a planet ruled by predictability where all contingency is eliminated is also a planet dominated by unchecked evil."²⁹ This is an important insight. If we can control our relationships, our loves and our dislikes, we not only control evil unwittingly but we can become evil unknowingly. Harmony requires wildness—the unpredictability of nature, the contingency that makes the world what it is – a sense of astonishment, wonder and awe.

Transhumanists who look to a postbiological world free of suffering and death are willing to sacrifice the organic whole at the expense of perfecting the human. A world deprived of suffering and death, however, cannot evolve. The very human limitations we want to eliminate, suffering and death, are the most important elements for the evolution of life. By artificially controlling our destiny we cut ourselves off from the rich depths of evolving life.

Teilhard de Chardin and Christian Transhumanism

Eric Steinart has described Pierre Teilhard de Chardin as a forerunner of transhumanism, saying: "Transhumanists advocate the ethical use of technology for human enhancement. Teilhard's writing likewise argues for the ethical application of technology in order to advance humanity beyond the limitations of natural biology."³⁰ Teilhard, he claims,

envisioned a cyber world as the next level of evolution, anticipating current trends in transhumanist philosophy and inventions. But is Teilhard's transhumanism on the same level of Kurzweil and others who anticipate a postbiological era marked by techno sapiens? David Grumett states: "Teilhard would not accept all transhumanist assumptions and values and could not himself be described as a "transhumanist" without careful qualification."³¹ Indeed, two significant points distinguish Teilhard from AI transhumanists: 1) the location of transhumanism within evolution and 2) the vitality and openness of matter to spirit. As one of the initial advocates of transhumanism, Teilhard is aligned to Huxley's original use of the term. Evolution and the openness of matter to spirit not only set Teilhard apart from AI transhumanists but enable him to describe evolutionary humanism that engages life for the whole cosmos.

Transhumanism is best understood for Teilhard as an evolutionary process and he saw an important role for technology in the progression of evolution. Evolution is not a blind, random process, he claimed, but one with meaning and purpose; evolution has direction. It is a process of creative union, a progression toward increasing consciousness active at all levels of reality, beginning with the Big Bang 13.7 billion years ago. He considered matter and consciousness not as two substances or two different modes of existence but as two aspects of the same cosmic stuff. The *within* is the mental aspect and the *without* is the physical aspect of the same stuff.³² He links evolution of the mind with the concept of physical and psychic energy. The human person is integrally part of evolution in that we rise from the process, but in reflecting on the process we stand apart from it. He defined reflection as "the power acquired by a consciousness to turn in upon itself, to take possession of itself *as an object*. . .no longer merely to know, but to know that one knows."³³ Following Julian Huxley, Teilhard wrote that the human person "is nothing else than evolution become conscious of itself."³⁴ The human person is "the point of

emergence in nature, at which this deep cosmic evolution culminates and declares itself.”³⁵ Ultimately, Teilhard indicated, evolution is the unfolding of consciousness through the dual processes of complexification and convergence. The evolutionary vigor of humankind, he indicated, can wither away if we should lose our impulse, or worse, develop a distaste for ever-increased growth in complexity–consciousness.³⁶

Teilhard recognized that there is a unifying influence in the whole evolutionary process, a centrating factor that holds the entire process together and moves it forward toward greater complexity and unity. His faith led him to posit Christ, the future fullness of the whole evolutionary process, as the “centrating principle,” the “pleroma” and “Omega point” where the individual and collective adventure of humanity finds its end and fulfillment, and where the consummation of the world and consummation of God converge. What we anticipate as the future of evolution is “the mysterious synthesis of the uncreated and the created—the grand completion of the universe in God.”³⁷ Hence evolution has a goal and direction and transhumanism must be considered within this larger direction.

Evolution and Noogenesis

Teilhard did not view evolution with a naïve realism but was acutely aware of internal forces that could thwart the direction of evolution toward the Omega Point. He was concerned about the use of resources, limited food supplies, and whether or not an expanding population would be able to live amiably and in peace with each other under conditions which he no longer described as “convergence” but “external compression.”³⁸ He saw the choice to be between political totalitarianism or some new breakthrough into a new state of human “unanimization,” the emergence of an ‘ultra-humanity.’³⁹ The forces of history acting on humanity must either

complexify it causing humanity to evolve or force humanity to wither. He described humanity as facing an insurmountable “wall” and the human reaction as being either the *extroversion* of “escape” or else the *introverted pessimism* of Sartre’s “existentialism.”⁴⁰ The danger he worried about most is that humanity, in losing its faith in God, would also lose what he called its “Zest for Living.”⁴¹ He questioned whether or not the human race having experienced “a scientific justification of faith in progress was now being confronted by an accumulation of scientific evidence pointing to the reverse--the species doomed to extinction.”⁴² The only solution, he indicated, is not “an improvement of living conditions”--as desirable as that might be; rather the inner pressures of history are the catalyst for evolution toward more being.

The evolutionary ascent of human beings occurs in stages, according to Teilhard. In the first stage of its evolution, humanity expanded in both quantity (number of persons) and in quality (psychological and spiritual development). During the long period of expansion, physical and cultural differences isolated the peoples of the Earth from each other as they spread to fill the Earth. At the beginning of our present century, with most of the habitable surface of the Earth occupied, the races began to converge. Teilhard points to the heightening organo-psychic human development (that is, the process of socialization) which began 30,000 years ago, as an indication that evolution marches on. The birth of the tribes, of the empires, and of the modern states is the offspring of the great movement of evolution towards socialization or collectivization. We have reached the end of the expanding or “diversity” stage and are now entering the contracting or “unifying” stage. The human is on the threshold of a critical phase of super-humanization: the increasingly rapid growth in the human world of the forces of collectivization, the “super arrangement” or the mega-synthesis.⁴³ At this point, Teilhard’s theory runs counter to Darwin’s in that the success of humanity’s evolution in the second stage

will not be determined by “survival of the fittest” but by our own capacity to converge and unify.⁴⁴ The most important initial evolutionary leap of the convergence stage is the formation of what he called “the noosphere.”⁴⁵ In his *Phenomenon of Man* Teilhard describes the noosphere:

The idea is that the Earth [is] not only becoming covered by myriads of grains of thought, but becoming enclosed in a single thinking envelope so as to form a single vast grain of thought on the sidereal scale, the plurality of individual reflections grouping themselves together and reinforcing one another in the act of a single unanimous reflection.⁴⁶

The noosphere is a psycho-social process, a planetary neo-envelope *essentially linked with the biosphere* in which it has its root, yet is distinguished from it. Unlike the AI transhumanist blend of biology and machine, Teilhard’s noosphere is a new stage for the renewal of life and not a radical break with biological life. If there is no connection between noogenesis and biogenesis, Teilhard said, then the process of evolution has halted and man is an absurd and “erratic object in a disjointed world.”⁴⁷ Just as Earth once covered itself with a film of interdependent living organisms which we call the biosphere, so mankind's combined achievements are forming a global network of collective mind.⁴⁸ Hence, the noosphere is a sphere of collective consciousness which preserves and communicates everything precious, active and progressive contained in this earth’s previous evolution. It is the natural culmination of biological evolution and not a termination of it, an organic whole, irreducible to its parts, destined for some type of superconvergence and unification.⁴⁹

Although mass communication technology was just beginning to develop in Teilhard's time, he appreciated the role of machines in the emergence of the noosphere. In his *Future of Man* he wrote of "the extraordinary network of radio and television communications which, perhaps anticipating the direct intercommunication of brains through the mysterious power of telepathy, already link us all in a sort of 'etherized' universal consciousness."⁵⁰ Teilhard predicted the evolution of the computer as the "brain" behind the noosphere and thus the catalyst for the next step of evolution. He writes:

Here I am thinking of those astonishing electronic machines (the starting-point and hope of the young science of cybernetics), by which our mental capacity to calculate and combine is reinforced and multiplied by a process and to a degree that heralds as astonishing advances in this direction as those that optical science has already produced for our power of vision.⁵¹

His anticipation of what computers would do for us was twofold: first, they would complete our brains through instantaneous retrieval of information around the globe so that what one person lacks is immediately provided by another, and second, they would improve our brains by facilitating processes more quickly than our own resources can achieve them.⁵² Teilhard's vision of the noosphere as cybernetic mind anticipated the emergence of cyberspace as a field of global mind through interconnecting computer pathways. With the rise of technology he saw a forward movement of spiritual energy, a maximization of consciousness and a complexification of relationships. Technology extends the outreach of human activity but it depends on a broader use of human activity and how humans control psychic, spiritual energy needs and powers.⁵³

Transhumanism as Ultrahumanism

AI transhumanists look to a postbiological future where super informational beings will flourish and biological limits such as disease, aging and death, and perhaps even sin, will be overcome. Bart Kosko, a professor of electrical engineering at the University of Southern California writes: “Biology is not destiny. It was never more than tendency. It was just nature’s first quick and dirty way to compute with meat. Chips are destiny.”⁵⁴ Katherine Hales, in her book *How We Became Posthuman* writes: “In the posthuman, there are no essential differences, or absolute demarcations, between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot technology and human goals.”⁵⁵ She concludes with an admonition: “Humans can either go gently into that good night, joining the dinosaurs as a species that once ruled the earth but is now obsolete, or hang on for a while longer by becoming machines themselves. In either case ... the age of the human is drawing to a close.”⁵⁶ Similarly Robert Jastrow claimed, “human evolution is nearly a finished chapter in the history of life,” although the evolution of intelligence will not end because a new species will arise, “a new kind of intelligent life more likely to be made of silicon.”⁵⁷ While AI transhumanists aim toward a new virtual body, they also anticipate a new virtual creation where the earthly garden will wither away and be replaced by a much greater world, a paradise never to be lost.⁵⁸

Teilhard’s vision of evolution was not apocalyptic but inherently creative. He saw the convergence of human and machine intelligence as completing the material and cerebral sphere of collective thought. His hopeful vision of transhumanism was a richer and more complex domain, constructing with all minds joined together, a collective or global mind for the forward movement of cosmic evolution. He did not see evolution as a disruption in the organic whole but instead a greater unification of the whole in and through the human person who is the growing

tip of the evolutionary process. He wrote, “we should consider inter-thinking humanity as a new type of organism whose destiny it is to realize new possibilities for evolving life on this planet.”⁵⁹ Whereas AI transhumanists look toward the emergence of *techno sapiens* as a new species derived from humans but different from humans, Teilhard did not anticipate the perfection of being through artificial means. For him evolution is progression toward more being:

. . . it is not *well being* but a hunger for *more-being* which, of psychological necessity, can alone preserve the thinking earth from the *taedium vitae* . . . it is upon its point (or superstructure) of spiritual concentration, and not upon its basis (or infra-structure) of material arrangement, that the equilibrium of Mankind biologically depends.⁶⁰

Teilhard distinguished “more being” from “well being” by saying that materialism can bring about well being but spirituality and an increase in psychic energy or consciousness brings about more being.⁶¹ He imagined psychic energy in a continually more reflective state, giving rise to ultrahumanity.⁶² He insisted that technology is the means of convergence and the noosphere is the evolutionary convergence of mind through technology; humankind does not dissipate itself but continually concentrates upon itself.⁶³ Hence the noosphere is a superconvergence of psychic energy, a higher form of complexity in which the human person does not become obsolete but rather acquires more being through interconnectivity with others. In this respect the Noosphere is not the realm of the impersonal but conversely it is the realm of the *deeply personal* through *convergence* or the bringing together of diverse elements, organisms, and even the currents of human thought. The noosphere is not merely a cyber world of virtual being but a medium of collective consciousness that enhances more being. Teilhard

wrote: “It is a mistake to look for the extension of our being or of the Noosphere in the impersonal. The Future universal cannot be anything else but the *hyperpersonal*.”⁶⁴

Teilhard repeatedly used the language of ultra-humanity to emphasize the need for humanity to enter into a new phase of its own evolution. The value of science, he indicated, could only be for the deepening of spirituality, since knowledge increases mind and mind deepens spirit. He wrote: “However far science pushes its discovery of the essential fire and however capable it becomes someday of remodeling and perfecting the human element, it will always find itself in the end facing the same problem--how to give to each and every element its final value by grouping them in the unity of an organized whole.”⁶⁵ Teilhard saw the insufficiency of science to effect the transition to superconsciousness. “It is not tête-à-tête or a corps-à-corps we need; it is a heart to heart.”⁶⁶ Hence integral to the noosphere is the necessary role of love and “the rise of our inward horizon of a cosmic spiritual center...the rise of God.”⁶⁷ A theogenic process of love at the heart of cosmic evolution, now at the level of the noosphere, is far different from the transhumanist trend of individual perfection or posthuman techno sapiens. Whereas AI transhumanists view consciousness as an epiphenomenon in the evolutionary process, Teilhard described evolution as the process of unfolding consciousness. He indicated that ultimate knowing is love which draws together and unites in such a way that new complexified being transcends individual being; it is the emerging body of Christ.⁶⁸ The evolution of noosphere is a new collective consciousness that enables a more profound union in love and thus a deepening of being that reflects more unified soul and greater wholeness.

Ultrahumanism and Christogenesis

While AI transhumanism can seem self-serving at the expense of community or cosmic wholeness, Teilhard saw ultrahumanism less as alteration of the human person than as the next level of evolution and expansion of community through greater unity. Philip Hefner states that technology is either pointless in the long run or an expression of the fundamental self-transcending reality of God.⁶⁹ Teilhard too saw the evolution of the noosphere and the emergent ultrahumanism as fundamentally religious in nature. Christ is the Omega Point, the goal of the universe and the evolver in its convergence toward unity. Through the inner law of convergence-complexity, God is being born from within; salvation is “becoming one with the universe.”⁷⁰

A fundamental difference between Teilhard’s ultrahumanism and AI transhumanism is the role of religion in evolution. AI transhumanists such as Kurzweil see technology as the fulfillment of what religion promises; however, techno-salvation is centered on the individual. Teilhard did not see technology as self-perfecting or self-asserting; rather technology furthers religion which is the heart of evolution. He wrote: “Religion, born of the earth’s need for the disclosing of a God, is related to and co-extensive with, not the individual human but the whole of humankind.”⁷¹ As we advance from individual consciousness to collective consciousness, we see that reality is a single organic evolutionary flowing. For Teilhard, the noosphere is not simply a new level of global mind; rather the new level of global mind is the emergence of Christ because the human person is “the arrow pointing the way to the final unification of the world in terms of life.”⁷²

Technology therefore not only advances noogenesis but noogenesis continues christogenesis. Through a collectivization of consciousness, Teilhard saw the possibility of a new global unity in love. Reflecting on the future of humanity, he envisioned an eventual convergence of religions so that the emergence of Christ would ultimately not be limited to a

single religion but would be the convergence of psychic, spiritual energy, the unification of the whole.⁷³ In a 1950 talk to the *Congrès Universel des Croyants* he stated that “...the various creeds still commonly accepted have been primarily concerned to provide every human with an *individual* line of escape” and for this reason they fail to “allow any room for a global and controlled transformation of the whole of life and thought in their entirety.”⁷⁴ This stance, Teilhard insisted, can no longer be: “No longer is it simply a religion of individual and of heaven, but a religion of mankind and of the earth--that is what we are looking for at this moment, as the oxygen without which we cannot breathe.”⁷⁵ He describes the noogenic Christ as “a general convergence of religions upon a universal personal center of unity who fundamentally satisfies all religions.”⁷⁶ Technology plays a key role in evolutionary convergence, enabling the emergence of global mind and collective consciousness; however, the endpoint is not technology or techno sapiens. For Teilhard the end is Omega, the total unification of being-in-love. The transhumanist Christ does not supercede biological evolution; rather as biogenesis yields to noogenesis so too Christ emerges as greater unity in love. Transhumanism is ultrahumanism, the deepening of being in love.

Conclusion

The exponential growth of technology today and the aims of AI transhumanism can seem *prima facie* to signal the end of humanity as we have known it. But a closer examination of this development shows an apocalyptic mentality with platonic ideals. Rooted in deep religious convictions of immortality, suffering and death, AI transhumanism has sought to replace religious beliefs with technology. In doing so, however, it threatens to thwart evolution by substituting the artifice for the life of matter thus disconnecting matter and the life of the spirit.

Evolution is religious to the core, according to Teilhard, because of matter's openness to spirit. His vision offers a thoroughly incarnational view of transhumanism, seeing the role of technology as a positive one toward greater convergence and unification of humankind. The emergence of technology within evolution impelled Teilhard to highlight the link between religion and technology as the most important one at this point in the evolutionary process. Whereas AI transhumanists aim to replace religious ideals with technological achievements, Teilhard saw that technology could further religion. In his view the next step of evolution brought about by technology is the convergence of religions which means that in order for the process of evolution to move to the next level, religions must unify. Hence the next stage of evolution is not dependent on technology as AI transhumanists propose but on the spiritual power of religions. Teilhard following Huxley saw that evolution is not a mechanical process of inert matter but a dynamic unfolding of life, spirit and consciousness. Without organic matter, spirit cannot deepen and complexify. Hence religion is not outside the realm of technology but integral to its purpose and development. World religions must awaken to their role in evolution and seek to unite because the convergence of religions is necessary for the ongoing genesis of Christ. Evolution proceeds towards the Omega Point not by information or enhancement of the individual but by the convergence of humanity and the deepening of relationships in love.

NOTES

¹ Nick Bostrom, "A History of Transhumanist Thought" *Journal of Evolution and Technology* 14.1 (April 2005): 1.

² Archimedes Carag Articulo, "Towards an Ethics of Technology: Re-Exploring Teilhard de Chardin's Theory of Technology and Evolution, <http://www.scribd.com/doc/16038038/Paper2-Technology>.

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- ³ Julian Huxley, *Religion Without Revelation* (Westport, CT: Greenwood Press, 1979, reprint), 195.
- ⁴ David Grumett, "Transformation and the end of enhancement: insights from Pierre Teilhard de Chardin," in *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement*, ed. Ronald Cole-Turner (Washington, DC: Georgetown University Press, 2011 forthcoming), 3.
- ⁵ Cited in Bostrom, "History of Transhumanist Thought," 8.
- ⁶ Bostrom, "History of Transhumanist Thought," 14.
- David F. Noble, *Religion of Technology: The Divinity of Man and the Spirit of Invention* (New York: Penguin Books, 1999), 5.
- ⁸ Bostrom, "History of Transhumanist Thought," 2.
- ⁹ Bostrom, "History of Transhumanist Thought," 2.
- ¹⁰ For a discussion of medieval Franciscans and Science see Keith Warner, *Franciscan Science in Action*, vol. 7, Franciscan Heritage Series, ed. Joseph P. Chinnici (New York: Franciscan Institute Publications, 2011).
- ¹¹ Daniel P. Horan, "Light and Love: Robert Grosseteste and John Duns Scotus on the How and Why of Creation," *The Cord* 57 (July/September 2007): 243-257.
- ¹² Richard E. Rubenstein, *Aristotle's Children: How Christians, Muslims, and Jews Rediscovered Ancient Wisdom and Illuminated the Middle Ages* (New York: Harcourt Books, 2003), 188 – 89.
- ¹³ Thomas Berry, "Traditional Religion in the Modern World," in *Sacred Universe: Earth, Spirituality, and Religion in the Twenty-First Century*, ed. Mary Evelyn Tucker (New York: Columbia University Press, 2009), 4; Thomas Berry, "Christianity and Ecology," in *The Christian Future and the Fate of Earth*, eds. Mary Evelyn Tucker and John Grim (Maryknoll, NY: Orbis Books, 2009), 61-62, 93.
- ¹⁴ Barbara Obrist, "Views on History in Medieval Alchemical Writings," *Ambix* 56.3 (2009): 236.
- ¹⁵ Bostrom, "History of Transhumanist Thought," 4.
- ¹⁶ Carl Mitcham, "The Philosophical Challenge of Technology," *American Catholic Philosophical Association Proceedings* 40 (1996): 45.
- ¹⁷ Noreen Herzfeld, *Technology and Religion: Remaining Human in a Co-created World* (West Conshohocken, PA: Templeton Press, 2009), p. 9.
- ¹⁸ Kurzweil defines the singularity as the point at which machines become sufficiently intelligent to start teaching themselves. When that happens, he indicates, the world will irrevocably shift from the biological to the mechanical. See Ray Kurzweil, *The Age of Spiritual Machines: When Computers Exceed Human Intelligence* (New York: Viking, 1999), 3-5.
- ¹⁹ Garner, Stephen R. "Praying with Machines: Religious Dreaming in Cyberspace." *Stimulus* 12. 3 (2004): 20.
- ²⁰ Garner, "Praying with Machines," 20.
- ²¹ Garner, "Praying with Machines," 20; D.O. Berger, "Cybergnosticism: Or, Who Needs a Body

Anyway?” *Concordia Journal* 25 (1999): 340 - 45.

²² Michael Heim, *The Metaphysics of Virtual Reality* (New York: Oxford University Press, 1993), 89.

²³ Alfred Kracher, “The Diversity of Environments: Nature and Technology as Competing Myths,” in *Creation’s Diversity: Voices from Theology and Science*, eds. Willem B. Drees, Hubert Meisinger and Taede A. Smedes (New York: T&T Clark, 2008), 78.

²⁴ Ronald Cole-Turner, “Biotechnology and the Religion-Science Discussion,” in *The Oxford Handbook of Religion and Science*, eds. Philip Clayton and Zachary Zimpson (New York: Oxford University Press, 2006), 941.

²⁵ Cole-Turner, “Biotechnology and Religion-Science,” 941.

²⁶ Cole-Turner, “Biotechnology and Religion-Science,” 942.

²⁷ Kracher, “Nature and Technology as Competing Myths,” 83.

²⁸ Kracher, “Nature and Technology as Competing Myths,” 84.

²⁹ Kracher, “Nature and Technology as Competing Myths,” 84.

³⁰ Eric Steinhart, “Teilhard de Chardin and Transhumanism,” *Journal of Evolution and Technology* 20.1 (2008): 22. <http://jetpress.org/v20/steinhart.htm>. While Steinhart’s argument is cogent, I do not believe that Teilhard sought to transcend biological limits through technology but to deepen the whole biological process of life.

³¹ Grumett, “Transformation and the End of Enhancement,” 2.

³² Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York: Harper & Row, 1959),

Teilhard de Chardin, *Phenomenon of Man*, 165.

Teilhard de Chardin, *Phenomenon of Man*,

Pierre Teilhard de Chardin, *Human Energy*, trans. J. M. Cohen (New York: Harcourt Brace Jovanovich, 1969), 23.

³⁶ Pierre Teilhard de Chardin, *The Future of Man*, trans. Norman Denny (New York: Harper & Row, 1964), 213.

Pierre Teilhard de Chardin, *Les Directions de l’Avenir* (Paris: Editions du Seuil, 1973), 97.

³⁸ Teilhard de Chardin, *The Future of Man*, 235.

³⁹ Teilhard, *Future of Man*, 270 - 80.

⁴⁰ Richard W. Kropf, “Teilhard and the Limits to Growth: The Evolutionary Dynamic toward ‘UltraHumanity,’” 8. Paper presented at the annual meeting of the Catholic Theological Society of America, Halifax, Nova Scotia, June, 2010.

⁴¹ Pierre Teilhard de Chardin, *The Activation of Energy*, trans. René Hague (New York: Harcourt, Brace, Jovanovich, 1970), 229-43.

⁴² Teilhard de Chardin, *Future of Man*, 298 - 303.

Articulo, "Towards an Ethics of Technology," 5.

Teilhard de Chardin, *Phenomenon of Man*, 243.

Teilhard de Chardin, *Future of Man*, 204. "In the 1920s Teilhard coined the word *noosphere* in collaboration with his friend Edouard Le Roy. Derived from the Greek word *nous* or mind in the sense of integrating vision, the noosphere describes the layer of mind, thought and spirit within the layer of life covering the earth." Ursula King, "One Planet, One Spirit: Searching For an Ecologically Balanced Spirituality," in *Pierre Teilhard de Chardin on People and Planet*, ed. Cecelia Deane-Drummond (London: Equinox, 2008), 82.

Teilhard de Chardin, *Phenomenon of Man*, 251.

⁴⁷ Robert J. O'Connell, *Teilhard's Vision of the Past: The Making of a Method* (New York: Fordham University Press, 1982), 145.

⁴⁸ Michael H. Murray, *The Thought of Teilhard de Chardin* (New York: Seabury Press, 1966), 20-1.

W. Henry Kenny, S.J., *A Path Through Teilhard's Phenomenon* (Dayton, OH: Pflaum Press, 1970), 110.

⁵⁰ Lawrence Hagerty, *The Spirit of the Internet: Speculations on the Evolution of Global Consciousness* (Matrix Masters, 2000), 33.

⁵¹ Teilhard de Chardin, *Man's Place in Nature* (New York: Harper and Row, 1956), 110.

⁵² Teilhard de Chardin, *Man's Place in Nature*, 111.

⁵³ Joseph A. Grau, *Morality and the Human Future in the Thought of Teilhard de Chardin A Critical Study* (Cranbury, NJ: Associated University Presses, Inc., 1976), 274.

⁵⁴ C. Christopher Hook, "The Techno-Sapiens are Coming," *Christianity Today*.
www.christianitytoday.com/ct/2004/january

⁵⁵ N. Katherine Hales, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago IL: University of Chicago Press, 1999), 2 - 3.

⁵⁶Ibid.

⁵⁷ Cited in Theodore Roszak, "Evolution and the Transcendence of Mind," *Perspectives* Vol. 1, no. 2 (1996). http://www.mentalhelp.net/poc/view_doc.php?type=doc&id=274.

Hans Moravec, *Robot: Mere Machine to Transcendent Mind* (New York: Oxford University, 1999), 143ff.

⁵⁹ Teilhard de Chardin, *Phenomenon of Man*, 20.

⁶⁰ Teilhard de Chardin, *Future of Man*, 317.

⁶¹ Grau, *Morality and the Human Future*, 275.

⁶² Kenny, *A Path Through Teilhard's Phenomenon*, 105.

⁶³ Teilhard de Chardin, *Future of Man*, 316.

⁶⁴ Teilhard de Chardin, *Phenomenon of Man*, 260.

⁶⁵ Teilhard de Chardin, *Phenomenon of Man*, 250.

⁶⁶ Teilhard de Chardin, *Future of Man*, 75; Kenny, *A Path through Teilhard's Phenomenon*, 138.

⁶⁷ Teilhard de Chardin, *Future of Man*, 120.

⁶⁸ He would describe it in two essays written in 1950, the first of which (dated January 6) described his belief "On the Probable Coming of an 'Ultra-Humanity'" (*Future of Man*, 270-80) and the second (dated January 18) began with the title in the form of a question: "How May We Conceive and Hope that Human Unanimisation Will Be Realized on Earth?" (*Future of Man*, 281-88).

⁶⁹ Philip Hefner, *Technology and Human Becoming* (Minneapolis: Fortress Press, 200?), 84-6.

⁷⁰ Pierre Teilhard de Chardin, *How I Believe*, trans. René Hague (New York: Harper & Row, 1969), 81.

⁷¹ Teilhard de Chardin, *How I Believe*, 61.

⁷² Teilhard de Chardin, *Phenomenon of Man*, 224; Kenny, 99.

⁷³ Teilhard de Chardin, *How I Believe*, 77-85.

⁷⁴ See Ursula King, "Feeding the Zest for Life: Spiritual Energy Resources for the Future of Humanity," <http://www.metanexus.net/Magazine/tabid/68/id/9359/Default.aspx>.

Pierre Teilhard de Chardin, *Activation of Energy: Enlightening Reflections on Spiritual Energy*

Teilhard de Chardin, *How I Believe*, 85. In a recent paper on religion and globalization ("Human Religious Evolution and Unfinished Creation"), sociologist Jose Casanova notes that in our globalized era all religions can be reconstituted for the first time as de-territorialized global imagined communities, detached from the civilizational settings in which they have been traditionally imbedded. Through internet and mass migration, each world religion is being dissociated and reconstituted on the global level through interrelated processes of particularistic differentiation, universalistic claims and mutual recognition (p. 15). World religions are becoming more at home in the presence of one another than at home, a point that speaks to Teilhard's evolution of world religions toward convergence and unity-in-love.