

## **Religion and Posthuman Life: Teilhard's Noosphere<sup>1</sup>**

**Ilia Delio**

Artificial intelligence (AI) is one of the most significant new sciences of the 20<sup>th</sup> century. Born from insights on cybernetic systems, machine thinking and information, AI now dominates the cultural terrain personally and globally. We are enamored by its powers but frightened by its possibilities. How do we adequately assess the role of AI in human life? Can AI enhance human relationships and build communities or are we inventing machines that will eventually cause human extinction? By contextualizing the rise of AI within the larger historical context of evolution we can begin to define a more integrated role for AI in the emergence of human personhood. This paper will examine the emergence of AI in the midst of the violent 20<sup>th</sup> century and the significance of this development for a new philosophy of personhood. I will explore two trajectories of AI that support different philosophical positions: transhumanism and the emphasis on human betterment and posthumanism and the quest for deep relationality. Using the work of John Johnston and Katherine Hayles, I will examine the significance of posthumanism as new levels of consciousness and complexity. I will suggest that a new type of person is emerging with posthumanism, one that corresponds to the insights of Teilhard de Chardin and his ideas on ultrahuman life in the Noosphere. Teilhard's evolutionary paradigm gives direction to posthuman/ultrahuman life in which religion plays a significant role. I will explore his insights on religion and evolution and suggest new ways to develop it for planetary life.

### **The Emergence of AI Life**

In his book *The Allure of Machinic Life* John Johnston argues that in the early era of cybernetics and information theory following the Second World War, two distinctively new types of machine appeared. The first, the computer, was initially associated with war and death—breaking secret codes and calculating artillery trajectories and the forces required to trigger atomic bombs. But the second type, a new kind of liminal machine, was associated with life, inasmuch as it exhibited many of the behaviors that characterize living entities—homeostasis, self-directed action, adaptability, and reproduction. Neither fully alive nor at all inanimate, these liminal machines (thinking machines) exhibited what he calls “machinic life,” mirroring in purposeful action the behavior associated with organic life while also suggesting an altogether different form of “life,” an “artificial” alternative, or parallel, not fully answerable to the ontological priority and sovereign prerogatives of the organic, biological realm. These forms of machinic life are characterized not by any exact imitation of natural life but by complexity of behavior.

Johnston questions if the new biological-electronic hybridization or machinic life is an extension of “nature” life. He states, “our human capacity as toolmakers (*homo faber*) has also made us the vehicle and means of realization for new forms of machinic life.”<sup>2</sup> He continues by saying that artificial life is actually producing a new kind of entity or being which is at once technical object and simulated collective subject. He writes:

Constituted of elements or agents that operate collectively as an emergent, self-organizing system, this new entity is not simply a prime instance of the theory of emergence, as its strictly scientific context suggests. It is also a form of artificial life that raises the possibility that terms like subject and object, physis and techne,

the natural and the artificial, are now obsolete. What counts instead is the mechanism of emergence itself, whatever the provenance of its constitutive agents.<sup>3</sup>

Johnston identifies “becoming machinic” as the process of cyborgization, a process of increasing levels of hybridity between human and non-human life forms. The term “cyborg” emerged in the 1960s with space travel and the need to maintain human physiological function in non-human environments of outer space. The cyborg (or cybernetic organism) is a mixture of biology and machine whereby the machine enables biological function. The emergence of the cyborg signals the fact that nature’s boundaries are not fixed but fluid. Nature is a co-creation among humans and nonhumans, machines and our other partners. The two narratives that Johnston highlights reflect the two trajectories of AI: Shallow AI or radical Transhumanism and Deep AI or Posthumanism. Each posits a different philosophical perspective of the human person. While they are not exactly conflicting positions, since aspects of transhumanism are also found in posthumanism, they differ philosophically.

### **Transhumanism**

The word “transhumanism” was initially coined by Julian Huxley to describe novelty in evolution; however, philosopher Nick Bostrom seized upon transhumanism as the technological salvation of modernity’s failure to achieve social change: “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.”<sup>4</sup> He began the World Transhumanist Association in 1998 with David Pearce as a cultural and philosophical center of human betterment through technology. A corollary group known as Extropy (a philosophy devoted to the transcendence of human limits) was founded by Max More, who immigrated to California from Britain and changed his name from Max O’Connor to Max More. More founded the Extropy Institute to catalyze the transhuman ideal of betterment: “I was going to get better at everything, become smarter, fitter, and healthier. . . a constant reminder to keep moving forward.”<sup>5</sup> Following the closure of the Extropy Institute in 2006, *Humanity+* emerged as an outgrowth of the World Transhumanist Association and has since become the principal representative of the transhumanism movement.

We aim to deeply influence a new generation of thinkers who dare to envision humanity’s next steps. Our programs combine unique insights into the developments of emerging and speculative technologies that focus on the well-being of our species and the changes that we are and will be facing. Our programs are designed to produce outcomes that can be helpful to individuals and institutions.<sup>6</sup>

Since its inception, the World Transhumanist Association, along with the pioneering work of Extropy Institute, has contributed to advancing the public knowledge of how science and technology can and will affect our human future. Hence “transhumanism” now refers to those technologies which 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.”<sup>7</sup> Ray Kurzweil, for example, anticipates an increasingly virtual life in which the bodily presence of human beings will become irrelevant. Kurzweil claims that machine-dependent humans will eventually create 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.<sup>8</sup> Robert Geraci states, “our new selves will be infinitely replicable, allowing them to escape the finality of death.”<sup>9</sup>

This futuristic “post-biological” computer-based immortality is one also envisioned by Hans Moravec who claims that the advent of intelligent machines (*machina sapiens*) will provide humanity with “personal immortality by mind transplant.” Moravec suggests that the mind will be able to be downloaded into a machine through the “eventual replacement of brain cells by electronic circuits and identical input-output functions.”<sup>10</sup> Michael Benedikt believes that cyberspace is an extension of religious desires to escape earthly existence. The “image of the Heavenly City,” he writes, “is. . . a religious vision of cyberspace.”<sup>11</sup> The pursuit of cybernetic heaven means that we will be able to overcome the limitations of the body, including suffering and death—and attain artificial eschatological paradise. Just as human beings must give up their bodies to attain the heavenly city, so too AI transhumanists view

relinquishing the human body for artificial mediums as a positive step in the evolution of *techno sapiens*.

Daniel Crevier argues that A.I. is consistent with the Christian belief in resurrection and immortality. Since some kind of support is required for the information and organization that constitutes our minds, Crevier indicates, a material, mechanical replacement for the mortal body will suffice. Christ was resurrected in a new body, he states, why not a machine?<sup>12</sup> Antje Jackelén notes that the development toward *techno sapiens* might be regarded as a step toward the kingdom of God. What else can we say when the lame walk, the blind see, the deaf hear, and the dead are at least virtually alive? The requirements of the Gospel and the aims of technical development seem to be in perfect harmony.<sup>13</sup> Geraci states: “Only by eliminating the physical and embracing the virtual can we return to the undifferentiated wholeness of the good.”<sup>14</sup>

Many transhumanists look to a postbiological future where super informational beings will flourish and biological limits such as disease, aging and death 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.”<sup>15</sup> 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.”<sup>16</sup> 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.<sup>17</sup>

Transhumanism is the legacy of the enlightenment's liberal subject whose Kantian motto "*sapere aude*," dare to know, hangs like a banner over the dream of postbiological life.<sup>18</sup> The Cartesian subject is ripe for post-biological life. This narrow-minded, binary way of thinking is "shallow" because it fails to recognize the integral relationship between mind and matter, which evolve together as a complex whole. Transhumanism induces an "artificial" intelligence by aiming to separate mind from body and eventually uploading mind into an artificial medium. Such an attempt at artificially separating mind and matter not only enhances fragmentation and disorder (which undergirds war and destruction) but this trajectory contradicts the evolutionary trend of convergence, whereby mind and matter complexify together.

### **The Rise of the Posthuman**

While Transhumanism seeks betterment through technology posthumanism seeks deeper relationality. Posthumanism or "deep AI" regards the person as a complex entity of embodied mind embedded in a matrix of cultural information. Katherine Hayles is the author of *How We Became Posthuman*, a highly sophisticated treatment of technology, embodiment and personhood. She writes:

Historically the idea of the liberal humanist subject, which was accompanied by notions of free will, autonomy, rationality, and consciousness as the seedbed of identity was deeply bound up with causal explanations in science. It was a science that was equipped to deal with a world in which there were weak or negligible

interactions between different bodies and particles. These notions translated into the idea of an autonomous self, possessed of rationality and free will.<sup>19</sup>

In post-human and new materialist thinking, matter is regarded as always already entangled with discourse in the enactment of phenomena. The term “new materialism” was coined by Manuel DeLanda and Rosi Braidotti in the second half of the 1990s and refers to idea that mind is always already material and matter is necessarily something of the mind. Hence it builds on the inseparability of mind and matter. The complex interaction among multiple forces spawns and reconfigures in the new materialist and posthuman thinking. This reconfiguration occurs via conceptualizations of assemblages where the intra-activity and entangling agencies in and through material-discursive apparatuses point to comprehensive open-ended processes that undergird human identity and action. That is, the posthuman does not presume separateness of anything or any pre-existent entities. Rather matter is agential, “not a fixed property of things” but “generated and generative” so that nature and culture are entwined, agential, differentiating and entangled. The posthuman signals a new type of relational person emerging in and through information embeddedness whose boundaries undergo continuous construction and reconstruction. A dynamic partnership between humans and intelligent machines is replacing the liberal humanist subject’s manifest destiny to dominate and control nature. Hayles writes:

The posthuman is likely to be seen as antihuman because it envisions the conscious mind as a small subsystem running its program of self-construction and



self-assurance while remaining ignorant of the actual dynamics of complex systems. But the posthuman does not really mean the end of humanity. It signals instead the end of a certain conception of the human, a conception that may have applied at best to that fraction of humanity who had the wealth, power and leisure to conceptualize themselves as autonomous beings exercising their will through individual agency and choice.<sup>20</sup>

In the posthuman the distributed cognition of the emergent human subject correlates with the distributed cognitive system as a whole in which “thinking” is done by both human and nonhuman actors. Hence the posthuman ability to conceptualize oneself as autonomous being, exercising one’s will through individual agency and choice, gives way to distributed personhood where conscious agency is never fully in control. In this respect, Hayles sees the liberal subject of the Enlightenment (supported by Transhumanists) as coming to an end. In the posthuman, she states, “there are no essential differences, or absolute demarcations, between bodily existence and computer simulation, cybernetic mechanism and biological organism, robot technology and human goals.”<sup>21</sup> She concludes with a death knell: “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.”<sup>22</sup>

Hayles and other new materialist philosophers indicate that the modern liberal subject is coming to an end. Information, cybernetics and the rerouting of nature into new machinic life is giving rise to a new type of person. Unlike the binary liberal subject of

Transhumanism, Posthumanism is cyborgian, materially-extended life. Posthumanism redefines personhood in terms of cognitive assemblages. Continuous interaction with electronic devices does not ignore the human person as agent; however, agency is now reconfigured as distributed, interactive agential realism. Karen Barad uses the term “agential intra-action” meaning that what is pre-existing is relations from which relata (that which relates) emerge. Hayles ventures into a discussion on how information technologies fundamentally alter the relation of signified to signifier. She maintains that within informatics "a signifier on one level becomes a signified on the next-higher level."<sup>23</sup> She characterizes the bodily world as a world in which one can contrast presence and absence, and the virtual world of information technologies as a world in which one contrasts pattern and randomness.

Hayles masterfully argues for the significance of embodiment (in contrast to the transhumanist body as machine) for the formation of thought and knowledge. She writes: “Information, like humanity, cannot exist apart from the embodiment that brings it into being as a material entity in the world; and embodiment is always instantiated, local, and specific.”<sup>24</sup> The body that “exists in space and time ... defines the parameters within which the cogitating mind can arrive at ‘certainties.’”<sup>25</sup> She reminds the reader that the body writes discourse as much as discourse writes the body. Briefly stated, embodied experience generates the deep and pervasive networks of metaphors and analogies by which we elaborate our understanding of the world. Hayles goes on to add that “when people begin using their bodies in significantly different ways, either because of technological innovations or other cultural shifts, experiences of embodiment bubble up into language, affecting the metaphoric networks at play within culture.”<sup>26</sup> In this

respect, *electronic literature* can be understood as part of an ongoing attempt to direct posthumanism toward embodiment. Electronic language provides a type of embodiment, a distributed embodiment (my term) that rattles the liberal autonomous subject, drawing away from the idea of the disembodied person. She refuses received interpretations of the liberal human subject in favor of drawing radical lessons to be learned from the regime of computation. She explains that the posthuman is an emergent “reflexivity” in that human-machine complexity forms personhood and the person becomes part of the system it generates.

Hayles sees that the traditional relationship of human subjectivity *to* technology is undergoing a historic, perhaps cosmological, revision. She rejects the perspective of technological determinism (which evokes a humanist perspective) and celebrates technology as a new singularity. Ray Kurzweil also predicts a singularity by 2045, a point where human intelligence and machines will be welded in a seamless flow of mind, a transition point where machines will become smarter than people. For Kurzweil, the singularity is an opportunity for humankind to improve. “We’re going to get more neocortex, we’re going to be funnier, we’re going to be better at music. We’re going to be sexier,” Kurzweil said during an interview. “We’re really going to exemplify all the things that we value in humans to a greater degree.”<sup>27</sup> Here is a fundamental difference, however, between the transhumanist and the posthuman: transhumanism emphasizes betterment anticipating a “super-intelligent life.”

Posthumanism emphasizes deep relationality and entangled life. Hayles suggests that a new humanism is developing directly at the borderline of simulation and materiality. In her perspective, the scientific language of complexity theory—dissipative structures,

fluidities, porous boundaries, and bifurcations—is projected beyond the boundaries of scientific debate to become the constitutive principles of a form of humanism enabled by the regime of computation. The grammar of the body is shifting from exclusive concern with questions of sexual normativity and gendered identity to a creative interrogation of what happens to questions of consciousness, sexuality, power, and culture in a computational culture, in which the code moves from the visible to the invisible, from a history of tools and prosthetics external to the body to a language of simulation fully internal to identity formation.

### **Living from the Splice**

Hayles' cultural achievement lies in a critical perspective on technology in which the human species limits itself to that of a “co-evolving” partner in the relationship and against the technical will to disembodiment and immateriality. Her writings point to the body's deep participation in the question of technology. Since the person as embodied mind is now extended electronically, personal identity finds a new locus. When the human is seen as part of a distributed system, the full expression of human capability is seen to *depend on the splice* rather than being imperiled by it. In this respect, identity is ongoing, constructive, intra-agential and self-organizing. Drawing on Barad's agential realism, knowing is a matter of intra-acting. The term “intra-acting” refers to acting reciprocally, a term consonant with cybernetic systems. Information forms an intra-acting process of personal formation and world formation. Sharing information becomes an ontological performance of the world in its ongoing articulation and differential becoming. We are part of the world in its ongoing changes, reconfigurations, dynamics,

production of meaning and entities (its ongoing intra-activity) and the world takes shape through our actions. Knowing and being, Barad claims, are mutually related: “We know because we are of the world. We are part of the world in its differential becoming.”<sup>28</sup>

The posthuman therefore is no longer the liberal subject of modernity living from a will to power but the person who now *lives from the splice*, that is, the inter-material space between biology and machine/device, the intra-acting person whose subjectivity is embodied embedded connectivity living from a new locus of identity, the “in-between” space of relationship itself. The logic of posthuman personhood is a logic of complexified relationships that opens a creative space of engagement. One lives not in a binary mode (*me* and *you*) but in the creative space of interrelatedness (*me and you*) so that relationships ontologize *relata*. One finds one’s being not within oneself but beyond oneself (the beyond is within and the within is beyond), in the relationships that form oneself; the “I” flows from constitutive relationships of shared information. Being itself is a decentering and reforming flow that exists in creative tension with present existence and openness to novel form.

The dynamics of complexified relationships are non-linear, unstable fluxes of ongoing engagement so that subjects are always emerging intrapersonally and co-constitutively. What is posited here is the appearance of a becoming that is symbiotic, a hybridity of entities, a *tertium quid* that gives way to complexified being. The French philosopher Emmanuel Levinas employs triadic logic in his book *Otherwise Than Being* where he writes:

It (triadic logic) is a relationship with a surplus always exterior to the totality, as though the objective totality did not fill out the true measure of being, as though another concept, the concept of infinity, were needed to express this transcendence with regard to the totality, non-encompassable within a totality and as primordial as totality.<sup>29</sup>

In triadic logic a limit is where Infinity overflows itself towards another and the limit must be included as part of the logic. Of course, taken at face value this seems absurd. But perhaps it is absurd because we think of logic as binary logic and therefore as a synchronized, totalized structure of relationality that cannot tolerate the ambiguity of the excluded middle. The logic of posthuman relationships follows a different trajectory from the modern liberal subject because the parameters of the cognitive system it inhabits expands and is multidimensional. Personhood is an open system of distributed subjectivity so that categories of gender, race and religion are less defining and more negotiated ones. The human person is no longer the source from which emanates the mastery necessary to dominate and control the environment. Rather, “thinking” is done by both human and nonhuman actors. “Only if one thinks of the subject as an autonomous self, independent of the environment,” Hayles claims, “is one likely to experience panic.”<sup>30</sup>

While the lines of personhood are rewired in posthuman life, the question of human identity remains open. What constitutes “this” person in the matrix of hybridizing relationships? Even if relationships are intra-agential they are not completely random: why “this” relationship and not “that” one? What governs the ongoing co-constitutive

relationality of emerging posthuman life? Is AI opening up pathways to a new collective consciousness so that the posthuman is part of a new type of collective personhood oriented toward planetary life? Michael Burdett and Victoria Lorimar write: “Whereas certain transhumanists might lament the fact that we aren’t solely in charge of our own destiny, critical posthumanists celebrate it and indeed argue we will never flourish if we don’t first recognize that our relations with others are endemic to who we are. Hence, critical posthumanists argue for a deep and abiding relationality.”<sup>31</sup>

Relationality, not betterment, is the operative word of posthuman life. Humans are part of a deep relational wholeness that is characteristic of nature itself. Complex dynamical thinking impels us to think of humans as integrated into wider systems of relationality. Burdett and Lorimar state: “What might make them distinctive is the extent to which other species and entities are implicated in this relationality and the way our formation and identities depend on them. It is not just other human beings that we ‘become-with’, to use the phrase of Haraway, but other creatures and artefacts, too.”<sup>32</sup> By placing posthuman life in the context of evolution we can better appreciate how AI is complexifying consciousness and reshaping matter toward new levels of interrelated life. Posthumanism, seen through the lens of critical feminists, interprets technology as the breakdown of boundaries, the fusion of disparate identities and the forging of a new type of person electronically embedded in systems of information, including the systems of ecology, economics and politics.<sup>33</sup> Posthumanism owes its very expression to a fundamental paradigmatic shift in the nature of scientific realism today. For Hayles, the scientific language of complexity theory—dissipative structures, fluidities, porous boundaries, and bifurcations—is projected beyond the boundaries of scientific debate to

become the constitutive principles of a form of humanism enabled by hybridized electronic life.

Hayles' cultural achievement, Arthur Kroker suggests, "lies in suggesting a critical perspective on technology."<sup>34</sup> The human person becomes that of a "co-evolving" partner in the complexified electronic relationship. A dynamic partnership between humans and intelligent machines replaces the liberal humanist subject's manifest destiny to dominate and control nature. As Hayles states, navigating into the future does not have to be apocalyptic but takes place in the complex interactions within an environment that includes both human and nonhuman actors. The posthuman is best described as a complex dynamical system in which cybernetics governs ongoing negotiation of boundaries and choices. The human person is not simply the source of mastery over the environment in which technology is a tool for our use or an obstacle to our otherwise private solitary lives. Rather, the distributed cognition of the emergent human subject correlates with the distributed cognitive system as a whole electronic environment, in which "thinking" is done by both human and nonhuman actors. In the posthuman, human functionality expands because the parameters of the cognitive system it inhabits expands. Hayles states, "what is lethal is not the posthuman as such but the grafting of the posthuman onto a liberal humanist view of the self." For example, "You" choosing to download yourself into a computer, attaining the ultimate privilege of immortality.<sup>35</sup>

The posthuman is an expression of "deep AI," a new emergence of personhood through electronic embeddedness. AI extends the embodied mind into exoskeletal systems of information so that neither mind nor body disappear but are now complexified in systems which extend into larger maps of complexified wholeness electronically



facilitated. The electronically embedded relational posthuman lives in the splices of informational fields so that boundaries of gender, race and religion are transcended or rather constantly renegotiated through the creative space of shared being. Markers of intelligence are also shifting in so far as the brain is learning to adapt to multiple information fields. Super intelligent machines will not replace us;<sup>36</sup> rather, we are transcending our present existence by merging with super intelligent machines, giving rise to a new type of thinking person.

### **Teilhard's Noosphere**

Posthumanism speaks to the search for a new ecology but the question in light of deep relationality is, where are we going? Transhumanism has a clear aim of human betterment. By improving ourselves with technology, we will become smarter, happier, healthier and live longer, perhaps indefinitely. But the aims of posthumanism are not clear. If relationships are redefining personhood, toward what end?

The posthuman is being born in a chaotic world without meaning or orientation. Although the posthuman constructs meaning, what orients our direction or construction of meaning? Teilhard de Chardin was a scientist, involved in the discussions of how evolution proceeds with direction, and was influenced by the philosopher Henri Bergson's theory of creative evolution. Bergson rejected Darwinian evolution in that it failed to adequately account for novelty and transcendence in nature. He posited an *élan vital* in nature that could account for creative evolution. Bergson's ideas impelled Teilhard to form his principle of Omega as a way of explaining intrinsic wholeness and direction. "Omega" is the last letter of the Greek alphabet and has meaning in both

science and religion because it signifies the end of something, its ultimate limit. Omega makes wholeness in nature not only possible but intensely personal because it is the most intensely personal center that makes beings personal and centered.<sup>37</sup> It is both in evolution and independent of evolution, within and yet distinct, autonomous and independent, deeply influential on the nature's propensity toward complexity and consciousness.<sup>38</sup> It is operative from the beginning of evolution, acting on pre-living cosmic elements as a single impulse of energy.<sup>39</sup> Teilhard posited that the Omega principle is a principle of attraction in *everything* that exists; it is irreducible to isolated elements yet accounts for the "*more* in the cell than in the molecule, *more* in society than in the individual, and *more* in mathematical construction than in calculations or theorems."<sup>40</sup> As the principle of centration, it is independent of nature, not subject to entropy, and ahead of nature as its prime mover. Omega emerges from the organic totality of evolution insofar as evolution proceeds to greater wholeness marked by higher levels of unity and consciousness; Omega is the goal toward which evolution tends.<sup>41</sup>

By positing Omega as the goal of evolution, Teilhard was not positing a supernatural force but an internal power that is simultaneously deeply present and overflowing nature itself. The Omega principle helps make sense of the direction of evolution toward more consciousness. Teilhard saw the process of evolution as a dynamic unfolding of mind and matter and the openness of these to greater complexity and consciousness. He spoke of dual aspect to materiality, a withinness and a withoutness, consciousness and attraction, transcendence and unity, and identified love as the core energy that both transcends and attracts. Because all of nature bears the marks of transcendence and attraction, he spoke of love as a cosmological force, present from the

beginning of the universe: “Love is the most universal, the most tremendous and the most mysterious of the cosmic forces. . .the *physical* structure of the universe is love.”<sup>42</sup> Love is a unitive energy, “the building power that works against entropy,” by which the elements search their way towards union.<sup>43</sup>

There is an unyielding openness to biological and cosmic life that is not adequately explained by materiality, the orientation itself being “spirit” or energy overflow, an innate propensity of matter toward spirit. Teilhard saw this energy overflow of matter as the religious dimension of evolution. He wrote: “There is only one real evolution, the evolution of convergence, because it alone is positive and creative.”<sup>44</sup> The openness of matter to spirit and the propensity of nature to complexify on higher levels of unity impelled Teilhard to posit that religion and evolution go together. Nature has an intrinsic orientation toward wholeness, a horizon of complexifying wholeness oriented to a future anticipation of ultimate wholeness. Teilhard wrote: “To my mind, the religious phenomenon, taken as a whole, is simply the reaction of the universe as such, of collective consciousness and human action in process of development.”<sup>45</sup> “Religion and evolution should neither be confused nor divorced,” Teilhard wrote, “they are destined to form one single continuous organism, in which their respective lives prolong, are dependent on, and complete one another.”<sup>46</sup> By saying religion and evolution go together, Teilhard indicated that there is a capacity in cosmic life for more personal and unifying life. The centrating power of this emerging unity is God.

## **Theogenesis**

Teilhard's God is one of creative union. If God is love, then the perfection of divine love includes the fulfillment of creation. God could not fulfill God's nature without some other to love. God creates in order to share God's life and thus God and world are not opposed but complementary: God and world belong together and complete one another. Teilhard said that creation is integral to God. He believed that without creation, something would be absolutely lacking to God, considered in the fullness not of his being but of his act of union. God and world are in a process of creative union. Creation is unfinished and exists in a dynamic process of unification and God is unfinished in relation to the world growing in love.

Teilhard developed a doctrine of theogenesis (literally, the birthing of God) based on the rise of consciousness in evolution. If God is love and love is relational, God can only be the fullness of love through the deepening of relationships in evolution. He wrote: "As a direct consequence of the unitive process by which God is revealed to us, he in some way 'transforms himself' as he incorporates us."<sup>47</sup> As we come to a higher consciousness of a point of unity, God rises up in us; God *becomes* God in us. This is the meaning of incarnation; God "enters into" matter by rising up in matter as the unitive power of love. God is in us and we are in God without collapsing or merging these two realities, since they form a single reality. It is not enough to simply believe in God, Teilhard said; rather we are to incarnate God and help God become God, if we are to realize the potential of created existence.<sup>48</sup> As God rises up through higher consciousness, the human evolves from an incomplete whole to a new level of completion and thus a new vision, a new knowing, and a new way of acting in the world. Peter Todd writes:

Like Jung, Teilhard thinks God needs humankind to become both whole and complete. The implication is that God and humanity are in an entangled state and that the individuation of each is inextricably bound with the other. This entanglement of God and world is symbolized by the concept of Omega. Teilhard develops an understanding of personalization whereby God becomes God in union with another because only in union with another can one's true personality be found.<sup>49</sup>

Since God is love and love is personal, center to center, attraction, God is most deeply actualized in personal love. God loves in and through our love for one another. Only in actualization can love be experienced on a personal level, in the attraction and relations between one's deepest center, as it is drawn to another. The universe may be understood as God's actualization in deepening and personalizing love. As the most conscious point of the universe, the human person realizes God's life through the deepest, most personal love. Love causes God to be.

### **Noosphere and the Role of Love**

Teilhard lived at the dawn of the computer and was fascinated by the computer as a new level of interconnecting minds. This new level, he said, is a new stage of convergence in evolution, the formation of what he called "the noosphere," a new level of coreflective thought and action.<sup>50</sup> 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.<sup>51</sup>

Just as Earth once covered itself with a film of interdependent living organisms which we call the biosphere, so humankind's achievements are forming a global network of collective mind.<sup>52</sup> 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. Teilhard envisioned the noosphere as a global network of collective mind.<sup>53</sup> He saw evolution proceeding to a greater unification of the whole in and through the human person who is the growing tip of the evolutionary process. In his introduction to Teilhard's *Phenomenon of Man* Julian Huxley 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."<sup>54</sup> Both Huxley and Teilhard saw this new type of person as a hyperpersonalizing person on a new level of "cooperative interthinking."<sup>55</sup> Just as human persons develop a complex brain, Teilhard saw that the earth is developing a "planetary brain," a global complex brain, made possible by computer-mediated interconnected minds. He posited a new type of person to embody this new type of brain, an "ultra" human whereby thought is no longer on the level of the individual but on the level of the convergent and collective.

Teilhard saw the hybridization of human and machine intelligence as completing the material and cerebral sphere of collective thought, and in this respect he is a forerunner of posthumanism.<sup>56</sup> His hopeful vision was a richer and more complex domain of matter and mind through the development of technology, a way of constructing or joining all minds together in a collective or global mind for the forward movement of cosmic evolution. In his *Heart of Matter* he wrote: “How can we fail to see that the process of convergence from which we emerged, body and soul, is continuing to envelop us more closely than ever, to grip us, in the form of. . .a gigantic planetary contraction?”<sup>57</sup> The individual human person, he thought, will be surpassed by a collective convergence of consciousness giving rise to the ultrahuman, a new person who is part of the new planetary consciousness.

To appreciate Teilhard’s position is to realize that he was not enamored of technology as an autonomous power but technology as the main impetus of Omega-centered evolution. The ultrahuman is an effort to impel humanity to enter into its own evolution, that is, the value of technology is for the sake of spirituality. 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.<sup>58</sup>

Teilhard saw the insufficiency of science alone to effect the transition to superconsciousness and collective unity. “It is not tête-à-tête or a corps-à-corps we need; it is a heart to heart.”<sup>59</sup> Technology for Teilhard is in the service of love as the deepest vital energy of the universe. He asks

Why do we not recognize in the accelerating totalization against which we are struggling, sometimes so desperately, simply the normal continuation at a level above ourselves of that process which generates Thought on Earth? Why do we not see that it is continuing the process of cerebration?<sup>60</sup>

Teilhard saw evolution of the posthuman/ultrahuman in terms of Lamarckian rather than Darwinian evolution, “the possibility of continuing improvement, passed on from one generation to another, in the actual *organ* of this vision.”<sup>61</sup> The rise of the posthuman or ultrahuman represents a new collective consciousness that transcends individual consciousness and evokes a new type of person whose body now extends to the whole electronically mediated plane.

### **Hyperpersonalization**

Teilhard did not live to see the technological revolution of the internet but he imagined a thinking earth formed by the linking of electronic minds. The ultrahuman, like the posthuman, represents a new collective consciousness that transcends individual consciousness and evokes a new type of person whose body now extends to the whole electronically connected planet. Hominization continues in and with new lines of shared information. What is “staring us in the face,” Teilhard wrote, is the rise of a “collective reflection” which is now realized to some extent by the internet. As we increasingly



emerge through complexified consciousness into posthuman/ultrahuman life, the concept of personhood is changing in accord with the new consciousness. He anticipated that each ego will be “forced convulsively beyond itself into some mysterious *super ego*.”<sup>62</sup> This “super ego” reflects the notion that the individual is coming to an end and a new “hyperpersonal” is emerging in evolution.

Only when the noosphere is aligned with the whole, the cosmos/universe, can it facilitate the *deeply personal* through *convergence* by bringing together consciousness, person and creativity. Teilhard wrote: “The future universal cannot be anything else but the *hyperpersonal*.”<sup>63</sup> This hyperpersonal for Teilhard is a “folding in” of consciousness, as if the lines of consciousness are merging together into one great complexified brain of planetary thought and planetary thought is giving rise to a new planetary body. This too is what Hayles conceives of in the posthuman, the electronically embedded person whose body is machine-body, whose ego is collective or super-ego and whose passion or emotional life must also be collectivized. The posthuman is the planetized conscious life whose new collective powers have the potential to form a new planetary whole.

What Teilhard contributes to the evolution of AI is a context for a new collective consciousness. In his view, this is an evolutionary leap toward a new world Soul, a unifying spiritual thread of interconnecting minds. The further evolution of humanity toward greater unity, he wrote, “will never materialize unless we fully develop within ourselves the exceptionally strong unifying powers exerted by inter-human sympathy and religious forces.”<sup>64</sup> For Teilhard the noosphere is the newest realm of evolution where God is rising up. Technology has ushered in a new level of complexified consciousness where God is being born from within.

## Conclusion

The posthuman hyperconnectivity that drives modern culture is not a drive for superintelligence but deep relationships. In Teilhard's terms, it is a drive for more profound union in love and a deepening of being: "It is not well-being but a hunger for more-being which can alone preserve the thinking earth from the tedium of life."<sup>65</sup> 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.<sup>66</sup> He imagined psychic energy in a continually more reflective state, giving rise to ultrahumanity.<sup>67</sup> The Future universal cannot be anything else but the *hyperpersonal*.<sup>68</sup>

Teilhard's theogenetic evolution means we are responsible for the future and we are responsible for God. Reality is a process marked by a drive for transcendence and God is at the heart of transcendence. "When God is removed from nature," Philip Hefner writes, "God disappears, and when God disappears we disappear to our own selves because we are not our own making."<sup>69</sup> Transhumanism is alluring and the possibilities of living healthier, wealthier and smarter play into the weakness of our frail human condition. But without a cosmic sacred dimension to our lives and a way of harnessing spiritual energies toward a transcendent convergent center of love, we are abandoned to the forces of capitalism and consumerism. Teilhard's vision helps us realize that religion is the most crucial factor for AI in the 21<sup>st</sup> century; without it we will be left fearful and vulnerable.

## Notes

---

<sup>1</sup> A version of this paper will be published in the *Toronto Journal of Theology* (Fall, 2020) by invitation of the editor.

<sup>2</sup> John Johnston, *The Allure of Machinic Life: Cybernetics, Artificial Life, and the New AI* (Cambridge: MIT Press, 2008), 12.

<sup>3</sup> Johnston, *Machinic Life*, 13.

<sup>4</sup> Nick Bostrom, “A History of Transhumanist Thought” *Journal of Evolution and Technology* 14.1 (April 2005): 7.

<sup>5</sup> E. Regis, “Meet the Extropians,” *Wired* 2 (1994): 10.

<sup>6</sup> Transhumanist Technology, “About Humanity+” <https://humanityplus.org/about/>

<sup>7</sup> Bostrom, “History of Transhumanist Thought,” 13-4; 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>.

<sup>8</sup> David F. Noble, *Religion of Technology: The Divinity of Man and the Spirit of Invention* (New York: Penguin Books, 1999), 154. Ray 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.

<sup>9</sup> Robert Geraci, “Spiritual Robots: Religion and Our Scientific View of the Natural World,” *Theology and Science* 4.3 (2006): 235.

<sup>10</sup> Hans Moravec, *Mind Children: The Future of Robot and Human Intelligence* (Cambridge, MA: Harvard University Press, 1988), 1-2, 110-111.

<sup>11</sup> Michael Benedikt, ed., introduction to *Cyberspace: First Steps* (Cambridge, Mass.: MIT, 1991), 1-26, 16.

<sup>12</sup> Daniel Crevier, *AI: The Tumultuous History of the Search for Artificial Intelligence* (New York: Basic, 1994), 278-80.

<sup>13</sup> Antje Jackelén, “The Image of God as *Techno Sapiens*” *Zygon* 37.2 (2002): 294.

- 
- <sup>14</sup>Geraci, "Religion and the Promise of Artificial Intelligence," 165.
- <sup>15</sup> C. Christopher Hook, "The Techno-Sapiens are Coming," *Christianity Today*.  
[www.christianitytoday.com/ct/2004/january](http://www.christianitytoday.com/ct/2004/january)
- <sup>16</sup> Cited in Theodore Roszak, "Evolution and the Transcendence of Mind,"  
*Perspectives* Vol. 1, no. 2 (1996).  
[http://www.mentallhelp.net/poc/view\\_doc.php?type=doc&id=274](http://www.mentallhelp.net/poc/view_doc.php?type=doc&id=274).
- <sup>17</sup>Hans Moravec, *Robot: Mere Machine to Transcendent Mind* (New York: Oxford University, 1999), 143ff.
- <sup>18</sup> Bostrom, "History of Transhumanist Thought," 4.
- <sup>19</sup> Arthur Kroker, *Body Drift: Butler, Hayles, Haraway* (Minneapolis: University of Minnesota Press, 2012), 11; N. Katherine Hayles, "Unfinished Work: From Cyborg to Cognisphere," *Theory, Culture and Society* 23.7-8 (2006): 159-166 at p. 160.
- <sup>20</sup> N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago: University of Chicago Press, 1999), 286.
- <sup>21</sup> Hales, *How We Became Posthuman*, 2-3.
- <sup>22</sup> Hales, *How We Became Posthuman*, 2-3.
- <sup>23</sup> Hayles, *How We Became Posthuman*, 31.
- <sup>24</sup> Hayles, *How We Became Posthuman*, 48.
- <sup>25</sup> Hayles, *How We Became Posthuman*, 203.
- <sup>26</sup> Hayles, *How We Became Posthuman*, 206-207.
- <sup>27</sup> Kurzweil predicts that the Singularity Will Happen by 2045.  
<https://futurism.com/kurzweil-claims-that-the-singularity-will-happen-by-2045>
- <sup>28</sup> Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Raleigh, NC: Duke University Press, 2007), 76.
- <sup>29</sup> Emmanuel Levinas, *Otherwise Than Being*. Trans. by Alphonso Lingis (Boston: Kluwer Academic, 1991), 23.
- <sup>30</sup> Hayles, *How We Became Posthuman*, 290.

---

<sup>31</sup> Michael Burdett and Victoria Lordimer, “Creatures Bound for Glory: Biotechnological Enhancement and Visions of Human Flourishing,” *Studies in Christian Ethics* 32.3 (2019): 241 – 53 at p. 249.

<sup>32</sup> Burdett and Lordimer, “Creatures Bound for Glory,” 249.

<sup>33</sup> See Rosi Braidotti, *The Posthuman* (Malden, MA: Polity, 2013), 13-25.

<sup>34</sup> Kroker, *Body Drift*, 12.

<sup>35</sup> Hayles, *How We Became Posthuman*, 286 – 87.

<sup>36</sup> On the possibility of human extinction by super Intelligent machines see Charles T. Rubin, "Artificial Intelligence and Human Nature," *The New Atlantis* <https://www.thenewatlantis.com/publications/artificial-intelligence-and-human-nature>.

<sup>37</sup> Pierre Teilhard de Chardin, *Activation of Energy*, trans. René Hague (New York: Harcourt Brace Jovanovich, 1970), 112.

<sup>38</sup> Pierre Teilhard de Chardin, *The Phenomenon of Man*, trans. Bernard Wall (New York: Harper Row, 1959), 257 – 60.

<sup>39</sup> Teilhard de Chardin, *Activation of Energy*, 121.

<sup>40</sup> Teilhard de Chardin, *Phenomenon of Man*, 268.

<sup>41</sup> Teilhard de Chardin, *Activation of Energy*, 114.

<sup>42</sup> Pierre de Chardin, *Human Energy*, trans. J. M. Cohen (New York: Harcourt Brace Jovanovich, 1969), 32.

<sup>43</sup> Thomas M. King, *Teilhard's Mysticism of Knowing* (New York: Seabury Press, 1981), 104-05.

<sup>44</sup> Pierre Teilhard de Chardin, *Christianity and Evolution: Reflections on Science and Religion*, trans. Rene Hague (New York: Harcourt, 1971), 87.

<sup>45</sup> Teilhard de Chardin, *Christianity and Evolution*, 118-19.

<sup>46</sup> Pierre Teilhard de Chardin, *How I Believe?* Trans. Rene Hague (New York: Harper & Row, 1969), 60-1.

<sup>47</sup> Pierre Teilhard de Chardin, “The Spiritual Power of Matter,” in *Hymn of the Universe*, trans. Simon Bartholomew (New York: Harper 7 Row, 1961), 53.

<sup>48</sup> Teilhard de Chardin, “The Spiritual Power of Matter,” 53.

---

<sup>49</sup> Peter Todd, Teilhard and Other Modern Thinkers on Evolution, Mind and Matter, *Teilhard Studies* 66 (2013): 1-18, at p. 5.

<sup>50</sup> Pierre Teilhard de Chardin, *The Future of Man*, 204. “In the 1920s Teilhard coined the word *noosphere* in collaboration with his friend Edouard Le Roy. The noosphere (sometimes noösphere) is the sphere of human thought. The word derives from the Greek νοῦς (nous "mind") and σφαῖρα (sphaira "sphere"), in lexical analogy to "atmosphere" and "biosphere." It was introduced by Pierre Teilhard de Chardin in 1922 in his *Cosmogonesis*. Another possibility is the first use of the term by Édouard Le Roy (1870–1954), who together with Teilhard was listening to lectures of Vladimir Ivanovich Vernadsky at the Sorbonne; cf. 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.

<sup>51</sup> Teilhard de Chardin, *Phenomenon of Man*, 251.

<sup>52</sup> Michael H. Murray, *The Thought of Teilhard de Chardin* (New York: Seabury Press, 1966), 20-1.

<sup>53</sup> Murray, *The Thought of Teilhard de Chardin*, 20-1.

<sup>54</sup> Teilhard de Chardin, *Phenomenon of Man*, 20.

<sup>55</sup> Teilhard de Chardin, *Phenomenon of Man*, 21.

<sup>56</sup> See for example Eric Steinhart, “Teilhard de Chardin and Transhumanism,” *Journal of Evolution and Technology* 20.1 (2008): 22. <http://jetpress.org/v20/steinhart.htm>. Steinhart begins his paper by saying: “Teilhard was one of the first to articulate transhumanist themes. 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.” However, Teilhard’s transhumanism is cosmic evolution on the level of mind. In this respect he is closer to the position of posthumanism.

<sup>57</sup> Pierre Teilhard de Chardin, *The Heart of Matter*, trans. Rene Hague (New York: Houghton, 1979), 36.

<sup>58</sup> Teilhard de Chardin, *Phenomenon of Man*, 250.

<sup>59</sup> Teilhard de Chardin, *Future of Man*, 75; W. Henry Kenny, S.J., *A Path Through Teilhard's Phenomenon* (Dayton, OH: Pflaum Press, 1970), 138.

<sup>60</sup> Teilhard de Chardin, *Heart of Matter*, 37.

- 
- <sup>61</sup> Teilhard de Chardin, *Heart of Matter*, 37.
- <sup>62</sup> Teilhard de Chardin, *Heart of Matter*, 38.
- <sup>63</sup> Teilhard de Chardin, *Phenomenon of Man*, 260.
- <sup>64</sup> Ursula King, *Teilhard de Chardin and Eastern Religions: Spirituality and Mysticism in an Evolutionary World* (Mahwah, NJ: Paulist, 2011), 193.
- <sup>65</sup> Teilhard, *Future of Man*, 317.
- <sup>66</sup> 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), 275.
- <sup>67</sup> Kenny, *A Path Through Teilhard's Phenomenon*, 105.
- <sup>68</sup> Teilhard de Chardin, *Phenomenon of Man*, 260.
- <sup>69</sup> Philip Hefner, *Technology and Human Becoming* (Minneapolis: AugsburgFortress, 2005), 83.