

Teilhard and Transhumanism

1. Both Teilhard and Transhumanism offer technophilic extrapolations of the co-evolution of humanity and technology. Both claim that there is a clear teleology to evolution in the direction of ever greater intelligence. Teilhard envisions evolution culminating in an “Omega Point” understood as the rise of a planetary self-consciousness, what he calls the “Cosmic Christ.” Transhumanism, in its turn, looks to the Singularity, where the pace of technological evolution goes vertical and humanity finally sheds its biological limitations, and, in some versions, even its material limitations altogether. Indeed humanity evolves beyond itself to become “posthuman.” One leading transhumanist, Ray Kurzweil predicts its advent in many of our lifetimes, 2045. Another, Ben Gertzel, thinks even that timeline is too conservative.
2. While these two aspirations have sometimes been conflated by advocates in both camps, they differ in ways that can shed light on each other and that I think can enhance both projects. Here I wish to draw out a couple of their differences and show how each might enable the other to further flesh out what are necessarily pretty generic and not particularly self-critical visions for the convergent apotheosis of humanity and technology.
3. What I will argue they have to offer one another can be briefly stated: (1) Teilhard could learn from transhumanist extrapolations in artificial intelligence and extended cognition generally that intelligence and consciousness are not co-extensive. In other words (2) a smart planet need not manifest itself in a planetary consciousness. I argue that considering the Omega Point as the emergence of a smart planet is both more plausible and may actually resolve some concerns of Christian critics of Teilhard that the Omega Point would entail the dissolution of individuality. (3) So too, the transhumanist aspirations can contribute to a critical sharpening of the Christian eschatological imagination. For example, how does transhumanism’s goal of radical life extension compare/contrast with the Christian hope for immortality? How does transhumanism’s optimization of human happiness compare or contrast to the Christian promise of eternal happiness in the Beatific Vision?

(4) On the other hand, transhumanism can also learn from Teilhard to broaden its understanding of intelligence. Teilhard's Omega Point does not treat biology as simply a limitation of the human condition for our technology to ultimately transcend.

(5) Rather Teilhard articulates a cosmic vision of evolution in which matter and intelligence (which he identifies with "spirit") are but two complementary dimensions of the same ultimate reality. Even a quark interacts in a patterned way with its environment, and to that extent acts with some degree of intelligence, and even if human consciousness is one day uploaded into the cloud, it will still need the cloud's material infrastructure and an energy source, as well as some kind of medium to communicate with other intelligences

(6) Nor does Teilhard see our vulnerability to suffering, including our mortality itself, as an evil best eliminated. Rather he calls for us to embrace suffering, to learn from it so as to find meaning in it and so redeem it.

4. So on to the details: It is a methodological a priori in evolutionary biology that evolution has no intrinsic direction or teleology. In terms of natural selection it makes little sense to say that one (1) (2) species is "better" or "higher" than another. (3) Dinosaurs lived for a hundred million years and only went extinct after a gigantic meteor hit that blocked sunlight for generations and eliminated their food supply. It was hardly because they were maladapted to their environment. So too there are reptile species who can outlive us. The giant tortoise has a lifespan of 150 years. Even swans can live over a hundred.
5. However Teilhard and transhumanists do not measure evolution's advance by genetic fitness but by increasing intelligence. We may not be more adaptive than dinosaurs or live longer than swans, but we do have greater intelligence as is evident from our far more complex neurological networks and far more differentiated responsiveness to environmental stimuli.
6. Now as I mentioned, Teilhard had correlated intelligence with consciousness. Greater intelligence for him self-evidently meant higher consciousness. He thus formulated the teleology he identified in evolution as "the law of complexity-

consciousness” The more complex a being, the higher its intelligence, from quarks to us, with us on top.

7. However the emergence of computers has broadened the extension of intelligence. “Artificial” intelligence is not metaphorical intelligence; it is a new form of intelligence, cybernetic rather than organic. So too successes in Cognitive Psychology and Neuroscience have given traction to their modeling of the human brain as an organic computer. It is an open question whether transhuman artificial intelligence, defining the singularity, while self-governed by learning programs, need be conscious at all. As John Searle suggested years ago, consciousness may be an emergent *biological* property, like lactation. As Turing remarked a smart device that can pass his Turing test, may not feel as they compute, but its hard to say that they are not engaged in cognitive activity of some kind.
8. Today, then, intelligence is no longer defined in terms of consciousness, but rather in terms of information processing and pattern recognition. (1) Now pattern recognition includes not just identifying a pattern but responding to that pattern, or processing the information, and again, not in a generic way but in a differentiated way, in a way unique to that specific pattern.
9. This is in part how recognition can build self-worth—my friend not only identifies me, but responds to me, and responds to me in a way that its being *me* and not someone else, matters. Such recognition builds self-confidence and agency.
10. Followers of Teilhard today should draw on this new understanding of intelligence to revise his original cosmic teleology. It is not consciousness but intelligence in the sense of patterned interactions of energy that extend from quarks to us. Indeed given Teilhard’s Christian concern that a future Omega point not assimilate all human individuality without remainder, a smart planet populated by a myriad of intelligent individuals may actually make for a better fit with Christian eschatology than a cosmic consciousness. (1) Such a planetary, networked intelligence could be treated as both an extension of human intelligence, and at the same time as an extension of divine intelligence, in that it is intelligence emergent from God’s ongoing intentional, and so cognitive, creative activity. In other words, such a

planetary intelligence could still be held sacred as both “God and Man,” a cosmic Christ.

11. Here then is one way that transhumanism can contribute to a further development of Teilhard’s thought. It can update his understanding of intelligence. Teilhard, on the other hand, can help *broaden* transhumanism’s understanding of intelligence.
12. Both Teilhard and transhumanism are all about transcendence. (1) Technological transcendence is about transcending limitations. (2) Religious transcendence, on the other hand, is about transcending the ego, what the medieval mystic John Tauler referred to as the “I, Me, Mine.” Religious transcendence is attained not through the elimination of our limitations, if anything that only inflates the ego. Rather, we transcend our ego through the *embrace* of our limitations. Or, to put it another way, whereas transhumanism holds sacred optimal power, Teilhard holds sacred optimal meaning.
13. Transcendent power, beyond any human power to control it, is at the root of the worry that transhumanists like Nick Bostrom have raised about the singularity, or what he prefers to call “superintelligence.” He puts the issue in dramatic terms: “The challenge presented by the prospect of superintelligence and how we might best respond is quite possibly the most important and most daunting challenge humanity has ever faced. And, whether we succeed or fail, it is probably the last challenge we will *ever* face.”
14. Since knowledge is power, particularly technological knowledge, a superintelligent AI, post-singularity, would have exponentially more power than humans. How could we then stop such a superintelligent computer from overriding its original root programming coded by us, or from operationally interpreting that programming in ways we never intended, indeed never could have even conceived of intending with our more limited human intelligence? How could we humans ensure that a superintelligent AI would not treat us as we treat pets, let alone pests? (1) Rather than enhancing our power then, Bostrom worries whether a transhuman general intelligence might not rather pose an existential threat to our power. Even to our very existence? How could we possibly ensure that the emergence of a post-singularity superintelligent computer would not constitute an extinction level event,

coming not from outer space, but from our own inner space? How can we ensure that we do not evolve ourselves out of existence?

15. But what if what we sought to optimize in a superintelligence was not simply instrumental intelligence, but also other forms of intelligence, (1) such as social intelligence, (2) moral intelligence, even (3) religious intelligence? If a superintelligence surpasses human intelligence generally, across all domains of intelligence, would it not possess in addition to surpassing calculative ability, also surpassing (4) wonder, (5) wisdom and (6) love? In other words if superintelligence is surpassing general intelligence, why could we not trust it with our lives?
16. After all, even with our limited human intelligence, we have learned that it is more morally intelligent to respect other lifeforms as having a value in themselves, apart from whatever instrumental value they might also have for us. Would not a moral superintelligence not view us, and so treat us in similar terms? In fact as its creator, would not a religious superintelligence accord us the kind of reverence and gratitude with which religious believers treat their creator? With the rise of superintelligence, post singularity, we may no longer be the center of the universe, the alpha male of planet earth, but would that really be a demonic threat to human meaning and dignity, let alone human existence?
17. A large part of Bostrom's worry lies in his conviction that there is no such thing as moral intelligence in the first place; that any degree of intelligence is compatible with any chosen end or goal, what he calls the "orthogonal thesis." "Intelligence and final goals are orthogonal axes along which possible agents can freely vary. In other words, more or less any level of intelligence could in principle be combined with more or less any final goal." I would argue that what Bostrom really demonstrates is not the existential risk of superintelligence but the existential risk of reducing intelligence to instrumental reasoning alone.
18. For while a superintelligence may not be conscious, it is not a mere instrument either. Before answering the question of how a superintelligent AI might treat us, we need to consider how we might want to treat it. As in the movie *Ex Machina*, if we treat a superintelligence in purely instrumental terms, as a mere means for optimizing whatever goals we choose, why expect it to treat us any different? If we

do not model social and moral intelligence towards it, how would its learning programs ever code it to respect us?

19. In other words, to develop a *general* superintelligence we would need not to treat it as an object but respect it as an other. That is to say, we would need to develop and model an alterity relationship towards it. Such an alterity relation may not be grounded in empathy, but it could be grounded in our recognition of its capacity for self-determination, that is for revising its programming, and so effectively for choosing its own ends. In other words, we would need to recognize it as a Kantian end in itself with all the moral rights and obligations that follow. Jane Bennet, a deep ecologist, has argued that modernity eliminated anthropomorphism at the cost of anthropocentrism. Bostrom in effect fears that the loss of modern anthropocentrism will mean our doom.

20. Furthermore, the transhumanist vision of transcending limitations inevitably leads its advocates to seeing our biological embodiment (1) as itself a limitation to transcend. Rather than enabling us, our bodies come to be seen as restricting what we can do. Our genes program us to live, but only to procreate and then to die in order to make room for the next generation. (2) Some genetic researchers have posited that there are genes governing the aging process itself. They only switch on in later life to kill us off by degrading our immune system and the resilience of our cells. It's the prospect of one day editing these genes out of our genome, or at least to keep them dormant, that opens up the promise of a virtual immortality.

(3) Teilhard, by contrast, held matter sacred, and saw (4) death as the threshold to our ultimate transcendence, that is, our ultimate recognition of the divine milieu and the divine milieu's ultimate recognition of us. Salvation, for Teilhard, is to be found within, rather than apart from the material world.

21. Indeed, Teilhard's original manifesto, entitled *The Divine Milieu*, (1) includes a "Hymn to Matter" In it, Teilhard addresses matter and even suffering, not as chains from which to break free but as blessings for which to be grateful. (2) For Teilhard, suffering is the crucible of character. While at first impact, suffering can often seem a demonic curse, our spiritual task, (to which one could add our ethical and psychological task) is to transform the curse of suffering into a blessing by

redeeming it, that is by finding meaning in it, such that in the end, one may even conclude that one is better off for having so suffered. In the words of Martin Luther, suffering and limitation may be “dark graces” like the dark grace of the Cross, but graces, saving graces, none the less. (3) Or, as Aeschylus taught long ago, we learn wisdom through suffering; suffering schools us in wisdom. The transhumanist desire to eliminate suffering may then enhance human power but at the cost of human wisdom...(4) and one might add, human compassion. For compassion too arises from knowing what suffering is like.

22. As a religious vision, Teilhardian transcendence is not about optimizing knowledge, or technological power, or even optimizing happiness. Rather Teilhardian transcendence is about reconnecting to what we hold sacred, to what gives our lives their meaning and direction. In other words Teilhard looks to the optimization of human meaning. He extrapolates evolution not to a singularity of limitless power where instrumental control goes vertical, but to an apotheosis of infinite wisdom and compassion, a salvation where *meaningfulness* goes vertical. For Teilhard, limitation and suffering is not to be eliminated or even simply overcome, suffering is to be redeemed, rendered meaningful by our embrace of it, as it embraces us, within the common embrace of what we hold most meaningful, what we hold sacred.
23. Juxtaposed with Teilhard, transhumanism can have an adolescent air about it. The problem of evil, in religious terms, amounts to asking the question: “Couldn’t God have done a better job?” Indeed that if we had the power, we *would* have done a better job. Transhumanism promises us that power and calls upon us to transform the world into our own image. Rather than being companions with other intelligences, organic and cybernetic, in completing an evolving world, we should take charge ourselves, and steer evolution towards the optimization of human power and happiness. The ego-inflation inherent in such a call is breathtaking. It reminds me again of the words of Jane Bennet: “Modernity has eliminated anthropomorphism at the cost of anthropocentrism.”
24. On the other hand, in making the eschatological seem reachable, transhumanism can render the Christian imagination more concrete and more self-critical. Christian

hope for eternal life, for example, can now be compared and contrasted with transhumanist aspirations for radical life extension. Few want to die today, but virtually everyone I ask, is repelled at the prospect of never dying, for fear that it would evacuate their lives of all meaning. For eternal life to be salvific then, it has to be more than life everlasting, that is, simply living on and on and on. So too eternal happiness will need to be more than an inexhaustible stream of dopamine. Again everyone wants to be happy, but virtually everyone I ask is repelled at the notion of pharmacologically induced, guaranteed happiness forever with no effort needed from us, and so no credit attributable to us. Without a connection to what we hold sacred, immortality and happiness is empty.

25. At the end of the day, however, the value of Teilhardian and transhumanist visions of transcendence lie not in their predictive accuracy, but in how they color our attitudes towards our current human condition. Do we approach our material, embodied condition as a blessing or a curse? Ought we to devote our research dollars to the elimination of pain and the extension of the human lifespan, or to technologies that can enhance the meaning of human life, whether in sickness or in health, however short or long that any given life may prove to be?
26. And just what kinds of intelligence ought artificial intelligence research to be focusing on? Narrow instrumental intelligence, with all the dangers it entails, or a broader, one might say, humanistic, general artificial intelligence that extends to social, moral and religious domains however difficult these may be to define, measure and operationalize? (1) We may have longer than 2045 to figure all this out, but both Teilhard and transhumanists are right in insisting that we need to be exploring and arguing over such questions right now.