34. The Problem of Transhumanism in the Light of Philosophy and Theology

PHILIPPE GAGNON

Subject Philosophy » Continental Philosophy
Religion » Christianity
People Descartes, René
Key-Topics bioethics, science, theology
DOI: 10.1111/b.9781444335712.2012.00036.x

Sections (N.B. page numbers in this document are inserted between [ ] directly in the text)

Our purpose in this chapter is to examine from the perspective of philosophy and theology the recent cultural movement calling itself transhumanism. The term was first used in its current sense, it seems, by Julian Huxley (1957, 13 17). The movement gained traction in the 1960s, and has reached the status of a significant cultural and intellectual voice in the present century, with magazines, lectures, internet sites, books, global associations, and even its own "Transhumanist Declaration" (World Transhumanist Association 1998). The transhuman ideal is based upon a reconception of evolution, a perfecting and transcending of the human race through the next step in progress: not through biological mutation but through science and technology. H+ (a common abbreviation) means the enhancement of human beings as a whole, the inevitable advance of our species which combines biology with technology, enhancing our bodies and brains with scientific innovation, seeking to overcome the limitations of our flesh (see Bostrom 2005).

Humanism as Historical Reality

In this chapter we will bring the transhumanist ideal into conversation with Western philosophy and Christian theology. Seeing this current movement in the longer vision of Western philosophy will both help us to understand it and bring out some problems which it recapitulates in its own techno-human way. What Christian theology will say to the transhuman ideal, as a kind of alternative story of salvation, will also bring both greater understanding of this hope in technological advance and critical issues from the stance of faith in God.

To begin with, an assessment of transhumanism requires that one address the "trans-" function in the expression. In the Western philosophical tradition, there has been some ambivalence when it comes to situating human beings within nature, and transhumanism seems to be in a similar place. For some ancient and medieval philosophies, relying on various understandings of the Hermetic tradition, we were considered a symbolic representation of [394] the whole cosmos, a microcosm within a macrocosm (Peck 1979, 49 52). Another reaction to humanity's place in the natural order came from the project of establishing a foundation of knowledge that would be indubitable, which Descartes sought in the self-affectation of the knower in a direct experience of mental attention. It was soon realized that for Descartes the substance of non-mental things had been reduced to extension, thus ceasing to have any density,

and thus emphasizing a connection to God through our mental life exclusive of the body. Spinoza's reaction to this was to turn the problem on its head and declare that the material and the spiritual are two faces of one and the same reality. Along with this came the denial that human beings can be an "empire within an empire" (*Ethics* III, preface). This anti-anthropocentrism has had a long-lasting life. Along with this element of his thought came the development of an ontology of "enjoyment," with an explicit desire to find more in philosophy than a meditation on and a preparation for death. The "sage" rather meditates on life (*Ethics*, IV, prop. 67).

In the Western tradition, the humanistic project is centered on an affirmation of Self, a denial of one's enslavement to fate or the will of the gods. It takes the form, around the Renaissance, of the development of a sense of value in the service of honor. In Shakespeare's play *Julius Caesar*, we find Brutus guilty of regicide in the name of a higher law. This law is not transcendent, it is felt by one within oneself. In the sphere of action, it can lead to the commission of crimes in the name of an unspeakable urge. In the sphere of sentiments, we will see it enacted in the perennial vitality of the medieval legend of Tristan and Isolde, whose love is immanent and requires satisfaction, yet with a tonality of sadness in that it cannot be realized in this world. Whereas Tristan retains a connection to the tragic, the *virtù* of Renaissance neo-paganism knows no limit from outside. It culminates in the affirmation "I am" interpreted as freedom to make values and to choose how and when to apply them.

According to Carroll (2008, 26), reason's greatest authority does not come out in Newton, or in Descartes's or Kant's rationalism, but in Shakespeare. The Bard of Avon captured the downfall of the humanist utopia, because he did not try to salvage some of it like Erasmus, or to deny its having any value like Luther, but preferred to invite us to live without illusions, describing what he saw. He decided to look at things apart from any grand narrative so that, as Santayana had seen, with him we stop looking at the medieval supra-lunar world, the world of Dante, and rest our gaze on the sub-lunar world (1921, 152–154). We cannot describe this vision as tragic; there is no such thing as a humanist tragedy. The implications of man having been made the measure of all things are drawn as they never were: whereas for classical tragedy death is not ultimate, in *Hamlet* it is.

Hence, we see that an exaltation of the free individual imposing his will through might leaves one in front of nothing but emptiness. Learned men, especially, have no answer to death. Secular humanism leaves behind it a failure to invent a grand narrative (Stoeger 2000).

Manifestations of an Overhuman Idea

When one looks around, one finds a dual attitude to this saddening admission made by Nietzsche: we can no longer believe in God. There is something of a tiredness in the way he devoted all his energy to a parody of the Renaissance hero who knows no other law than his own, which he termed the *Übermensch* (the Over-Human), with little left to disprove God. But is it possible to stop trying to be like the gods in an attempt to live a form of *beata vita*? Will we see around us, in line with the "experiments in living" advocated by John Stuart Mill [395] in *On Liberty* (1859, chapter 3), then revived in a different and influential way by Foucault, some new quest to make oneself the center of things? Or is this postmodern mood a search for what may look like anesthesia from deep anguish-driven questioning (Lipovetsky 2005)? This might be what is left from a universe with its "center everywhere and its circumference nowhere." Despite appearances, one still tries to create a node in a complex web and pull the energies in one's own direction. On the darker side, we will see a disenchanted world and the breeding of a human herd, our having to invent new rules to regulate life alongside products of our technology, something to which Sloterdijk — in an important reply to Heidegger's "Letter on Humanism" — had the courage to call attention (2009; see also 1989). Sloterdijk might have enlisted Nietzsche too quickly in the materialism of the engineers of cybernetic control of the masses.

The Spirit of Technology

Transhumanism can mean overcoming our garment of flesh, and it can also mean transcending this humanistic ideal, which keeps something Promethean and invites us to measure up with the gods. Descartes's project of refoundation was aimed at establishing our freedom from the hardships of this world. The reformation of human knowledge through the sciences was built on the idea that one ought to increase the welfare of humankind if it is in one's power. Descartes added in the sixth part of the *Discourse on Method* that with knowledge we could become "as if" masters and possessors of nature (the adverb *"comme"* in the original is usually overlooked). We need to remember the context for these oft-quoted words. This is a time when disease can strike unexpectedly and kill half a city, when crop or grain shipments not making it on time bring famine, where nature has the face of a shrew rather than that of a mother (Broad 1959, 29–31). The Enlightenment project of promoting modern science

sometimes masked a fear of this world; it was intended to fight against the Fall of man and the curses inflicted on him (Harrison 2007). The theme of the vengeance of nature is a very real one in the subconscious of the promoters of an age of technological advancement (Daston 2010, 17).

There is an ambiguity in Descartes's ontology of substance, which we may find to some degree in Galileo's understanding of matter as representing "primary" qualities. This can lead to a reduction of phenomena to numerical magnitudes standing for them. It comes out in the fact that some Christian thinkers, such as Gassendi, thought it useful to adopt a reduction of the world outside the soul to matter and motion. Those Christian scientists had it in mind to *conjoin* the heuristic advantage of treating the world *as though* it would only be mechanical forces in motion, and the affirmation that God initially was responsible for setting it in motion. For some of them, like Robert Boyle, it seemed an advantage as it canceled any talk of pantheism or of a nature rivaling its creator (Daston 1995, 52 53). Yet the ironic result of trying to have nature's source of initiative be neither God nor nature itself is an estrangement of human beings from nature.

Some reactions of the Catholic Church indicate that its officials were quite aware of possible implications of the view of nature and matter adopted by Galileo and those he inspired (von Weizsäcker 1964, 111 112). In the case of Descartes, he advocated the causal and mechanical explanation of the achievements of human thinking, but also posited an *"ingenuum,"* an inscrutable center of decision, moving beyond the usual dichotomy associated with his philosophy of the mind and body relationship (see Brown 2006, 58 60). There is a folly [396] of the rationalist project where some philosophers have come to forget that for Descartes, in Husserlian language, the mind had not been reduced. This led them to abuse the intelligibility of mathematics, laying more than Descartes on a foundation about which he himself had occasional doubts and in which we may well find total intelligibility because this is where we have chosen to secure it all in the first place.

Technology as Driving Force

How shall we understand technology as it was generated against such a background? It is the "other" of the intelligible reconstruction in pure relational knowledge of measurements at first carried by the slaves. It got tied to the production of work through heat and its modeling which revolutionized industry through the transforming

power of fire. Following this revolution one can safely say that it became increasingly difficult to separate pure science from the technology needed to set up experimental apparatuses (Prigogine and Stengers 1984, 103 107, 136). Technology has something of an unexpected discovery: it is about making things happen by suddenly hitting upon the right functional schema. Nature's technology proceeds as we do, in the sense of using available resources and fitting them into functional trade-offs that make sense for the purposes of the situation. There is a difference, however, in that natural inventions have level upon level of order, or multiply realized orders.

The project of transforming and steering the available energies from nature easily turns into a denial of there being anything else than its own effort. Some students of technology have spoken of its whole project being animated by this spirit of unceasing transformation through a *logos* that will spare nothing on its way. Names such as Ellul (1980, 126 128) or Hottois (1988, 88 89) come to mind. Must we posit such a *logos* of technology? There seems to be one, an immanent energy that drives itself toward a sort of autism, but is it, as Ellul imagined, a purely processual force destined to carry everything in the end? The answer is "yes," but problematically so. The technological force is that of a human creature in denial in front of the presence of an order she has not made. Such judgments can therefore be misleading if they scapegoat something that is devoid of intentionality. No more than a computer can be "alive" is technology animated by a will that makes it a substance.

The Place of Evolution

A common perception of our having evolved is that we are the product of successive meaningless accidents. Von Bertalanffy warned that such a paradigm was not sustainable and that the real question is not to oppose mindless and undirected mutations to a "ghost in the machine" that would betray a misunderstanding of science and an outmoded spiritualism (1974, 84 85). Nature is creative but she does not work like we do. She tends to create patterns and order.

When we look at biology since the nineteenth century, we should be careful to notice the mingling of a mechanistic ideal with the will of Darwin to get close to the Newtonian ideal of enunciating a general law which subsumes its particular instances, with what is otherwise the hidden potency emphasized by the Romantics in the running commentaries on Diderot's and La Mettrie's legacy when they spoke of sensation as in-built in matter. [397]

One way to make sense of technology's conceptual advance is to see our inventions as compressing time, providing us with an advance, technically speaking a negentropy. When it is realized that our universe will not sustain carbon-based life forever, the reactions can be to count on our creativity to wormhole ourselves into a different universe, or to affirm that we have ways to migrate elsewhere within this galaxy so that its run-down could be as it were displaced. Technology induces in us an impression of control over the future. Interestingly, it is cosmologists who have, in their attempt to protest against our downfall, revived the idea that we would be fundamentally minds, or some informational pattern, whereas most biologists still defend the value of Darwin's insights that are in the end mechanistic ones, as if mechanism did not have its own demise (Baker 2002, 183). Popular scientific writers on evolution such as Gould have spoken much about the erroneous belief in the brain as driving force of evolution (1980, 130 133), but it is possible to bypass talks of brain size and ask whether mind and consciousness are not in the end the key factors. Such a perspective has been recently defended by Lanza and Berman (2010), but one could say that from the inception of the theory of evolution through natural selection, this line of thinking has been present with Alfred Russel Wallace (1903).

The point of the cybernetic turn embedded in transhumanism, be it in perception (making it happen as we *understand* how circuits are saturated) or in making things create themselves, from von Neumann to Schöffer, is really about creating a responsive environment: an "enchanted" world. It is also about canceling the effects of time: think of information archiving, where the past is recreated and becomes available through some atemporal present (Munnik 2005, 32 33).

The idea of creating life artificially, when forced on us with present-day technological capabilities, ends up copying that which nature has already done and playing with its tolerable perturbations without going beyond the boundaries of structural stability (responses to Venter *et al*. 2010 illustrate this). Tinkering attempts, like that of using different nucleic acids' "letters" to understand how chromosomal information is passed on between generations, brings us to optimality limits, where we are not well placed to predict what could come out of such manipulations in terms of, for example, the invention of new *Bauplans*, or the re-utilization of the same architect genes. If hox genes mutate as much as they do (Carroll *et al*. 2008, 67), it is not clear that homologies between body plans spanning a range from the earthworm to man through the lobster would be the result of random switching of genes. They could very well establish that nucleic acids are a storehouse of data rather than a program (Atlan and Koppel 1990).

In forms of biological experimentation that deny any order in nature other than a randomly stabilized interplay of mechanical forces, in what Stuart Newman calls "biological postmodernism," our species is either defined as a statistical result or apprehended as an indefinite force capable of self-transforming. Research in genetic engineering is thus split between those who try to achieve a reassembling of parts into novel organisms either through the use of non-naturally occurring molecules, or by shifting parts that are present naturally into some already living organism (Cole-Turner 2010, 137 142).

The Kind of Being That We Are

Attempts to save in the human a non-material element that would not die end up reinforcing dualism. We can understand why if we recall that in transhuman "evolution" our bodies [398] come out looking awfully irrational from the "natural" evolutionary story. They are evolved, which entails that they could have been considerably different. This lack of control implies that we are *connected* with the rest of the cosmos, that there is a unity of all things.

Therefore, to the question that asks why there has been a movement such as transhumanism, the answer would be: because being human means to be inserted in a dramatic becoming that does not seem to obey rational planning with its preemptive annihilation of time's effects. This carries with it the temptation to make the move Descartes made when he split the universe too rapidly in two substantial realms. It is then that we start to hear talk that we could be some software that can be saved from its implementation in "meat" (Hacking 2005, 163 165). Not only could we avoid dying, but we could entertain the possibility of being born with a different hereditary makeup. By choosing when to be born, or what type of constitution to have, some will think: "might we not escape the 'thrownness' sentiment and the estrangement in front of cosmic time?" Inevitably, there comes with it a radicalization of a core idea of Greek philosophy: we *are* an immortal "soul," a "pattern" in today's language.

It is a fallacy, although one only to be detected with subtlety, to say that, since man transforms everything he touches, we cannot assign him any nature. The reasoning goes like this:

(1)   If something is natural, then it is not artificial.
(2)   Man is the maker of all the artifices.
(3)   So, man does not have a nature.

The argument in fact draws on four terms, not three. The problem is the soundness of this reasoning. The minor premise calls on a capacity to draw out. The artifices in question do not concern the human being acting on his nature, as long as we have not created life in toto. It is assumed that to be in a nature puts one in a situation where everything would be given and somehow fixed through instincts or natural processes, which would imply the false assertion that there is no invention in nature but endless repetition of the same. What these problems reveal is not that human beings are without nature, but that we do not possess the adequate concepts to form an image of a nature capable of changing while staying the same. This is an old *aporia* in philosophy.

Limits and Motivations of Nature's Manipulation

Let us emphasize that Christianity is concerned with the very long term, its goal is nothing less than the redemption of all creation, including changing the mentalities of crude and barbaric individuals to make them inherit the Kingdom of God. If naturally occurring organisms like our very bodies are to be re-engineered by us, we will have to recognize that time and its effects are not on our side. This is captured by Bergson in *Creative Evolution* with his metaphor of the cube of sugar which has to melt in the glass (1913, 9 10), defining time as an unrestricted stream of self-referring duration (as opposed to Einstein's and Minkowski's view of physical time). Christian hope, past and future, needs to be thought of against this background of an organic whole reinforming all its states. This has a connection with reproduction, not in the sense of surviving *hic et nunc*, but rather through a duty to conquer time as opposed to space. The covenant of God with Abraham is sealed on the male reproductive organ (Gen. 17:11) and equally blessed is the womb of Sarah (Gen. 17:15 19). As Heschel [399] showed, the desire of the Israelite is to embrace the spirit of *Shabbat* personified in the feminine (1975, 50 57).

Evolution has brought time into the center of a consideration of what it means to be human, or indeed to be a living creature. The three humiliations inflicted on human pride of which Freud spoke, referring respectively to Copernicus, Darwin, and himself, are built on space, body, and mind (Weinert 2009). There is no real consideration of time in any of them. It matters that our planet is not conceived as central anymore, that our bodies are not the perfect result of a transcendent form, and that we do not control all that is in our minds, but in the end those successive "dethronings" do

nothing to address the question that asks about existence itself. Freud was to later put it correctly (1962, 35): what value is there in stretching the duration of our lives if it is to spend more time awaiting liberation from death? Any serious eschatological hope for meaning and fulfillment is skirted or ignored by transhumanism, which may envision nothing more than mere endless life, time extended without fulfillment.

As for the mind, if we say, like Gelernter (1994, 122 147), that we will program on a computer its allusive character or its metaphorization capacities through simulating emotions, it is hard to see how we could program a theory that would make a theory of its own incompleteness. What in effect would be the converse of such a position? Are we going to program in the mind a *theory* of what *life* is, of all its rhythms and cycles? It is the total sensitive incarnation which is lacking in the computer, to be as much of a summary of the universe as we are.

Artificial intelligence created programs that would not only perform logical operations or calculations faster and more accurately than human beings, but also neural networks that would learn by trial and error like we do. In the perspective of connectionism, what was advocated was a study of the cooperation of a great number of "cells," used here in an electronics sense, in the production of a pattern that would be general enough to give human beings' subjective impression of integration and preemption.

With hindsight, it is possible to see that a displacement from a focus on cognition needed to happen. The lesson could have been drawn around the suggestions of Turing, which amounted to saying that there is no priorly set limit to the algebraic operations that a machine eventually could perform. If a human thinker finds a function that a machine could not compute, Chaitin's Ω number, for instance (2006, 129 141), this is nonetheless unapproachable for the human mind. If a problem is correctly posed, someone will eventually be able to reconstruct the mechanical route to its solution.

So it seems that at the heart of this problem of transhumanism is not a question as to whether we should value the machine or not. Machines are humanly contrived apparatuses serving inferential and deductive rationality. We can use expert systems to assist in a diagnosis. We can even speak of augmented intelligence, from all manner of prostheses to "ubiquitous programming" with sensors disseminated in the environment so as to not interfere with human activity (Weiser 1994, 125 127). All of these are to some degree extensions of the human body. Such tools are "piloted" by a decisional center. They allow us more freedom to divagate and explore, making creativity equivalent to error in terms of this predefined codification.

The real question and enigma is the desire to flee out of humanity, of the risks and limitations of our "being human." It is the dementia of one who constantly swerves in order to be certain that he will not have deficiencies or be handicapped (Sandel 2004, 57 58). The goal is to reinforce that which we need nature to do if she is to perform according to a criterion we have predefined. What if we no longer had this servant that the body is, whose limits we can push back and which allows us to surpass ourselves? What would be an anthropological situation in which there no longer exists some self-overcoming? All that we want we would obtain, never again encountering this hard resistance of reality and the physical order.

As for our human bodies, it has always been justifiable to fight illnesses and grave deformities. "Improving" on our nature would come with all the shortcomings of our shortsightedness in electing a perspective to be valued. The lack of consensus about the "ideal type," its fleeting character, would run the risk of having for itself complete license until a perception started to look different and we "felt" we could *decree* some forms out of "humanness" (Lerderberg 2002, 38). The proximity of this to eugenics does not need to be emphasized. Our moral sense protests against it, yet if we try to define the nature we *possess*, we fall on traits we share with other sentient beings.

The Place of Fiction and the Reclaiming of Eschatology

The human orphan in a cosmic drama that surpasses us is bound to respond in a way that will reflect our dual capacities, limited by space and matter which can also be challenges to overcome, and apparently unlimited when it comes to a projection of our will. To the *rational utopia*, which would protest our having to work so hard to acquire fragments of knowledge only to see them disappear at death and try accordingly to push backwards our downfall, there is often contrasted a response which calls for the rediscovery of our animalness and the connection we bear with an emotive grounding to the "there is" (*"il y a,"* a technical term among phenomenologists) that has put us where we are. Adherents of this *poetic utopia* do not always have means of rationally articulating the meaning of their quest.

On the one hand, there is the ideal of ubiquitous presence, used by fascists in the 1930s through radio waves carrying the human voice everywhere and hence usurping a prerogative of the angelic world. This, if used for conditioning, would make of man a blasphemer in the style of the master of the Golem. The same presence everywhere can also, on the other hand, be equivalent to a communication that would affect its own

conditions of production, creating a loop where every act of emission would be informed by everything else instantaneously, such as was contemplated by Marshall McLuhan. This would redeem the Golem, since the secret of life would be intimately connected with the act of writing which shapes the future and, as Sloterdijk recalled, connects grammar and magic (2009, 13). If life is written down as a set of hereditary instructions, an algorithm, could one be any more guilty of writing on the already written, than one could be guilty for having to use language?

Sloterdijk's "Rules for the Human Zoo" moves from Heidegger's "angelism" to Nietzsche's "beastianism." Nietzsche wrote that there was no end or goal of humanity, save the production of the highest specimen: "the *goal of humanity* cannot lie in its end but only *in its highest exemplars*" (1983, 111). Many transhumanist proposals are thought experiments, they are to be understood as "world-making," so that behind the question of whether one should advocate "playing God" is the danger of stifling this vocation to creativity if we flip downward at the way the world is any efforts at inventing a better one.

One cannot make sense of the manner in which this reaction is conditioned by and is a response to nihilism if one does not move from metaphysical to fictional nihilism. It serves no purpose to oppose to Nietzsche an ontology of light and peace in reaction to some purported violent promotion of the void. He probed and found that reason and knowledge do not give us reasons stemming directly from reality, or put differently, values. Those imagi- [**401**] native procedures are "secreted" by the absence of a metaphysical viewpoint, and yet to oppose them a full-fledged realist metaphysics is besides the point. Recent apologetics, from writers such as J. Milbank and D. B. Hart, has misconstrued Nietzsche's stance by reading this mask-wearing philosopher like a first-person metaphysical realist (Hyman 2000, 434 436). The highest fruit of earthly becoming should be its offering to eternity, but how could we avoid this specimen being *this* or *that*, inevitably failing to represent all that the earth was capable of as possibilities? It is this that drove Nietzsche mad and led him to affirm eternal recurrence.

From Autonomy to Theonomy

The Christian faith affirms at the core of its hope the promise that God will be all in all (1 Cor. 15:28). What does this promise mean for the problem here considered? How will the kingdom of freely offered grace be allowed to make its appearance in the midst

of our chiaroscuro? Let us think about the vocation of lording over creation: does that mean and entail preserving some mind capacities? Does it mean improving on them? Some promoters of artificial life and intelligence, such as H. Moravec, have not failed to offer such an interpretation. Theologians have at times also taken this route (see Foerst 2004).

What place have we left for the animal, that sketch of ourselves? What room is left for a non-anthropocentric universe, that of Psalm 104, or of chapters 38 40 of the Book of Job? Those questions would pose a larger one: does Christianity require a communion with nature? It does in the sense of having been created for a communion supremely instantiated in the face to face of man and woman (*ish* and *isha*). In the sense of Romanticism, of the *Hymnen an die Nacht* of Novalis, the answer is problematic and more likely to be negative. Romanticism rests on an enclosing within the finite sphere of nature from which we have been freed by the cross. Christianity justifies a certain form of dominion of human beings over nature, and hence allows for some exploitation of it. Vitalistic naturalism is not a Christian position. God's Noachic covenant (Gen. 8:15 22) is not primarily a teaching about nature, but a statement to the effect that it is righteousness of the heart that will keep the balances of the earth (*'adamah*, from which *'adam* was modeled) forever standing, since they rest on God's ultimate solidity mediated through the human vizir he instituted. This being said, we need not pit the lessons of poetic utopia against Christianity. The Spinozist ontology introduced at the beginning, revived by Nietzsche and Freud, calls us to rediscover our dependence on nature instead of cultivating the illusion that we can dominate it. If poetic utopia is not from Christianity, it is hard to think it could be dispensed with altogether when it comes to prophetically expressing God's ultimate will, just as it would be hard to think of the compiler of the Genesis creation story not having borrowed anything from surrounding Near Eastern mythopoeic narratives.

Our obedience calls more for a conversion of the will than a prescription never to modify nature. If our intention is saved, we will foster those positive traits that are an inverse image of the ones Sandel stigmatized in the wrongful ethics of control. The problem is displaced, not so much toward some unconditional, forbidden modification of nature but towards the fruits of time to be poured into the bosom of eternity, so that they will carry something more than the mirroring of our own flawed passions, greed, and biases. We would not want a world made in our image if this is what it meant. It is to the credit of Dante's insight to have captured this in the *Inferno*. [**402**]

Jewish rabbinic ethics has left us with this teaching recalled by Lévinas: we disrupt the cosmos not when artificializing it, but when we fail to acknowledge the cucumbers

through our act of gratefulness and see instead in them the illusion of more production of cucumbers (Lévinas 1994, 141 142). It is not making things unnatural that bewitches the human creature into defying the Lord. We can make synthetic meat if we want. Our fault lay in eating it on *Shabbat* and not observing the final destination of creation.

The Christian God created through the Word something akin to an intellectual act and he had in front of him not passive atoms to shuffle, but a matter pregnant from an act of the Spirit. He does not create like an artisan, poking his hammer in slate. Reserving a space for that which we have not made comprises a range where even matter would be included. If God has let creation be what it is, if he created (*bara*) in a way that is unrepresentable to us (which in the Old Testament means less "to make" than "to make a *new* thing appear") and through withdrawing, there is room for nature's own intelligence, and further for the misuse of it, for ranges of exploratory "dead ends." Not all we see in nature ought to be preserved.

Transhumanism can be seen as an anticipation of a godlike life, but it will not do to simply speak of putting God at the center in the manner of Spinoza read by Heine. One has to locate the "blind spot" present in this project when, fueled by a desire for immortality, it flashes its gaze on the other "shore" of our experience of a "valley of tears" and imagines cities that are "cybernetic" (Schöffer 1972), or organisms such as cyborgs that have come to be from a finitely intentional act of mind and who do not know suffering, since it thus simulates for us the attainment of divine life *hic et nunc*, against a parousiac realization of justice.

If human beings are in the process of being fully formed, ethical problems themselves will be modified. For a being who has learned to partly control and certainly reduce suffering, the fear of consequences will not be experienced in the same way. When suffering has been eradicated, two possibilities present themselves: to propel ourselves in a painless life, pursuing a garden of pleasure and ecstasy, or to turn our gaze on the agonizing earth, almost as if she took over our suffering. No one, however, can tell us what *physical* sense there would be in a planet such as ours existing forever as we know it. The other strategy, that of a transfer of our lives in an endless absence of obstacles and trials, in an eternal repose, has a fantasy character about it, as if by pulling ourselves out of the universal connectedness of all creatures, we had forgotten the boredom and eternal suffering that would accompany a swelling-up of our deficiencies to the dimensions of endless time and space.

There is a theological response that will be shared by all Christians: the human person is made in the image of God. As *imago Dei*, humankind does not need to build a world

in its image, but to steer creation with a heart and mind in God's likeness. A full answer to the problems inherent within the dream of transhumanism would have to include a revaluation of personhood, but the nature of the human creature might not just be in personhood. Even the grounding of personhood in the life of the Trinity needs to be balanced against the recognition that "person" used as a concept to speak of God is more dissimilar from "person" used to speak of us than it is similar (Lateran Council IV, chapter 2). Nature might bear a greater work which exceeds the order she represents, but this might in turn only be visible in a theological axiology: an eternal fountain of energy and life that would make the person possible.

What is incompatible with Christianity in the transhuman ideal is the will to measure oneself against God, to act as if we could value ourselves only through work and autistic "busying" while God would have rested. To reject dependency on other creatures betrays a refusal of feebleness, of the weaving of a web, of the network that surrounds us. It [**403**] is the refusal to accept that resources which do not belong to us belong to other living beings.

Whereas humanism affirmed human nature to the point of creating in the soul a sense of horror, transhumanism denies it. In both cases, what complements this nature has not been acknowledged. Whether we affirm it or deny it any value, we have all along been incapable of seeing in the need for relationality a parable of who God is. Christianity is the real challenge to transhumanism, not the other way around. It teaches that to realize the fullness of our nature, to have it all, one must lay it down, not by aggrandizing a mentalized and abstract version of it, but by accepting that something be given at the gateway where our independence is destroyed.

This is why we are promised a new name and a new self (Rev. 14:3). Impatience with the self is therefore inscribed in us, but by having invented a world of constant agitation, we have gotten tired of being, of the effort implicit in evolving in a noosphere and having to constantly decide. We seek to dismiss the "I am" and fuse in a pantheistic way like a flame everywhere disseminated and locally nowhere. Never have we seen a more pressing need to understand how the Spirit of God is a flame that can call to life this haze of dust, because it is also the water where life could first appear.

References

Atlan, H. and Koppel, M. 1990. The Cellular Computer DNA: Program or Data. *Bulletin of Mathematical Biology*, (52) (3), pp. 335 348.

Baker, A. 2002. Theology and the Crisis in Darwinism. *Modern Theology*, (18) (2), pp. 183 215.

Bergson, H. 1913. *Creative Evolution*. Translated by A. Mitchell. New York: H. Holt.

Bostrom, N. 2005. A History of Transhumanist Thought. *Journal of Evolution and Technology*, (14) (1), online at http://jtpress.org/volume14/bostrom.html.

Broad, C. D. 1959. *A Short History of Science*. Garden City, NY: Doubleday.

Brown, D. 2006. *Descartes and the Passionate Mind*. Cambridge: Cambridge University Press.

Carroll, J. 2008. *The Wreck of Western Culture: Humanism Revisited*. Wilmington, DE: ISI Books.

Carroll, S., Prud'homme, B., and Gompel, N. 2008. Regulating Evolution. *Scientific American*, (298) (5), pp. 60 67.

Chaitin, G. 2006. *Meta Math! The Quest for Omega*. New York: Vintage.

Cole-Turner, Ronald. 2010. Synthetic Biology: Theological Questions about Biological Engineering. In D. Albertson and C. King eds. *Without Nature? A New Condition for Theology*. New York: Fordham University Press, pp. 136 151.

Daston, Lorraine. 1995. How Nature Became the Other: Anthropomorphism and Anthropocentrism in Early Modern Natural Philosophy. In S. Maasen, E. Mendelsohn, and P. Weingart eds. *Biology as Society, Society as Biology: Metaphors*. Dordrecht: Kluwer, pp. 37 56.

Daston, Lorraine. 2010. The World in Order. In D. Albertson and C. King eds. *Without Nature? A New Condition for Theology*. New York: Fordham University Press, pp. 15 34.

Ellul, J. 1980. *The Technological System*. Translated by J. Neugroschel. New York: Continuum.

Foerst, A. 2004. *God in the Machine*. New York: Dutton.

Freud, S. 1962. *Civilization and Its Discontents*. Translated by J. Strachey. New York: Norton.

Gelernter, D. 1994. *The Muse in the Machine*. New York: Free Press.

Gould, S. J. 1980. *The Panda's Thumb*. New York: Norton.

Hacking, I. 2005. The Cartesian Vision Fulfilled: Analogue Bodies and Digital Minds. *Interdisciplinary Science Reviews*, (32) (2), pp. 153 166.

Harrison, P. 2007. *The Fall of Man and the Foundations of Science*. Cambridge: Cambridge University Press. [**404**]

Heschel, A. J. 1975. *The Sabbath*. New York: Farrar, Straus & Giroux.

Hottois, G., ed. 1988. *Évaluer la technique*. Paris: Vrin.

Huxley, J. 1957. Transhumanism. In *New Bottles for New Wine*. London: Chatto & Windus, pp. 13 17.

Hyman, G. 2000. John Milbank and Nihilism: A Metaphysical (Mis)Reading? *Literature and Theology*, (14) (4), pp. 430 443.

Lanza, R. and Berman, B. 2010. *Biocentrism*. Dallas, TX: BenBella Books.

Lederberg, Joshua. 2002. Experimental Genetics and Human Evolution. In W. Kristol and E. Cohen eds. *The Future Is Now*. Lanham, MD: Rowman & Littlefield, pp. 33 40.

Lévinas, E. 1994. *Nine Talmudic Readings*. Translated by A. Aronowicz. Bloomington, IN: Indiana University Press.

Lipovetsky, G. 2005. *Hypermodern Times*. Translated by A. Brown. Cambridge: Polity Press.

Munnik, René. 2005. ICT and the Character of Finitude. In U. Görman, W. Drees, and H. Meisinger eds. *Creative Creatures*. London: T&T Clark, pp. 15 33.

Nietzsche, F. 1983. *Untimely Meditations*. Translated by R. J. Hollingdale. Cambridge: Cambridge University Press.

Peck, Russell A. 1979. Number as Cosmic Language. In D. Jeffrey, ed. *By Things Seen: Reference and Recognition in Medieval Thought*. Ottawa: University of Ottawa Press, pp. 47 80.

Prigogine, I. and Stengers, I. 1984. *Order Out of Chaos*. New York: Bantam.

Sandel, M. 2004. The Case against Perfection. *Atlantic Monthly*, April, pp. 51 62.

Santayana, G. 1921. *Interpretations of Poetry and Religion*. New York: Scribner.

Schöffer, N. 1972. *La Ville cybernétique*. Paris: Denoël.

Sloterdijk, P. 1989. *Thinker on Stage: Nietzsche's Materialism*. Translated by J. Owen Daniel. Minneapolis, MN: University of Minnesota Press.

Sloterdijk, P. 2009. Rules for the Human Zoo: A Response to the Letter on Humanism. Translated by M. Varney Rorty. *Environment and Planning D: Society and Space*, (27) (1), pp. 12 28.

Stroeger, William R. 2000. Cultural Cosmology and the Impact of the Natural Sciences on Philosophy and Culture. In J. Polkinghorne and M. Weiker eds. *The Ends of God and the End of the World*. Harrisburg, PA: Trinity Press, pp. 65 77.

Venter, C. G., Gibson, D. G., Glass, John I. et al. 2010. Creation of a Bacterial Cell Controlled by a Chemically Synthesized Genome. *Science Express,* May 20, pp. 1 7.

von Bertalanffy, L. 1974. *Robots, Men, and Minds*. New York: G. Braziller.

von Weizsäcker, C. F. 1964. *The Relevance of Science*. London: Collins.

Wallace, A. R. 1903. *Man's Place in the Universe*. London: Chapman & Hall.

Weinert, F. 2009. *Copernicus, Darwin, and Freud*. Oxford: Wiley-Blackwell.

Weiser, M. 1994. Commentary. *Human-Computer Interaction*, (9) (2), pp. 125 127.

World Transhumanist Association. 1998. Transhumanist Declaration, online at http://humanityplus.org/learn/transhumanist-declaration (accessed July 2011).

Further Reading

Albertson, D. and King, C., eds. 2010. *Without Nature? A New Condition for Theology*. New York: Fordham University Press. A collection of essays addressing the difficult question of nature's fixity and the human quest for improvement, typically with a theological dimension.

Ehrenberg, A. 2010. T*he Weariness of the Self*. Translated by D. Homel et al. Montreal: McGill. Helps to penetrate the discomfort with one's identities of substitution and shows how much of the transhumanist question is related to the absence of an agreed-upon anthropology.

Hansell, G. R. and Grassie, W., eds. 2011. *H+/−: Transhumanism and Its Critics*. Philadelphia, PA: Metanexus Institute. Recent essays by specialists laying down the reasons why they think transhumanism must be pursued, followed by dissenting viewpoints. [**405**]

Janicaud, D. 2005. *On the Human Condition*. Translated by E. Brennan. London: Routledge. Furthers several of the points mentioned in an inevitably sketchier way in this chapter.

Kurzweil, R. 2000. *The Age of Spiritual Machines*. New York: Penguin. Provides a synopsis of work done in artificial intelligence and mind reproduction in machines.

Wiener, N. 1966. *God & Golem Inc.: A Comment on Certain Points Where Cybernetics Impinges on Religion*. Cambridge, MA: MIT Press. Essential reading for understanding the vision that the father of cybernetics contemplated, seeking a humanism that would counterbalance machine and intelligence hybridization.

Cite this article