



Life-Extension in Transhumanist and Christian perspectives: Consonance and Conflict

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Abstract

The development of genetics and genetic technologies are bringing us closer to the possibility of greatly extending the human lifespan by significantly slowing the aging process. Eliminating the deleterious effects of aging through such technologies is one of the primary tenets of transhumanist philosophy, which actively seeks to improve and transcend the human condition as defined in part by our mortality. This paper explores the areas of consonance and conflict between Transhumanist Philosophy and orthodox Christian Theology concerning the goal of greatly extending the human lifespan by examining the origins of the modern biomedical movement and the Christian contribution to the current search for greatly-extended lives. These areas of consonance and conflict involve: (1) death as an enemy (2) the dissatisfaction with the current state of humanity, and (3) nature as a process of unfolding, and will be investigated by interacting with Christian theologian and defender of life-extension Ronald Cole-Turner, as well as the writings of the Swiss theologian Karl Barth.

Killing Death

In Nick Bostrom's *The Fable of the Dragon-Tyrant*,¹ we find a compelling parable describing humanity's struggle against an utterly unassailable dragon, whose hideous jaws produce a steady flow of putrid yellowish-green slime as it daily devours its meal of live human flesh. Though the dragon's insatiable appetite for humans exacts a heavy toll on the planet's population, people have come to accept the fact that one day they will be food for the dragon. In an effort to preserve life as long as possible and at the same time democratize death, only the oldest are sacrificed to the dragon, herded every night onto a cargo train leading straight to the dragon's abode. It is widely acknowledged that if the priests, magicians, and warriors of the past could not kill the evil dragon, then there was little reason to believe that they could. The King too is convinced that killing the dragon is technologically impossible, persuaded by the sages' wisdom that finitude is a blessing in life, and occupied with more immediate concerns. Over time however, the

¹ Nick Bostrom, "The Fable of the Dragon-Tyrant," <http://www.nickbostrom.com/fable/dragon.html>. Also forthcoming in *The Journal of Medical Ethics*.

King becomes convinced that the dragon might be defeated through the use of new technology, and approves the immense plan to destroy the dragon. Though requiring several years of Herculean-like effort and costing millions of dollars and lives, a special armor-piercing missile is finally developed that eventually kills the dragon. Great celebrations ensue as people realize that the awful daily ransom was now at an end, and people realize that an unlimited future now lay open before them. Though such a future presents numerous potential difficulties, people are up to the task of thinking new thoughts, and dreaming new dreams to meet the challenges that are posed not by death, but by life. That biggest source of dread—human decline and death—has finally been annihilated.

Until the last decade or so, most credible scientists likened the possibility of slowing or eliminating human aging to a fable. However, current techniques like selective breeding, caloric restriction and genetic manipulation have shown that human aging may be the next process to surrender to our control. It has already been shown that altering a single gene in the nematode worm *C. elegans* has produced a seven-fold increase in its lifespan.² Biologist Andrezej Bartke has extended the lifespan of a laboratory mouse by seventy percent with a combination of genetic alteration and caloric restriction.³ The remarkable thing about many of these laboratory experiments is that these extended life spans have been accompanied by extended periods of *health* and *vitality*, assuaging fears of prolonged senescence and physiological decline. We have moved a step closer to the possibility of growing much older without the nasty side-effects of aging. But these advances have not come without controversy.

Techno-optimists vs. the “Radical Mortalists”

In light of these scientific developments, the question of whether we *can* slow aging is being gradually replaced by the question of whether we *should* slow aging. The battle lines are typically drawn between transhumanists on the one hand, and those with religious convictions on the other. Yet, the line of separation is not that clear. Certainly, while the significant; if not indefinite expansion of the human lifespan is a key tenet in transhumanist philosophy, one need not be a transhumanist to be in favor of a longer, healthier life.⁴ Similarly, one’s religious convictions need not rule out the indefinite expansion of earthly life. Nor does this require transhumanist philosophy to be antithetical to belief in God or other theistic convictions.⁵ Unfortunately, the debates over this issue have produced more than a few unhelpful caricatures of the opposing position. But it would be just as wrong to say that the desire to indefinitely extend life is a hubristic

² L. Partridge and D. Gems, “Mechanisms of Ageing: Public or Private?” *Nature Reviews Genetics* 3 (2002): 165-175. The lifespan was increased from 31 days to nearly 200 days.

³ A. Bartke et al., “Extending the Lifespan of Long-lived Mice,” *Nature* 414 (2001): 412.

⁴ Bostrom observes that one of the core values of the transhumanist program is the “radical extension of the human health span.” “A Transhumanist Perspective on Human Genetic Enhancements,” <http://www.nickbostrom.com/ethics/enhancements.html>. Similarly, the first point in “The Transhumanist Declaration” speaks of “redesigning the human condition” which is essentially marked by the aging process. <http://transhumanism.org/index.php/WTA/declaration/>

⁵ Indeed, in an effort to persuade doubters about the goodness of extending life, Aubrey de Grey has observed that a ‘rational theist’ argument can be made by noting that God deprecates the hastening of death, regardless of the benefits of eternal life, and that God also deprecates apathy. “The feasibility and desirability of indefinite youth: recent advances from unexpected quarters,” <http://www.transhumanism.org/tv/2004/program.shtml>. Whether his account is convincing however, is another question.

transhumanism dream stemming from techno-optimism as it would to label opponents as dim-witted “radical mortalists.”⁶ Indeed, transhumanist’s invoke moral language in arguing their case, as is clear in Bostrom’s clever portrayal of aging as the ultimate enemy of humanity. The ‘moral’ of his story makes this abundantly clear. “Searching for a cure for aging is not just a nice thing that we should perhaps one day get around to. It is an urgent, screaming moral imperative.”⁷

Doubtless, there have been many objections to this goal from differing religious and theological perspectives. The reverberations of these objections result from a collision of worldviews that differ significantly from one another. Yet, when we consider the historical roots of current attempts to greatly extend the human lifespan, we discover not only that the prolongation of human life was a primary goal at the birth of modern biomedicine, but also that many of biomedicine’s proponents held Christian convictions. Consequently, the topic of life extension affords us one opportunity of examining the points of consonance and conflict between transhumanist philosophy and orthodox Christian theology, which, in its broadest sense can be characterized as affirming the centrality of the birth, death, resurrection and ascension of Jesus Christ—God ‘in the flesh’—and his eventual return to judge the living and the dead in the final establishment of his kingdom. It is hoped that an examination of these points of consonance and conflict might suggest areas of future dialog in hopes that each tradition might benefit from a critique from a different perspective. To this end, we will examine the history regarding the significant extension of the human lifespan in the key figures of Bacon, Descartes, and the early American health reformers in an effort to demonstrate the distinctly Christian contribution to the birth of the modern search for longevity. Then we will turn our attention to a contemporary Christian theologian and proponent of life extension in Ronald Cole-Turner in hopes of uncovering specific areas of consonance and conflict between Christian theology and transhumanism.

The scientific battle against aging

It may seem odd that some of the earliest attempts to slow aging and put off death come from within the Christian tradition. Yet, we find that Franciscan Roger Bacon argued in his thirteenth-century work *De Retardatione Accidentum Senectutis*, that aging and death could be put off through a scientific investigation of the aging process whereby nature’s hidden forces were uncovered.⁸ This involved a hygienic regime where particular attention was paid to cleanliness and a limited food intake, and the ingestion of certain medicines. David Aers observes that “this strand within the Catholic cultures of the Middle Ages seems to share some hopes and perspectives with modern medical technologies.”⁹ The desire to prolong life later found proponents in the figures of Francis Bacon and Descartes.

⁶ Ronald Bailey has coined this term, asserting that “future generations will look back at the beginning of the 21st century and marvel that intelligent people actually tried to stop biomedical progress just to protect their cramped and limited vision of human nature.” “Forever Young: The New Scientific Search For Immortality,” in *Reason Magazine* (August 2002) <http://reason.com/0208/fe.rb.forever.shtml>.

⁷ Bostrom, “Fable.”

⁸ David Aers, “The Christian Practice of Growing Old in the Middle Ages,” in *Growing Old in Christ*, ed. Stanley Hauerwas et al. (Grand Rapids: W. B. Eerdmans, 2003), 48-49.

⁹ Aers, “Christian Practice of Growing Old,” 49.

Descartes and Bacon

Descartes too clearly believed that advances in science would make longer life possible, though he had no specific methodology for longevity. Indeed, many of his comments betray overriding concern for death and the afterlife given his desire for bodily longevity and arguments for the soul's immortality.¹⁰ Descartes held the preservation of health as "undoubtedly the foremost good and the foundation for all the other goods of this life."¹¹ Much like his forbear Roger Bacon, he hoped that increasing knowledge of the created order would yield great progress and provide the primary means by which human longevity could be greatly extended. Through such knowledge,

. . . we could avoid many infirmities, both of mind and body, and perhaps even the decline of old age, if we had enough knowledge of their causes and of all the remedies that nature has provided for us.¹²

In another work he expresses his enthusiasm: ". . . I believe it may be possible to find many very sound precepts for the cure of diseases and for their prevention and also even for the retardation of aging. . . ."¹³ Descartes however, held out no hope for an earthly immortality, given his belief in an immortal soul. Indeed, in admitting that the body must eventually die, Descartes sought solace from the fear of death in the soul's incorruptibility and utter independence of the human body. Second only to the error of the denial of God's existence, claimed Descartes, was the belief that the soul, like that of an animal, expires with the body at death.

. . . there is none that more readily leads weak minds away from the straight path of virtue than to imagine that the soul of beasts has the same nature as ours, and, consequently, that we have nothing to fear or hope for, after this life, any more than flies or ants.¹⁴

Yet, it appears that Descartes' Christian convictions left him oscillating between his pursuit of earthly prolongevity through the *manipulation* of nature on the one hand and the ethical mission of *submitting* to the structure of the world and the limits of nature on the other.¹⁵ This is most readily apparent when one looks at his provisional morality system which consisted of four maxims, the third of which was "to change my desires rather than the structure of the world"—essentially, making a virtue of necessity.¹⁶ In this way, one would no longer desire to make external reality conform to one's desires—including the desire to have a body of extreme durability.

¹⁰ Leon Roth has made a similar assertion, though he goes too far by asserting that "the will o' the wisp of his life was the conquest of death not only for the soul but also the body. . . ." *Descartes' Discourse on Method* (Oxford: Clarendon Press, 1937), 7.

¹¹ René Descartes, *Discourse on Method and Related Writings*, trans. Desmond M. Clarke (London: Penguin Books, 1999), 44.

¹² Descartes, *Discourse*, 44.

¹³ Gerald J. Gruman, "A History of Ideas About The Prolongation Of Life: The Evolution of Prolongevity Hypothesis to 1800," in *Transactions of the American Philosophical Society* 56, vol. 9 (December 1966): 78, citing Descartes, *Description of the Human Body*, in *Œuvres*, vol. 11 (Paris, 1909), 223-224.

¹⁴ *Discourse*, 42.

¹⁵ Gruman, "History of Ideas," 79.

¹⁶ *Discourse*, 20-21.

Thus, by making a virtue of necessity, as they say, we would no more wish to be healthy when we are sick, or to be free when we are in prison, than we currently desire to have a body made from matter which is as durable as diamonds or to have wings like a bird for flying.¹⁷

Hence, in Descartes' thought, there is a tension between his desire for a body as 'durable as diamonds,' and controlling his mind which has given rise to such a desire. Philosopher Gerald J. Gruman sees an oscillation in Descartes between manipulating nature and accepting it as it is, attributing it to Descartes' religious convictions. He observes that Descartes' disciples defended him against the charge of impiety due to his endeavors in longevity.¹⁸ Certainly, Descartes himself placed a high value on Holy Scripture, having sought approval for his *Meditations on First Philosophy* from the theological faculty at Sorbonne.¹⁹ Descartes' personal correspondences however, reveal a fear of death that is assuaged somewhat by his proof that the soul lives on. In a private correspondence, he writes that the soul's immortality,

. . . I have found to be very powerful, not only to make me bear patiently the death of those I loved, but also to prevent me from fearing my own, although I belong to those who love life very much. It consists in the view of the nature of our souls, of which I believe I know so clearly that they outlast the body, and that they have been born for joys and bliss much greater than those we enjoy in this world, that I cannot conceive of those who die anything else but that they go to a life more peaceful and sweet than ours, and that we are going to rejoin them someday . . .²⁰

Several years later, Descartes' theological convictions appeared to win the day. In a 1646 letter to Chanut, he conceded "instead of finding means to conserve life I have found another, an easier and surer one, which is not to fear death."²¹ Hence, while Descartes held great hopes for science and the prolongation of life through mastery of nature, his belief in the afterlife tempered both his fear of death and his prolongevitist prognostications, primarily through his belief in the soul's immortality.

Francis Bacon appeared less encumbered by theological convictions and even more optimistic towards increasing control over nature through scientific progress. Central among Bacon's melioristic program was prolongevity. In his *Advancement of Learning*

¹⁷ *Discourse*, 21.

¹⁸ Gruman, "History of Ideas," 79. More recently, Charles Taylor has termed any view ascribing either atheism or Deism to Descartes as anachronistic. *Sources of the Self: The Making of the Modern Identity* (Cambridge, UK: Cambridge University Press, 1989), 151, 157.

¹⁹ *Meditations on First Philosophy, With Selections From the Objections and Replies*, trans. John Cottingham (Cambridge, Eng.: Cambridge University Press, 1986), 3-6.

²⁰ Samuel S. DeSacy, *Descartes par lui-même* (Paris: Editions du Seuil, 1956), 126.

²¹ Choron, *Death and Western Thought*, 111. More recently, Drew Leder has asserted that Descartes' dualism was motivated by a fear of death, whereby one's body becomes the body of the Other. See "Introduction" and "A Tale of Two Bodies: The Cartesian Corpse and the Lived Body," in *The Body in Medical Thought and Practice*, Philosophy and Medicine 43, ed. Drew Leder (Dordrecht: Kluwer Academic Publishers, 1992): 1-12 and 17-35 respectively; *The Absent Body* (Chicago: University of Chicago Press, 1992), 130-146.

Bacon criticized physicians for ignoring the prolongation of life, asserting instead that prolongevity was the most noble goal of medicine.²²

For if such a thing [prolongevity] may be discovered, the business of medicine will no longer be confined to humble cures, nor will physicians be honoured only for necessity; but for a gift to men—of earthly gifts perhaps the greatest—of which, next to God, they may become the dispensers and administrators.²³

His methods involved drugs which condensed the body's vital moisture, herbal treatments for bodily restoration and regeneration, and special baths for rejuvenation.²⁴ Yet Bacon also had to defend his actions against the charge of impiety, arguing for the advantages of longevity in making journey towards our heavenly home:

. . . although to a Christian making for the Land of Promise the world is but a wilderness, yet even while we travel in the wilderness to have our shoes and garments (that is our bodies, which are as the clothing of the soul) not worn out by the way, must be accounted as a gift of divine grace.²⁵

According to Gruman, Bacon's largest contribution to longevity research was not so much in his methodology or originality, but in bringing prestige to the idea of prolongevity, or a significant extension of human life by human action.²⁶ Both Bacon's and Descartes' contribution to modern science can hardly be underestimated. Indeed, at least one writer has dubbed the modern biomedical project designed to relieve the human condition and expand choice as the "Baconian Project."²⁷

American health reformers

The belief that aging might be brought under scientific control carried forward by Descartes and Bacon was to find its counterpart in America as a result of the theological upheavals in the Great Awakenings of the late eighteenth- and early nineteenth-centuries. In his work *The Journey of Life: A Cultural History of Aging in America*, cultural historian Thomas R. Cole observes a decisive shift in attitudes towards death and aging within the Christian tradition.²⁸ Prior to these Awakenings the early Americans, many of whom were Puritans, largely believed that aging was intractable and death inevitable. Cole identifies the last remnants of such thinking in the preaching of Puritan Divine Nathaniel Emmons (d. 1840), who preached a 'death without order,' a death of imminence and unpredictability due solely to God's inscrutable will, irrespective of one's physical or spiritual health.

²² Gruman, "History of Ideas," 80, 81.

²³ "The Works of Francis Bacon: Baron Verulam, Viscount St Alban, and Lord Chancellor of England", ed. James Speeding, Robert Leslie Ellis, and Douglas Denon Heath, vo. 9, *Advancement of Learning* (Boston: Brown and Taggart, 1861), 39. See also the *Physical and Metaphysical Works of Lord Bacon*, ed. Joseph Devey (London: George Bell and Sons, 1894), 163, 166-168.

²⁴ Gruman, "History of Ideas," 82.

²⁵ *The Works of Francis Bacon*, 39.

²⁶ Gruman, "History of Ideas," 82.

²⁷ Gerald P. McKenny, *To Relieve the Human Condition: Bioethics, Technology, and the Body* (Albany: State University of New York Press, 1997), 2.

²⁸ Cambridge, UK: Cambridge University Press, 1992.

After the first and second Great Awakenings however, Cole identifies a noticeable shift in thinking with respect to longevity: while the Puritans considered life a gift from God with a pre-determined, inscrutable, and intractable number of days, nineteenth-century evangelicals²⁹ and revivalists tended to see longevity as the reward for proper behavior. Particularly, in the preaching of revivalist Charles Finney, we no longer have a 'death without order'—a death of imminence and unpredictability due solely to God's inscrutable will—but a death that reveals some degree of acquiescence to human instrumentality. In one particular sermon, Finney preached a longevity that was under one's control:

Who does not know that the time of man's death, as far as he himself is concerned, is a matter of entire contingency; that his days may be lengthened or shortened by his own conduct; that years, or scores of years, may be added to or subtracted from, his life, through the instrumentality of his own agency.³⁰

Such revivalist theology emphasized the human involvement in salvation and sanctification, providing a suitable spiritual counterpart to a health reform movement that stressed behaviour in accordance with God's natural laws. This led to what Cole has termed a dualistic vision of aging and death, where a long life followed by a 'natural death' was attained by obedience to God's laws, while a bad, early, or disease-ridden death became associated with sin and disobedience.

Cole cites at least three examples of the shifting attitudes in health reform in the figures of William Alcott, Sylvester Graham, and Orson S. Fowler. William Alcott claimed that if one wanted to lengthen his life that he must obey the laws of God, claiming that disease could be *eliminated* by Christian physiology and hygiene, allowing one to approach the age of the biblical figure Methuselah, who lived more than 900 years (Genesis 5:27).

If Methuselah suffered from what we call the infirmities of age, it was his own fault. God, his Creator, never intended it. The very common belief, that old age necessarily brings with it bodily infirmities, besides being a great mistake, reflects dishonor on God.³¹

Alcott denied that old age was always accompanied by the wretchedness of physiological decline, insisting "whenever it is wretched, it is made so by sin."³² Similarly, Sylvester Graham, who began his career as a Presbyterian minister, said "the true principles of health and longevity, and the true principles of virtue and religion are inseparable. . ."³³ Graham was so confident that he predicted the return of antediluvian life spans (e.g. like those of Methuselah) within a few generations.³⁴ Thus, here we have claims not that the physical and spiritual were independent, but that they worked in harmony. Cole observes that Graham taught that this harmony allowed one to pursue

²⁹ Cole later defines Evangelicals as Northern Protestants.

³⁰ Cole, *Journey*, 83, quoting Charles Finney, "Reprobation," in *Sermons on Important Subjects* (New York: J. S. Taylor, 1836), 242.

³¹ Cole, *Journey*, 105, quoting William Alcott, *The Laws of Health* (Boston: J. P. Jewett, 1860), 9-10.

³² Cole, *Journey*, 105, quoting Alcott, *Laws of Health*, 9-10.

³³ Cole, *Journey*, 97, quoting Sylvester Graham, *Lectures on the Science of Human Life* (New York: S. R. Wells, 1858), 265. See also *A Lecture to Young Men on Chastity* (Boston: Light and Stearns, 1834).

³⁴ Cole, *Journey*, 101, quoting Sylvester Graham, *Science of Human Life*, 264, 266-267.

bodily health without damaging one's spiritual welfare.³⁵ Finally, Orson S. Fowler, author of *Practical Phrenology*, saw a direct connection between morality and longevity.

If, therefore, it is wicked to shorten life, then it is wicked to impair the health; for such impairment is but diminishing life, and inviting and hastening death.³⁶

Thus, in the writings of Graham, Alcott, and Fowler, we see almost a near equivalency between long life and morality. Moral behavior was in part associated with paying particular attention to one's bodily health, and therefore granted use of a host of remedies and strategies for promoting health and longevity, including vegetarianism, temperance, sexual restraint, phrenology, fresh air and exercise.

Over time however, it became clear that while hygienic practices might increase one's health, they were essentially inefficacious in retarding aging itself. Thus, the predictions of a return to biblical, antediluvian life spans through hygienic practices and moral living have shown to be greatly exaggerated. Indeed, the disciplines of geriatrics, gerontology and biogerontology have demonstrated that any serious hope of extending the healthy lifespan is likely to be found in slowing or reversing the human aging process through genetic technology, whether it be somatic or germ-line manipulation, pharmacogenetics, or nanotechnology.³⁷

What this brief historical survey reveals is that the desire to extend human longevity via medicine and technology is not an idea unique to transhumanist philosophy. Moreover, it demonstrates that uncovering the laws of the nature for the purposes of greatly extending life is not the sole property of a naturalistic worldview, which by definition eliminates the possibility of a divine being interacting with creation.³⁸ On the contrary, as we have seen it was generally believed that the uncovering of God's laws governing the universe would eventually allow a return to life spans of biblical proportions. However, while their desire to extend the human lifespan finds a contemporary expression in current transhumanist philosophy, their proposed methods are recognized today as largely ineffective. Indeed, with the completion of the Human Genome Project and daily developments in genetic engineering in general, the methodology for greatly extended lives is vastly different from the methods prescribed by the fathers of the modern biomedical project. The other key difference lies in the fact that transhumanist prolongevity is obviously unfettered by the Christian doctrines that appeared to give Descartes and Bacon some difficulty. The belief in the immortality of the soul (which is not necessarily explicitly a Christian doctrine) and the promise of eternity created a fair amount of tension for both men. Their struggle to reconcile belief in the afterlife with the pursuit of a longer earthly life left unanswered the question as to whether life extension

³⁵ Cole, *Journey*, 98, quoting Graham, *Lectures on the Science of Human Life* (New York: S. R. Wells, 1858), 264.

³⁶ Cole, *Journey*, 98, citing O. S. Fowler, *Practical Phrenology* (New York: O. S. and L. N. Fowler, 1847), 27.

³⁷ Other potential avenues for increased longevity involve organ growing and harvesting for transplantation and cryonic freezing for potential future reanimation.

³⁸ Indeed, the desire for extreme longevity or immortality is much older than Christianity, Islam, or even Judaism. See Gruman, "History of Ideas."

was a goal compatible within a Christian worldview where God is the creator, reconciler, and redeemer of humankind.³⁹

We have seen therefore, that longevity was around at the birth of modern science (indeed, even well before), and even situated—albeit uneasily—within a Christian worldview. However, in exploring any resonance between Christian and transhumanist worldviews with respect to extending the human life span, it would of course be much more helpful if we had contemporary examples from which to draw. At least one attempt has been offered from Christian theologian Ronald Cole-Turner, who sees the use of genetic technology to overcome human suffering as firmly rooted in the concepts of God's ongoing activity in sustaining and redeeming creation, including the prospect of extending the human lifespan. Therefore, in order to uncover points of agreement and disagreement between theology and transhumanism concerning life extension, it is worth briefly exploring Cole-Turner's theological warrants with regard to the use of genetic technology before looking at his arguments for extending life.

A Christian argument for life extension?—Ronald Cole-Turner

Central to Cole-Turner's theological defense for the use of genetic engineering in general is God's continuing creative and redeeming activity in the world. He wishes to affirm the Christian tradition that nature is good, yet in disorder, finding unnecessary the idea that this disorder occurred due to Adam and Eve's sin in the garden of Eden. Thus, "the earth is not exactly what God intends it to be, nor is it the home God intends for human beings."⁴⁰ The science of genetics tells us, in part, how our nature can be viewed as defective. Therefore, "in a very general way, this supports the traditional theological notion of the disordered self."⁴¹

In order to find out how we are to behave in redeeming the world, we turn to the example set forth by Jesus. Cole-Turner asserts that the creative and redemptive purposes of God "are disclosed in the relationship between Jesus Christ and nature."⁴² Thus, the Gospels portray a Jesus who took delight in nature, but also altered nature in order to restore it.⁴³ Hence, he affirms the classical Christian doctrine of creation as good, yet flawed. It is in the actions of Jesus Christ where we find a framework for evaluating genetic defects.

We have the necessary framework for comprehending the notion of a genetic defect. A human genetic defect is that which causes a condition comparable to those which evoked the compassionate intervention of Jesus

³⁹ This well-known adumbration comes from Karl Barth, *Church Dogmatics II/2*, ed. G. W. Bromiley and T. F. Torrance, trans. G. W. Bromiley et al. (Edinburgh: T. & T. Clark, 1957), 543ff.

⁴⁰ Ronald Cole-Turner, *The New Genesis: Theology and the Genetic Revolution* (Louisville, KY: John Knox/Westminster Press, 1993), 85. See also "Is Genetic Engineering Co-Creation?" in *Theology Today* 44 no. 3 (Oct. 1987): 338-349. For a more concise summary of Cole-Turner's theological understanding of genetic engineering, see Thomas A. Shannon, *Made in Whose Image? Genetic Engineering and Christian Ethics* (New York: Humanity Books, 2000), 63-64, 75-76.

⁴¹ Cole-Turner, *New Genesis*, 87.

⁴² Cole-Turner, *New Genesis*, 80.

⁴³ Cole-Turner, *New Genesis*, 83.

of Nazareth and which is therefore disclosed as contrary to the purposes of God.⁴⁴

Specifically, says Cole-Turner, these defects are skin diseases, mental and neurological disorders, losses in hearing, sight, the usage of limbs among other unnamed diseases.⁴⁵ Therefore, what counts as a defect—whether on the genetic or some other level—can be discerned “*in reference to God’s intentions.*”⁴⁶ Therefore, “that which is defective is that which may be changed or altered” by technology.⁴⁷ Thus, genetic engineering can be viewed theologically as redemptive and creative technology. But in addition to treating diseases says Cole-Turner, another goal of our participation in God’s created order is our assistance in unfolding what he calls “new dimensions of existence.”⁴⁸

CoCreators and Creatio Continua

The basis for these new dimensions of existence is found the twin ideas of *creatio continua* and cocreation. In his final chapter, he explores the logic of genetic engineering as a metaphor for God’s creative activity. Cole-Turner notes three affirmations of general agreement among theologians: (1) creation is an evolutionary process where God is continually active, (2) God’s omnipresence continuously affects creation at every level, and (3) creation’s future is still uncertain—God has not guaranteed its outcome.⁴⁹ Together, these affirmations comprise what he terms *creatio continua*, a ‘continuous creation,’ defined as “a divine action of influencing, of working through, of calling forth, and of offering new possibilities to all creatures.”⁵⁰ The primary question for humanity is to figure out to what extent, through our understanding and technological abilities, will we serve God the creator in this ongoing creative creativity. Here, he introduces his second tenet entitled co-creation.⁵¹ “Human work, especially our technology,” asserts Cole-Turner, “may be seen as a partnership with God in the continuing work of creation.”⁵²

To ground the notion of our partnership with God’s creative activity, Cole-Turner turns to the creation accounts at the beginning of Genesis. Wary of the possible accusations of ‘playing God’ associated with the term ‘co-creator,’ he modifies it by focusing on God’s redemptive purpose in nature, devoting particular attention to the second of the two

⁴⁴ Cole-Turner, *New Genesis*, 91.

⁴⁵ Cole-Turner, *New Genesis*, 91.

⁴⁶ Cole-Turner, *New Genesis*, 92.

⁴⁷ Cole-Turner, *New Genesis*, 92.

⁴⁸ Cole-Turner, *New Genesis*, 98.

⁴⁹ Cole-Turner, *New Genesis*, 99.

⁵⁰ Cole-Turner, *New Genesis*, 99.

⁵¹ The term ‘co-creation’ can be traced to Kenneth Vaux, *Subduing the Cosmos: Cybernetics and Man’s Future* (Richmond, VA: John Knox Press, 1970), 121-22. It has been subsequently developed into the idea of a ‘created cocreator’ by Philip Hefner, “Theology’s Truth and Scientific Formulation,” in *Zygon* 23 (1988): 263-79 and “The Evolution of the Created Co-creator,” in *Cosmos as Creation: Theology and Science in Consonance*, ed. T. Peters (Nashville, TN: Abingdon Press, 1989) 211-233. Also see Arthur R. Peacocke, *Creation and the World of Science* (Oxford: Clarendon Press, 1979), and Ted Peters, *Playing God? Genetic Determinism and Human Freedom* (New York: Routledge, 1997), 161.

⁵² Cole-Turner, *New Genesis*, 100.

creation accounts (the Yahwist account) in Genesis 2:4-25.⁵³ While the first creation account (Genesis 1:1-2:3) shows humanity as the final act and pinnacle of God's creative activity, the Yahwist creation account describes Adam and Eve as already present while God *continues* his creative activity. Cole-Turner asserts that God placed man and women in Garden because there was no one to till the ground, suggesting humanity's cooperation with God in the very act of creation, and thus authorizing human beings to create in the natural order.⁵⁴ "The Yahwist sees the human work of tilling the ground as something upon which God's own creative work depends."⁵⁵ Moreover, "if *God* plants, then our activity of planting takes on a new meaning, for we begin to see ourselves as participating in an activity of God."⁵⁶ He concludes by asking, "If the Yahwist could say that God planted a garden, can we not say that God engages in genetic engineering? . . . Can we picture the creativity of God through the metaphor of our own abilities to alter genetic materials?"⁵⁷ This question must elicit a positive answer, asserts Cole-Turner, an answer consistent with centuries of Christian tradition.

Genetic engineering does not encroach upon the scope of divine activity. It expands the reach of God's action, placing a new mode of contact, through our technology, between the Creator and the creation. God now has more ways [to] create, to redeem, and to bring the creation the creation to fulfilment and harmony.⁵⁸

While acknowledging that we can use genetic technology for purposes contrary to God's will, he seems to minimize this possibility. Cole-Turner summarizes the metaphor of God's engagement in genetic engineering as follows:

- God seeks genetic change as a proper means of creative and redemptive activity.
- God works through natural process to achieve genetic change and through humans to achieve intentional genetic change.
- God engages only in that form of genetic engineering consistent with his nature and purposes—of creation and redemption, renewing all of creation in anticipation of a new creation.⁵⁹

Cole-Turner derives theological warrant for using genetic technology not only for the cure of disease, but, as we have seen, for 'new dimensions of existence' through the notions of co-creatorship and *creatio continua*, where we act as co-participants in God's ongoing redemptive and creative work in the world. Though God does indeed work through natural processes, God can also work through genetic engineering, so long

⁵³ The Elohist and Yahwist accounts are thought to be two separate accounts of the creation events, deemed as such by the different Hebrew words used for God (Elohim) in Genesis 1:1-2:3, and LORD God (Yahweh Elohim) in Genesis 2:4-25.

⁵⁴ Cole-Turner, *New Genesis*, 103, commenting on Genesis 2.4ff. He relies on the findings of Bruce Naidoff, "A Man to Work the Soil: A New Interpretation of Genesis 2-3," in *Journal for the Study of the Old Testament* 5 (1978): 2-14; and Carol Meyers, *Discovering Eve: Ancient Israelite Women in Context* (New York: Oxford University Press, 1988), 83.

⁵⁵ Cole-Turner, *New Genesis*, 104.

⁵⁶ Cole-Turner, *New Genesis*, 105.

⁵⁷ Cole-Turner, *New Genesis*, 107-08.

⁵⁸ Cole-Turner, *New Genesis*, 108.

⁵⁹ Cole-Turner, *New Genesis*, 109.

as such activity fits within God's redemptive plan for the universe in the renewal of all things. Having considered the framework of Cole-Turner's arguments regarding genetic technology, it appears that he would be in favor of extending the human lifespan by the use of such technology. We turn now to his thoughts on extending the human lifespan.

Somewhat surprisingly, Cole-Turner's endorsement of life extension is found among some of his more public doubts and concerns regarding the potential abuses of genetic technology, particularly, that genetic technology may be used to facilitate a *rejection* of creation and Creator.⁶⁰ When he considers the possibility of extending life in light of the recent successes with laboratory animals, he wonders whether we will do this with our own descendents, wondering why we shouldn't enhance intelligence, height, skin tone or mood.⁶¹ Yet, he appears wary of life extension and other human genetic modifications.

No one knows now what we will learn to do, but it is pretty clear what we want. We are anxious, competitive, offended by age and decline, unable to accept loss. These needs drive our technology, shape its agenda, and ultimately pervert its moral meaning. What begins as a technology to relieve human pain becomes a technology to relieve the pain of being human.⁶²

Moreover, he revisits the idea of cocreation in an apparent attempt to distance himself from the possible solipsistic overtones inherent in the notion of relieving the pain of being human. "The real reason 'cocreation' is troubling is not our smallness or weakness but our selfishness. Do we human beings, in fact, move creation forward, . . . toward its true completion as *God's* creation?"⁶³ Thus, he acknowledges that there is in the human condition an innate tendency towards egocentrism.

If we are honest about ourselves, however, we see how easily technology turns out to be just so much egocentric reordering of nature that becomes, in the end, our self-assertion against creation.⁶⁴

But it is unclear what our self-assertion against creation might look like, especially if creation is still an ongoing process, a *creatio continua*.

Nevertheless, despite the potential abuses for which we might use genetic technology and our tendency towards egocentrism, Cole-Turner concludes that these possible abuses do not warrant a ban on aging research. On the contrary, he looks forward to the fact that one day technology will allow us to "add to or alter life on earth," as we learn to use genetic technology not for our own selfish ends, but for God's glory.⁶⁵ Any lingering ambiguity on his stance towards extending human life by slowing aging was dispelled at the 2002 "Extended Life, Eternal Life" conference, where he asserted that extended life might lead to collective spiritual growth and understanding, offering "an

⁶⁰ Ronald Cole-Turner, "Biotechnology: A Pastoral Reflection," in *Theology Today* 59 no. 1 (2002): 42-48.

⁶¹ Cole-Turner, "Biotechnology," 45.

⁶² Cole-Turner, "Biotechnology," 45.

⁶³ Cole-Turner, "Biotechnology," 48.

⁶⁴ Cole-Turner, "Biotechnology," 48.

⁶⁵ Cole-Turner, "Biotechnology," 48.

opportunity for a kind of blossoming of our humanity that has not yet been obtained.”⁶⁶ Therefore, Cole-Turner is in favor of using genetic (or possibly some other) technology to extend the human lifespan, so long as a prolonged life is lived in harmony with God’s goal of redeeming the created order. Cole-Turner grounds all genetic activity to relieve the human condition in the fact that we are cocreators with God as God continually sustains and creates (*creatio continua*). Thus, in Cole-Turner we have what could be properly termed a Christian theological argument for life-extension that mirrors the earlier sentiments of Bacon and Descartes.⁶⁷ Whether or not Cole-Turner could be described as a transhumanist however, is highly dubious.

Though Cole-Turner is in favor of muting the aging process with genetic or some other technology, it is clear that he is not a transhumanist. His earlier reservation concerning the uses to which genetic technology might be put makes this quite clear, and is worth a second look:

What begins as a technology to relieve human pain becomes a technology to relieve the pain of being human.⁶⁸

The use of technology to ‘relieve the pain of being human,’ and indeed, to surpass the present state of humanity appears to sum up basic transhumanist philosophy. Cole-Turner’s statement reflects a tension between relieving pain and preserving our humanness that is largely absent in transhumanist dogma. Cole-Turner is anxious about *protecting* our humanness, while transhumanism is eager to *leave* our humanity *behind*. Indeed, while this tension is often expressed with the therapy/enhancement distinction, Bostrom observes that transhumanism avoids this distinction altogether, and thus “denies any fundamental ethical importance to this distinction.”⁶⁹ But for those like Cole-Turner who wish to preserve the therapy/enhancement, things are not so simple. The crux of the distinction lies in one’s understanding of what it means to be *human*, which takes on an increasingly important role in light of our ever-expanding technological capabilities.⁷⁰

How and where Cole-Turner might decide where to draw the line on human enhancements is not entirely clear, even though he situates his support for extending human life within a Christian framework. Yet, being human from a Christian perspective means that our understanding comes from the humanity Jesus Christ.⁷¹ As Swiss

⁶⁶ Vida Foubister, “Immortality Quest Raises Ethical Concerns,” *American Medical News*, 3 April 2000, <http://www.ama-assn.org/amednews/2000/04/03/pr120403.htm>.

⁶⁷ Recently, Tihamer T. Toth-Fejel has offered a defense of life extension from a natural law perspective, “Humanity and Nanotechnology,” *The National Catholic Bioethics Quarterly* 4, no. 2 (Summer 2004): 335-364.

⁶⁸ See footnote 67.

⁶⁹ Bostrom, “Transhumanist Perspective,” n. 4. Bostrom does concede that this distinction might be useful in light of limited public funds and insurance issues.

⁷⁰ James J. Hughes for instance, “The Future of Death: Cyronics and the Telos of Liberal Individualism,” *The Journal of Evolution and Technology* 6 (July 2001), has recognized that transgenics will force the world to define what it means to be human. <http://www.transhumanist.com/volume6/death.htm>. Robert Song, *Human Genetics: Fabricating the Future* (London: Darton, Longman and Todd, 2002), offers a good analysis and defense of retaining this distinction, 58-78.

⁷¹ It was Karl Barth who insisted that our anthropology can only be derived from Christology, that is, the person of Jesus Christ. See *Church Dogmatics* III/2, ed. G. W. Bromiley and T. F. Torrance, trans. Harold Knight et al. (Edinburgh: T & T Clark, 1960), 44.

theologian Karl Barth noted, "his death, resurrection and coming again are the basis of absolutely everything that is to be said about man and his future, end and goal in God."⁷² It was Christ who took on flesh, becoming a man in a finite body and succumbing to death on a cross—even as he healed the sick and occasionally brought the dead back to life—whose life affirms the inherent goodness of embodiment and the finitude this entails. Moreover, the fact that Jesus rose bodily that we too might receive a resurrection body suggests that the use of technology to transcend our limitedness in time by slowing aging itself is misguided. Thus, from a Christian perspective, any distinguishing between human and post-human is best put in terms of human embodiment, as understood in the person of Jesus Christ, and our desire to transcend the limits that our body pose, most notably the limit of time. Indeed, one key difference between Christian theology and transhumanist philosophy is the moral or normative force of embodiment as a key criterion for humanness.

Despite significant conflicts in philosophies however, there are points within these disparate worldviews on which transhumanists and Christian theologians might agree. Cole-Turner's support of life-extension within a Christian worldview affords us an opportunity to discuss potential points of agreement. I will briefly discuss several points of consonance between Christian theology and transhumanist philosophy, illustrating at the same time the boundaries whereby consonance becomes conflict. At least three areas which share commonality are: death as an enemy, a dissatisfaction with our current human condition, and the idea of nature as a process.

Death as an enemy

Both Christian theology and transhumanist philosophy perceived death as the enemy. Though Bostrom's Fable depicts aging as an insatiable dragon-tyrant, feeding on the daily ransom of a hundred-thousand live humans, it is clear that death is the real enemy, given that aging can only culminate in death. That transhumanist philosophy considers death an enemy worth battling at all costs is indicated by Bostrom's disdain for what he calls 'deathist' narratives and ideologies that do nothing more than "counsel passive acceptance," that erect "reckless and dangers barriers to urgently needed action."⁷³ Death appears to be an enemy in transhumanist thought because it represents a premature foreclosure of the opportunities for human and post-human flourishing. The increasing levels of personal development opening up new levels of consciousness and new ways of being—even if they are currently inchoate or presently unimaginable to us—are denied by the tyrant death. Death becomes even more unwanted given that the flowering of new modes of being appears to require, at least initially, a much longer life. We will need much more time to reach our full potential.

We can conceive, in the abstract at least, of organisms and aesthetic-contemplative pleasures whose blissfulness vastly exceeds what any human has yet experienced. We can imagine beings that reach a much greater level of personal development and maturity than humans do, *because they have the opportunity to live for hundreds or thousands of years with full bodily and psychic vigor.*⁷⁴

⁷² *Church Dogmatics III/2*, 624.

⁷³ Bostrom, "Fable."

⁷⁴ Bostrom, "Transhumanist Perspective," italics mine.

Christian theology views death as an enemy as well. Though the Old Testament displays a certain ambivalence towards death and the span of life, death is clearly spoken of in negative terms. Moreover, there appears to be a biblical warrant for Bostrom's characterization of death as an evil tyrant. Philip Johnston has noted that in the Old Testament, "more commonly death is seen as a bitter enemy of life. It is often portrayed in personified terms as a hunter with traps and snares, a marauding shepherd, an *insatiable glutton* . . ." ⁷⁵ Though death is also spoken of as fitting after a long life, and is even desired by those experiencing intense suffering (Job 3:21-22), in general death was considered an enemy. ⁷⁶ In the New Testament Jesus raised several people from the dead—Lazarus (John 11), a widow's son (Luke 7), and Jairus' daughter (Mark 6) to name a few—indicating that death indeed is an enemy. Moreover, Apostle Paul makes it abundantly clear in his first letter to the Corinthians that death is an enemy: "The last enemy to be destroyed is death." ⁷⁷

While both transhumanist thought and Christian theology view death as an enemy, it must be pointed out that death is an enemy in Christian thought because it separates one from God. However, in the person of Jesus Christ and his resurrection, death is not just an enemy, but a *defeated* enemy. Though the full vanquishing of death awaits future completion, the fact that Lazarus was raised by Jesus, but eventually experienced death (again!), points to the final resurrection where death will be 'swallowed in victory.' (Isaiah 25:8, 1 Corinthians 15:54). This does not, and indeed *should* not mean that eternal life is offered as a panacea for the fear of death, or as a simple coping mechanism, as is often the criticism of Christianity at this point. As theologian Diogenes Allen rightly observes, "Christianity does not offer an afterlife to meet the fear of this life's coming to an end." ⁷⁸ The ultimate defeat of death will mean the defeat of the 'unreality' of our lives presently as marred by sin. Thus, "the motivation to seek eternal life is not to escape death, but to escape the unreality of one's present position for that which is true." ⁷⁹ Thus, while transhumanist philosophy and Christian theology share the concept of death as an enemy, they do so for different reasons. Moreover, while Christian theology views death as an enemy, it also views death as a defeated enemy—not ultimately through technology, but through the power of Christ.

It is important to point more specifically what is meant by this defeat of death as spoken of by Paul. There are indeed many ways to 'defeat' death: one might renounce the desire for life on this earth, or invest in one's posterity, or even use death as a stimulus to embrace life to the fullest. But the defeat of death that Paul speaks of is a personal and bodily resurrection from the dead. Yet it is crucial to realize here that the victory achieved over death by Christ involved first his *succumbing* to death on the cross. The

⁷⁵ Philip S. Johnston, *Shades of Sheol: Death and Afterlife In The Old Testament* (Downers Grove, IL: Inter Varsity Press, 2002), 28, italics mine. See for instance, Psalm 18:4f, 49:14, 55:4; Proverbs 30:15f, Job 18:13ff.

⁷⁶ For instance, Rabbi Gillman supports the extension of life based on such an Old Testament understanding of death. "There is nothing redemptive about death Death is my enemy, and I will wage war against him until the end." See Vida Foubister, "Immortality Quest Raises Ethical Concerns," *American Medical News*, 3 April 2000, <http://www.ama-assn.org/amednews/2000/04/03/pr120403.htm>

⁷⁷ I Corinthians 15:26, New International Version.

⁷⁸ Diogenes Allen, "Extended Life, Eternal Life: A Christian Perspective," in *The Fountain of Youth: Cultural, Scientific, and Ethical Perspectives On A Biomedical Goal*, ed. Stephen G. Post and Robert H. Binstock (Oxford: Oxford University Press, 2004): 394.

⁷⁹ Allen, "Extended Life, Eternal Life," 396.

demonstration of his victory over death was achieved three days later. Similarly, our death awaits us no less of a conclusion, a *finis* to our earthly existence as we sink into non-being. This makes our dying no less tragic or terrifying as we head for non-existence. Yet, for Christians, "death no longer is the boundary of finiteness and the history of the human person."⁸⁰ Thus, our hope for defeating death is not to be found through the use of technology, but in the person of Christ, who meets us beyond the limit of our death and holds us embodied in relationship to himself.

If we did not have to do with the definitive end of human life, we should not have to do with its resurrection and definitive co-existence with that of God. Anxious defiance of one's own end could only mean the forfeiture of one's destiny. Since Jesus did not love His life and thus rescued our life from destruction, we are invited to accept the limit of the life which He has rescued, and therefore to acquiesce in the fact that we must have an end, and to set our hope wholly and utterly in Him.⁸¹

A sense that things are 'not as they should be'

Secondly, within both transhumanist philosophy and Christian theology there is a palpable sense of longing to transcend the limits of the human condition. There is currently something *wrong* with the world, where suffering, disease, and decay are part of human existence that demand more than our passive acceptance. We find such thoughts expressed in the writings of Paul, a similar desire to escape his body of flesh, flesh that is wracked by disease and suffering, the flesh that, in Paul's terms, 'is wasting away' (2 Corinthians 4:16). It is not difficult to see transhumanist philosophy as the latest manifestation of the desire inherent in all of nature, the desire to transcend the human condition.

The Apostle Paul reminds the church at Corinth of the heavenly dwelling that awaits, all the while acknowledging the struggle of living in the world, the struggle which evokes a primal groan, and longing for the perfection that comes with immortality (2 Corinthians 5:2-4).

Meanwhile, we groan, longing to be clothed with our heavenly dwelling, because when we are clothed, we will not be found naked. For while we are in this tent, we groan and are burdened, because we do not wish to be unclothed but clothed with our heavenly dwelling, so that what is mortal may be swallowed up by life.

Elsewhere, Paul widens the scope of this groaning to all of creation, as he expresses the hope for our adoption as children of God, and the redemption of our bodies (Romans 8:22-25).

We know that the whole creation has been groaning as in the pains of childbirth right up to the present time. Not only so, but we ourselves, who have the firstfruits of the Spirit, groan inwardly as we wait eagerly for our adoption as sons, the redemption of our bodies. For in this hope we were saved. But hope that is seen is no hope at all. Who hopes for what he

⁸⁰ Ray S. Anderson, *Theology, Death and Dying* (Oxford: Basil Blackwell, 1986), 96.

⁸¹ Barth, *Church Dogmatics* III/2, 639.

already has? But if we hope for what we do not yet have, we wait for it patiently.

One can sense Bostrom's "groanings" over the limitations which humans currently possess, most especially the decline that comes with aging, the painful decline towards death which becomes an 'urgent, screaming moral imperative.' Similar sentiments are expressed with Cole-Turner's desire to slow aging and thereby relieve suffering. Here however, is where the brief consonance of worldviews comes to an end. That is, while Christians and transhumanists may be dissatisfied with the current state of affairs, the trajectories of these respective ends are not the same. The primary difference between Dr. Bostrom and a Christian perspective that looks forward to bodily resurrection is that Dr. Bostrom sees nothing worth waiting *for*. From a transhumanist's perspective, there is no point *waiting* for anything, there is no reason to hope for a future redemption because *we are our own redeemers*.

Of course, this notion of waiting does not imply that Christians need not be active participants in redeeming God's created order. As Ronald Cole-Turner correctly pointed out, the actions of Jesus provide warrant waging a battle against the diseases and maladies that mark our finite existence. However, while the successful treatment and even eradication of certain illnesses has resulted in longer lives, Rowan Williams reminds us that "the creative life, death, and resurrection of Jesus manifests a creator who works in, not against our limits, or mortality."⁸² Similarly, Christians are called to the fields of medicine and technology to help fight sickness and disease as a demonstration of Christ's incarnational activity, yet with the understanding that the ultimate redemption of our bodies will be accomplished at the resurrection of the dead.

Nature as a continuing process

A final commonality in the writings of Cole-Turner and Bostrom concerns the conception of nature as a continuing or ongoing process (*creatio continua*). Bostrom observes that "transhumanists view human nature as a work-in-progress, a half-baked beginning that we can learn to remold in desirable ways. Current humanity need not be the endpoint of evolution."⁸³ As we have seen in the writings of Cole-Turner, the idea of nature or creation as a 'work-in-progress' is mirrored in his use of *creatio continua*, though a Christian theology of creation would dispute the notion of nature's beginning as 'half-baked.' If transhumanist philosophy warrants that humans and eventually posthumans take over the evolutionary process in part through retarding aging, Cole-Turner finds warrant for attacking aging in part through the fact that creation is continually unfolding. Though Cole-Turner views God as sustaining and guiding this process, he relies on this point to argue for our intervention in the aging process. The fact that God is in some sense still creating should only encourage us to join in on God's creative activity. For transhumanists, the unacceptably slow pace of evolution warrants more human control as we move beyond the human.

The differences in worldviews surface again however, when we consider the trajectories of this evolutionary development. Where the future looks more open in transhumanist philosophy, scripture speaks of a radical in-breaking of God's Kingdom, a new heaven and earth (Revelation 21:1) which at least questions the continuity of our current

⁸² *On Christian Theology* (Oxford: Blackwell, 2000), 76.

⁸³ Bostrom, "A Transhumanist Perspective on Human Genetic Enhancements," <http://www.nickbostrom.com/ethics/enhancements.html>.

trajectory and life of our solar system. To be sure, these are complex issues from within a Christian worldview.⁸⁴ Thus, while both transhumanists and those who espouse the *creatio continua* share a view that nature is not static and thus require our assistance in its flourishing, the ultimate ends of creation are disparate.

We have seen that there are points of consonance between transhumanist philosophy and elements within Christian theology—at least as particularly expressed in the theology of Ronald Cole-Turner—with respect to death as an enemy, the sentiment that things are not as they should be, and the idea of nature as a dynamic, ever-developing process. Doubtless, this has not been a satisfying analysis for many. Several within the Christian tradition for instance, have offered sharp criticism against the ideas of cocreatorship and *creatio continua*.⁸⁵ Similarly, many transhumanists would like to see Christians recapture the earlier proactive and melioristic mindset expressed by Descartes, Bacon and many of the health reformers in America and join them in the search to slow aging.

On killing a tyrant: The death of one tyrant the birth of another?

I wish to conclude this article by offering one possible response to the idea of killing off the dragon of aging and death. I find it interesting that Bostrom chose the tyrant as the image of aging and death, for when we consider death's indiscriminately cruel and unabated visitation upon all, irrespective of one's health, social, or moral standing, it is easy to see why the tyrant metaphor encompasses so much of what we hate and fear about death. We have already made aging and death a tyrant. However, one wonders if Bostrom and transhumanist philosophy has not made *life* a tyrant. It was this notion of 'life at all cost,' life as an 'ethical lord' that Barth found so troubling, countering that "in theological ethics the concept of *life* cannot be given this tyrannical, totalitarian function."⁸⁶ Barth was essentially arguing that since life was a gift on loan from God, a proper expression of appreciation involved the acceptance one's bodily limits, or even laying down one's life for another as the ultimate sacrifice of offering one's life back to the One who gave it. Again, the basis for such behavior was determined by the person of Jesus Christ, who is the standard by which all human thought and action is to be judged.

Of course, one may freely reject the presuppositions on which this argument depends, by rejecting either the existence of God or the possibility of God becoming man in Jesus Christ. Here we are likely dealing again with a collision of worldviews, but it is hoped that Bostrom and other transhumanists might consider the implications of making life the ethical lord of humankind. One such implication was provocatively suggested Barth

⁸⁴ A good treatment of this from a Christian perspective can be found in Peter Scott, "Nature, Technology and the Rule of God: (En)countering the Disgracing of Nature," in *Re-Ordering Nature: Theology, Society, and The New Genetics*, ed. Celia Deane-Drummond et al. (London: T & T Clark, 2003), 275-292.

⁸⁵ While Cole-Turner is wary of the term 'cocreator,' his arguments follow similar lines, and therefore equally susceptible to the counter arguments put forward by Stanley Hauerwas, "Work as Co-Creation: A Critique of a Remarkably Bad Idea," in *Co-Creation and Capitalism: John Paul II's Laborem Exercens*, ed. John W. Houck and Oliver F. Williams (Washington D.C.: University Press of America, 1983), 46.

Also Michael Banner, *Christian Ethics and Contemporary Moral Problems* (Cambridge, UK: Cambridge University Press, 1999), 223-224; "Burke, Barth, and Biotechnology: On Preferring the Sabbath to the Sublime—Some Preliminary Thoughts," in *Re-Ordering Nature*, 68-76.

⁸⁶ Barth, *Church Dogmatics* III/4, ed. G. W. Bromiley and T. F. Torrance, trans. A. T. Mackay et al. (Edinburgh: T. & T. Clark, 1961), 326, italics mine.

himself, who spoke of those who are not happy with the idea of life as a loan from God and thus of a limited duration: "Those who are not pleased with this limit cannot be pleased with life."⁸⁷ The most obvious retort would be that making *life* one's lord is certainly better than making *death* one's lord. Yet, if death means non-existence, a permanent end to our personal history, then one wonders, given all of the suffering in this world, whether non-existence would be preferable to a miserable one.

Conclusion

While there are significant differences between Christian and transhumanist worldviews, we have seen that there are some areas of commonality in the particular area of life extension. Moreover, it has been shown that the desire to extend human life through scientific advancement is not new to transhumanist philosophy, but can minimally be traced back to the health reformers and scientist, many of whom struggled to harmonize their scientific goals with Christian convictions. Three areas of consonance were found amidst the conflict by looking at the arguments put forth for life extension by theologian Ronald Cole-Turner, suggesting that there is some common ground on which Christian theology and transhumanist philosophy might meet and critique one another. There remain of course, significant differences between these two camps, stemming clearly from different worldviews. Key differences involves the future resurrection of the body and questionable elevation of life as ethical lord, points made earlier by Karl Barth, and the effects that killing death might have for the Christian who is called to daily give her life away in service to the One who gives life as a gift.

⁸⁷ Barth, *Church Dogmatics* III/4, 570.