

**TED PETERS****Markers of Human Creaturehood:  
Soil, Spirit and Salvation**


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*When faced with the invitation for self-transformation through bio-nano-technology, we must pause to ask: just what does it mean to be a human being? Both scripture and evolution make the same point: we humans live at the metaxy, in the tension between soil and spirit. Genesis 2:7 says we live at the in-between where the ineffable God beyond touches the mundane realm of daily existence. Even in salvation, we will be redeemed creatures and not gods. The promise of technological utopianism, then, becomes an empty promise. Even with dramatic bio-enhancements or improved intelligence, we Homo sapiens must still pray that divine grace will provide the ultimate transformation. In the meantime, we should simply enjoy the metaxy.*

Keywords: *metaxy*, human, dignity, technology, Transhumanism, spirit, Genesis 2:7

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Creatures are finite. They are located in a specific time and place. They exist in the sense that they stand out (*ek-stasis*) of non-being. They are ephemeral; they exist for a period of time and then drop into non-existence. Even if the Creator is eternal, creatures are temporal.<sup>1</sup>

The human creature exhibits an additional trait, namely, *metaxy*. Coming from Plato, *metaxy* designates the tension experienced in human consciousness between the finite and the infinite. We human beings are scheduled to die, but we can imagine immortality. We are enchained by temporality, but we can imagine eternity. We look beyond the fence of finitude and wonder whether transcendence is more or less real than our actuality. We humans live at the *metaxy*, at the in-between where the ineffable God beyond touches the mundane realm in which we live.<sup>2</sup>

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1 This paper was originally delivered at the ‘Theological Anthropology’ Symposium *Deification and Creaturehood in an Age of Biotechnological Enhancement*, 17-19 July 2017 at Kellogg College, Oxford University. For more on anthropology at the intersection of science and theology, see: Peters, T. ‘Universal Humanity, Religious Particularity, and Scientific Reductionism,’ in Tibayrenc, M. & Ayala, F.J. (eds.) *On Human Nature: Biology, Psychology, Ethics, Politics, and Religion*, Amsterdam: Elsevier (2017), pp. 686-694.

2 For Eastern Orthodox theologians, the *metaxy* is more than a raw or brute tension. The *metaxy* is bridged by wisdom, *sophia*. ‘The fundamental intuition of sophiology is...that the gulf between the uncreated God and creation, brought into being out of nothing, does not put creation in opposition to God; rather, Wisdom constitutes a kind of *metaxu*...Wisdom...is the face that God turns towards his creation, and the face that creation, in humankind, turns towards God.’ Louth, A. *Introducing Eastern Orthodox Theology*, Downers Grove IL: IVP Academic (2013),

We may be tempted at times to deny our *metaxy* by denying that we are soil, by storming the citadel of pure spirit through self-deification. Typically, this results in destruction, in evil. The active pursuit of an exclusively transcendent stage of existence risks not only denial of the reality of *metaxy* but self-demolition as well.

The question confronting the twenty-first century is this: can we eliminate the *metaxy* through technological self-transformation? Should we ask technology to deliver the equivalent of salvation understood as liberation of the spirit from the body? This is what the transhumanist movement promises. Should we believe this promise? How does the technological promise of redemption compare the promise God made to us when raising Jesus from the dead on the first Easter?

### Soil and spirit in Genesis

In the Adam and Eve story, Genesis acknowledges the *metaxy* without using an equivalent term. 'Then God the Sovereign One formed a human creature of dust from the ground, and breathed into the creature's nostrils the breath of life; and the human creature became a living being' (Gen. 2:7; *ILL*). The first human being created here is a combination of soil and spirit. The Hebrew word for 'human creature' (*ILL*) or 'man' (*NRSV*) in this passage is אָדָם (*adam*). The Hebrew word for earth or ground is אֲדָמָה (*adamah*). Adam is a creature of Earth inhaling God's breath (*neshamah, ruach*). On the one hand, the human creature is autochthonous, belonging to the soil. On the other hand, with the breath of divine life the human spirit soars beyond the soil to the heavens.

We human creatures – like all creatures – are soil. We are earthly, physical, material finite. We are literally dependent upon the soil. Not only do vegetables and fruits come directly from seeds sown in the ground, but even such products as milk and corned beef begin as grass that is transmuted by bovine digestive processes. We come from the soil, and when we die and are buried, we return to it. We come from dust and shall return to dust. We are soil.

Evolutionary science paints a parallel picture. It is a picture of conscious spirit rising up from the soil over deep time. 'Thus humans are of the world, and a product of evolution,' says evolutionary biologist Simon Conway Morris. 'Nev-

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p. 44. Though he does not emphasise the metaxic tension, Michael Spezio reminds us what we should avoid, namely, that 'the physicality of the body be taken to imply the disembodiment of the nonphysical human mind or soul.' Spezio, M. 'Freedom in the body: the physical, the causal, and the possibility of freedom of choice', *Zygon* (September 2004) 39:3, 577-590, at 587. We human beings are both *imago mundi* and *imago Dei*, according to Moltmann. J. *God in Creation: A New Theology of Creation and the Spirit of God*, The Gifford Lectures, 1984-1985, New York: Harper (1985), p. 186.

ertheless for all intents and purposes we are now beyond the world.<sup>3]</sup> Physicist and theologian John Polkinghorne registers astonishment and a touch of glee at this observation. 'I think that the most astonishing and unexpected development of which we are aware in all those fifteen billion years is the coming-to-be of self-conscious life here on Earth. In humankind, the universe has become aware of itself.'<sup>4</sup> Despite this triumph of spirit in evolution, Mary Midgley reminds us that we dare not deny that we remain soil. 'We are earthly creatures who are thoroughly *at home* here – part of the system, native to the place, living in the only dwelling we could ever have, and thus responsible for its upkeep.'<sup>5]</sup> Despite the begetting of spirit by the soil, we will remain anchored in Earth's soil for an indefinite period yet.

Our creation by God in Genesis is complemented by this evolutionary account, even if the Darwinian picture may seem demeaning at first. 'The message seems to be that if Christians found it demeaning that man was created from apelike creatures, then how much more demeaning to be created directly from earth! ... And that signifies the importance of the body, which belongs to a person's essence,' avers Rodney Holder.<sup>6</sup> We must recognise if not celebrate that our humanity, like a flower, grows out of soil.

Both theologically and scientifically we must admit that we have been and still are literally soil. We are also soil symbolically. The symbol of soil emphasises how much we are a part—a fleeting part—of this world. The modern physical and biological sciences depict life as an instance of negative entropy, as a time and place where order is on the increase. As the example of eating demonstrates, an essential feature of living systems is that they are open to the world. We humans are open systems; we are not sealed off from what surrounds us. We can survive only by exchanging energy and material with our environment. The energy of the cosmos flows through us, so to speak. In this

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3 Morris, S.C. 'Evolution and the inevitability of intelligent life', in Harrison, P. (ed.) *The Cambridge Companion to Science and Religion*, Cambridge UK: Cambridge University Press (2010), pp. 148-172, at 166.

4 Polkinghorne, J. 'Opening windows on to reality', *Theology Today*, (July 2001) 58:2, 145-154, 146. R.J. Berry takes up two tasks: first, to reconcile the Genesis account of the divine image with evolutionary knowledge and, second, to locate within evolutionary history the fall of the human race into estrangement from God. 'Should we read 'adamah' when the Bible text speaks of 'Adam'? Both an individual Adam and a 'generic' Adam seem to be exegetically possible. Contrary to the common assumption, evolutionary science can embrace the possibility of an Adam who 'fell'.... The more seriously we take sin, the more it seems better not to avoid the possibility of 'Mr Adam.' Berry, R.J. 'Adam or Adamah', *Science and Christian Belief* (2011) 23:1, 23-48, at 48.

5 Midgley, M. 'Concluding Reflections: Dover Beach Revisited', in Clayton, P. & Simpson, Z. (eds.) *The Oxford Handbook of Religion and Science*, Oxford: Oxford University Press (2006), pp. 962-978, at 966, Midgley's italics.

6 Holder, R.D. 'Modern Science and the Interpretation of Genesis: Can We Learn from Dietrich Bonhoeffer?', *Theology and Science* (2008) 6:2, 210-231, at 219.

flow, alluding to physicist Erwin Schrödinger, we concentrate the energy in the order of life and temporarily escape the decay into atomic chaos. The cosmos as an entirety may be winding down according to the second law of thermodynamics, but as a far-from-equilibrium subsystem within the cosmos we, as living beings, are experiencing a temporary but exciting advance in the order of things. Eventually, of course, as individuals and as parts of the whole cosmos, we will undergo the final triumph of entropy, the dissipation of all energy into equilibrium and the demise of all life. We are, after all, soil.<sup>7</sup>

## The breath of God

But soil is not all. The breath of God is added, according to the book of Genesis. We become a living being, שָׁפָן (*nephesh*), only after the Creator breathes into our nostrils the power of life, הִשָּׁמָה (*neshamah*). It is curious that in many ancient languages the word for breath or wind is the same as that for spirit: in Sanskrit *atman*, in Chinese *chi*, in Greek πνεῦμα, in Hebrew רוּחַ (*ruach*). Phenomenologically, this may be due to the basic observation that when a baby is born life begins with breathing, and when a person dies the lungs stop moving. Yet breath, which is so life-giving, is itself elusive and uncontrollable. It is invisible, yet we know it is there and we know that without it we are dead.

The combination of body and breath has led us to use the term *spirit* to refer to the dynamism of human life, to our freedom and our ability to transcend our physical situation. Negative entropy can be experienced in human consciousness, so to speak. We can order and reorder ourselves through decision making and commitment. We can bind ourselves to one another in community through love. Our imaginations free us from the restrictions of what is immediately given and open doors to new and different possibilities. We can anticipate a new future. We can create. We may have begun as soil alone but we need not stay that way when we inhale the Spirit of God and gain the freedom to transcend ourselves. Thus as soil inspired by spirit, we recognise that our life is radically contingent on something bigger and external to us, something that invades and enlivens us, something that by nature is gracious.

Instead of *spirit* we sometimes use the word, *soul*, to indicate the animating power of human life that distinguishes living creatures from inert matter. The

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<sup>7</sup> Each living organism is an open system facing either enhanced creativity with negative entropy or dissipation and dissolution with positive entropy. Might this provide the physical source of what we experience as evil? Robert John Russell answers affirmatively. 'Although the characteristics of entropy and evil do not give direct support to one another, if evil is real in nature, entropy is what one would expect to find at the level of physical processes. Conversely, if a real arrow of time is coupled to entropy in physical processes, one would expect to find dissipative, disruptive, yet subtly catalytic processes in history and religious experience.' Russell, R.J. *Cosmology from Alpha to Omega: The Creative Mutual Interaction of Theology and Science*, Minneapolis: Fortress Press (2008), p.240.

word *soul* comes from the Greek ψυχή, and we have come to associate the soul with the human mind, the seat of consciousness and willing, and that which makes an individual a subject, a personality. We can say we have a mind or we are a person.

I tend to employ the term *soul* to refer to the centring dynamic of the individual person and the term, *spirit*, to the non-physical bond between persons, even between a person and God. John Polkinghorne weighs in on soul.

Whatever the soul may be, it is surely 'the real me,' whatever it is that links the young schoolboy in the photograph to the ageing academic of today. That link is certainly not the mere matter of my body, for that is changing all the time, through wear and tear, eating and drinking. There is no basis for continuity to be found in the atoms of my body. Rather, the carrier of that continuity must surely be the dynamic, almost infinite, information-bearing pattern in which those atoms at any time are organized. That is the real me. The soul is the 'form,' the pattern, of the body.... The pattern that is me will be dissolved at my death. Death is, therefore, a real end, but it is not the ultimate end, for only God is ultimate. It is a perfectly coherent belief that the pattern that is me will be remembered by God, held in the mind of the faithful Creator, and that God will ultimately reconstitute the pattern through the divine, eschatological act of resurrection into a new environment. In other words, my soul will be preserved in the divine memory and then reembodyed when I am raised to the everlasting life of the world to come.<sup>8</sup>

Personhood and metaxy come together in a single package. To be a person even in the modern sense is to stand at the metaxy between part and whole. The classical understanding of the human person comes from Boethius, who defined the human being as an individual substance possessing a rational nature (*naturae rationalis individua substantia*). This applies both individually and universally. On the one hand, each of us is a particular individual. We differ from one another. On the other hand, our soul or mind is attuned to the rational structure of the cosmos. Therefore, the whole of reality is in a way present in the individual. So Aristotle and Thomas Aquinas could speak of the human mind as 'in a way all things' (*quodammodo omnia*).<sup>9</sup> The whole of reality is, curiously enough, somehow present to each of us individually, at least as a quest. Each of us, although unique, seems to be programmed from within to seek reality in its entirety.

Does this impulse within the human soul to pursue reality in its entirety

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8 Polkinghorne *op. cit.*, (4), 151.

9 In the Orthodox tradition, 'The human was regarded as a microcosm, a little cosmos, in which all the structures of the cosmos were reflected; similarly, the cosmos could be regarded as the human writ large....When Adam and Eve relinquished their role as a bond of the cosmos – *syn-desmos tou kosmos*--the cosmos lost much of its harmony.' Louth *op. cit.*, (2), pp.73-74.

constitute a divine call to become divine ourselves? Should we pursue our own deification? One contemporary Orthodox theologian would answer affirmatively.

Man, having been created 'in the image' of the infinite God, is called by his own nature – and this is precisely the sense of 'in the image' from this point of view – to transcend the limited boundaries of creation and to become infinite ... the progress of man in scientific knowledge is not an arbitrary or fortuitous matter. Human knowledge is driven by its own nature to raise itself up to the totality of knowledge.<sup>10</sup>

Does such a view of deification require an escape from the *metaxy*? A resolution of the tension? Perhaps one might affirm such overcoming of the metaxic tension eschatologically, in the beatific vision. 1 Corinthians 13:12: 'For now we see in a mirror, dimly, but then we will see face to face. Now I know only in part; then I will know fully, even as I have been fully known.' The beatific vision, of course, would be an eschatological gift of God's grace. Would this apply as well to temporal scientific knowledge? To technological knowledge?

The pursuit of infinite knowledge through science, it seems to me, suggests a dissatisfaction if not outright denial of the otherwise inescapable *metaxy* at the intersection of soil and spirit. For a person who has faith in the God of salvation, should infinite knowledge let alone divinity become a goal to be pursued?

## Dignity and personhood

The modern concept of human dignity can be grounded here.<sup>11</sup> To be a person is more than just to be an individual. To be a person is to exhibit the truth of the whole of reality in, with and under our individuality. We may still see only through a mirror darkly, but we have been created by God to enjoy the fullness of knowing. It is this that leads us to think of each person as an end and not a means to any further end. According to the modern mind, personhood should be sacrificed to no higher value or goal.

We experience the *metaxy* as a tension due to the elusive presence of spirit within a creature of the soil. The tension is due to our supra-individual thirst that goes unquenched. It is due to our hunger for wholeness that goes unsatisfied. We yearn to meet the fulfilled person, the one in whom the infinite has made peace with the finite, the one in whom the eternal dwells amid the temporal, the one in whom the whole is present in the part, the one in whom the divine has become human. Only such a fulfilled personhood can resolve the

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10 Nellas, P. *Deification in Christ: the Nature of the Human Person*, Russell, N. (trans.), Crestwood NY: St. Vladimir Seminary Press (1997), p.28.

11 For a postmodern de-grounding of dignity, see Bennett, G. *Technicians of Human Dignity: Bodies, Souls, and the Making of Intrinsic Worth*, New York: Fordham University Press (2016)

*metaxy* and quench the human thirst for wholeness.

This means that the spirit cannot be identical to or limited to the human individual. Rather spirit comes from without. It invades us or, perhaps better, draws us beyond ourselves into a transcendent order of reality. Spirit is present to us, but it is not ours to keep. If there were to be such a thing as human nature, spirit would not be part of it. Spirit is the condition for human life, but in itself it does not belong to what is human. In its origin and in its destiny, it is divine.

## Technological self-salvation

If the infinite reverberates within the finite soul, the way we react is not uniform. We respond to the call of the infinite by pursuing a wide variety of attempts at self-transcendence, at boot-strapping ourselves into a post-metaxic future where all promises are to be fulfilled. In short, the pursuit of self-salvation is a pervasive form of the anticipatory impulse throbbing in the human soul.

One salient example is technological progress and the modern belief in human perfectibility. In the case of technological progress, it is we human technicians who mould the soil, form what we want and then breath what we think is spirit into our creations. Earthly engineers replace the God of Genesis 2:7.

Perhaps today's transhumanists (sometimes with the moniker H+) best illustrate the widespread human hunger for perfectibility combined with a technical strategy to accomplish it.<sup>12</sup> One of the earliest uses of the term, *transhumanism*, is that offered by Julian Huxley. 'The human species can, if it wishes, transcend itself,' Huxley wrote in 1967. 'We need a name for this new belief. Perhaps *transhumanism* will serve: man remaining man, but transcending himself, by realizing new possibilities of and for his human nature.'<sup>13</sup> For Huxley, this term refers to a future evolutionary advance while enhancing, but not replacing, human nature as we presently know it. With the more recent appearance of the concept of the *post-human*, however, the term *transhuman* now suggests a future transcendence in which our present human nature will

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12 At the centre of today's discussion is the proposal by Transhumanism (H+) to so perfect the human race that it self-transcends and creates a post-human successor species. See: Cole- Turner, R. (ed.) *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement*, Washington DC: Georgetown University Press (2011). See also: Peters, T. 'Perfect Humans or Trans-Humans?', in Deane-Drummond, C. & Scott, P.M. (eds.) *St. Deiniol's Library research project Future Perfect? God, Medicine, and Human Identity*, London and New York: T. & T. Clark (2006), pp.15-32; Peters, T. 'Transhumanism and the Post-Human Future: Will Technological Progress Get us There?', in Grassie, W. & Hansell, G. (eds.) *H+ Transhumanism and Its Critics*, Philadelphia: Metanexus Institute (2011), pp. 147-175; Peters, T. 'Can We Enhance the Imago Dei?', in Murphy, N. & Knight, C.C. (eds.) *Human Identity at the Intersection of Science, Technology, and Religion*, Aldershot UK: Ashgate (2010), pp. 215-238; Peters, T. 'Theologians testing Transhumanism', *Theology and Science* (May 2015) 13:2, 1-20.

13 Huxley, J. *Religion without Revelation*, London: C.A. Watts & Co. Ltd. (1967), p.195.

be replaced with a new and different post-human nature.

A startlingly Promethean agenda has been set by the *Transhumanist Declaration* of the World Transhumanist Association. ‘Humanity will be radically changed by technology in the future. We foresee the feasibility of redesigning the human condition, including such parameters as the inevitability of aging, limitations on human and artificial intellects, unchosen psychology, suffering, and our confinement to the planet earth.’<sup>14</sup>

The biological substrate – what we have here called ‘soil’ – can be transcended by bio-nano-technology. We can upload our mind – what we previously thought of as our soul – into a computer. If the computer remains plugged in, we can live bodiless indefinitely. Let’s label this, *cybernetic immortality*. ‘Liberated from biological slavery, an immortalized species, *Homo cyberneticus*, will set out for the stars. Conscious life will gradually spread throughout the galaxy... until finally, in the unimaginably distant future, the whole universe has come alive, awakened to its own nature—a cosmic mind become conscious of itself as a living entity—omniscient, omnipotent, omnipresent.’<sup>15</sup> The entire universe will be converted into an ‘extended thinking entity’, writes Hans Moravec.<sup>16</sup>

“Transhumanists do not find the human body to be “very good”,” observes computer scientist and theologian Noreen Herzfeld. “The transhumanist understanding of the human person is unabashedly dualistic, dismissive of the physical body.”<sup>17</sup> Are transhumanists trying, like peeling a banana, to take possession of the spirit while jettisoning the soil?

The transformative power of technology emits a strong religious charge. The prospect of deification via technology electrifies our imaginations. ‘Having raised humanity above the beastly level of survival struggles, we will now aim to upgrade humans into gods, and turn *Homo sapiens* into *Homo deus*,’ says Israel historian Yuval Noah Harari.<sup>18</sup> This technological objective is more than the deification (*theosis*) that Eastern Orthodox Christians invite us into, more than a divine unity we share with our Creator God. Instead, Harari propels us toward becoming gods (*theoposis*) ourselves, toward our own apotheosis

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14 <http://www.transhumanism.org/index.php/WTA/declaration/> (accessed January 22, 2008). Transhumanism is an expansion on *extropianism*. Extropy, in contrast to entropy, refers to a system’s capacity for growth based upon its functional order, intelligence, vitality, energy and experience. Extropianism or extropism is a set of values oriented toward improving the human condition through technology that might some day bring immortality.

15 *ibid.*, 44.

16 Moravec, H. *Mind Children: The Future of Robot and Human Intelligence*, Cambridge, Mass.: Harvard University Press (1988), p.116.

17 Herzfeld, N. ‘Human-directed Evolution: A Christian Perspective’, in Haag, J.W., Peterson, G.R. & Spezio, M.L. *The Routledge Companion to Religion and Science*, London: Routledge (2012), pp.591-601, at p. 592.

18 Harari, Y.N. *Homo Deus: A Brief History of Tomorrow*, New York: Harper (2017), p.21.

through technological self-transformation.

The shock of techno-deification has been felt within Mormonism, where Lincoln Cannon has turned the on-switch for a brigade of religious transhumanists.

As transhumanists, we have discarded the old assumption that human nature is or ever was static--not only because science has demonstrated biological evolution, but especially because history itself is cultural and technological evolution....humanity will continue to evolve. Our common ambition is to inject ourselves into the evolutionary process, changing our bodies and minds, our relationships, and even our world for the better--perhaps to learn, love, and create together indefinitely.... Mormon transhumanism stands for the idea that humanity should learn how to be God; and not just any kind of god, not a god that would raise itself in hubris above others, but rather the God that would raise each other together as compassionate creators. Humanity should learn how to be Christ.<sup>19</sup>

I have my doubts about the credibility of these technological claims. What is expected here is much more than science or technology will likely be able to deliver. Theologically, it appears that H+ is attempting to transcend prematurely the soil-spirit metaxy by which we have recognised humanity since its birth.<sup>20</sup> Even though our human nature and condition is plastic and can be altered partially by design, is it realistic to hope for a transformation of such magnitude via technology? Here is my thesis: If the metaxic dialectic between soil and spirit makes us definitively human, then this technological attempt at salvation *without soil* is doomed to disappoint.

I would like to add a corollary thesis: transhumanist assumptions regarding this level of progress are naive, because they fail to operate with an anthropology that is realistic regarding the human proclivity to turn good into evil. I rec-

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19 Cannon, L. 'What is Mormon Transhumanism?', *Theology and Science* (May 2015) 13:2, 202-218, at 202-203.

20 In the anti-dualist tradition of Donna Haraway, the cyborg crosses boundaries between machine and organism by hybridising them. Though a fiction, the cyborg unites the physical and the technological. 'A cyborg is a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction.' Haraway, D. 'A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s', *Australian Feminist Studies* (1987) 2:1, 1-38, at 2; [https://monoskop.org/images/5/5c/Haraway\\_Donna\\_1985\\_1987\\_A\\_Manifesto\\_for\\_Cyborgs\\_Science\\_Technology\\_and\\_Socialist\\_Feminism\\_in\\_the\\_1980s.pdf](https://monoskop.org/images/5/5c/Haraway_Donna_1985_1987_A_Manifesto_for_Cyborgs_Science_Technology_and_Socialist_Feminism_in_the_1980s.pdf) (accessed 1/8/2018).

'In the figure of the cyborg, the human is physically intertwined with the nonhuman, the organic with the mechanical (cybernetic machine). It is a metaphor and figuration, it can count as a symbol, but it is also lived experience that changes what counts as a human being. It takes both the organic and the technological to have a cyborg!' Kull, A. 'Cyborg and Religious? Technonature and Technoculture', *Scientia et Fides* (2016) 4:1, 295-311, at 296; DOI: <http://dx.doi.org/10.12775/SetF.2016.016>.

commend that researchers in the relevant fields of genetics and nanotechnology proceed toward developing new and enhancing technologies, to be sure; but they should maintain constant watchfulness for ways in which these technologies can become perverted and bent toward destructive purposes.

### How realistic is technological self-salvation?

The promises of H+ prophets remind us to ask: who is our saviour? D. Gareth Jones doubts that technology can deliver salvation. 'The excesses of transhumanism with its picture of a new world order, in which medicine will be devoted to conquering mortality, overcoming ageing, vanquishing neurodegenerative diseases and enabling people to live to 600 or so years of age as healthy and fulfilled individuals, rightly repel Christians....These extreme vistas represent a rerun of the science-as-saviour mentality.'<sup>21</sup> Does science have what it takes to deliver on such salvific promises?

There is no question that the last five centuries has witnessed a leap-frog advance in discovery, innovation, engineering and the re-founding of civilisation. Yet, we must ask: has our metaxic tension been relaxed or does it still abide with us? Would we like to deny our *metaxy* in favour of unrealistic fantasies?

On the one hand, faith in technological progress marks a post-religious or secular form of human hope. 'What is characteristic of the modern spirit' is 'its self-confident optimism and belief in progress,' observed Ernst Troeltsch a century ago.<sup>22</sup> On the other hand, rather than dubbing progress as simply a secular and post-religious belief system, some contemporary theologians declare that technological civilisation is being guided by divine providence. According to Lutheran Philip Hefner, for example, 'God is a *participant* in the technological process, since the purposes of God are now embedded through technology into techno-nature.'<sup>23</sup> Belief in technological progress exhibits the human drive to transcend limitations with a vision of perfection.<sup>24</sup> Yet, we must ask: is belief in such self-transcending progress realistic?

No, is the answer Reinhold Niebuhr would give, working out of Protestant Reformation insights. The idea of progress derives from the Renaissance, not the Reformation.

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21 Jones, D.G. 'A Christian perspective on human enhancement', *Science and Christian Belief* (2010) 22:2, 4-16, at 14.

22 Troeltsch, E. *Protestantism and Progress*, Minneapolis: Fortress Press (1912, 1986) p.26.

23 Hefner, P. *Technology and Human Becoming*, Minneapolis: Fortress Press (2003) p.79, author's italics.

24 We 'should not confuse a Christian conception of transcendence with a transhumanist one.' McKenny, G. 'Transcendence, Technological Enhancement, and Christian Theology', in Cole-Turner (ed.) *op. cit.*, (12), pp.177-192, at 177.

The relation of these modern ideas of progress and Christian eschatology is that in both cases history is conceived dynamically rather than statically or retrogressively. The difference between them is twofold. The first difference is that the Renaissance thinks of the fulfillment of life, whether individually or in terms of total history, without grace....The second difference is of even greater importance. The Renaissance regards history as dynamic; but it generally disregards the twofold dynamic in it. It assumes that all development means the advancement of the good. It does not recognize that every heightened potency of human existence may also represent a possibility of evil.<sup>25</sup>

While affirming the dynamism of historical change, Niebuhr like a sentinel warns us that an enemy is approaching. That enemy is us.

Christian realism, in Niebuhr's view, cautions us against putting too much hope in a technological utopia, because we human beings bear within ourselves the propensity for self-destruction. This trait of being human requires that salvation must come to us as a gift, a gift of divine grace. Visions of technological utopias blur our vision so we cannot clearly see either our need for grace nor God's promise of grace. 'Against utopianism the Christian faith insists that the final consummation of history lies beyond the conditions of the temporal process. Against other-worldliness it asserts that the consummation fulfills rather than negates the historical process.'<sup>26</sup> In sum, Christian anthropology should make us realistic regarding our creaturehood, regarding what we as human beings can and cannot accomplish on our own.

It would be unrealistic to dub innovative technology as simply good or evil. It is actually ambiguous. Technology can be pressed into the services of either good or evil. The question of good and evil must be addressed at the level of the human person, the human race.

When we stop asking progress to deliver salvation, technology can find its proper place in the godly life. Celia Deane-Drummond reminds us that 'we need not totally reject ... technology, but appreciate its proper limits according to particular goals that express the common good'.<sup>27</sup>

To be realistic, we humans as mixtures of soil and spirit should look forward to a salvation God offers by grace, not a pseudo-salvation offered by technologi-

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25 Niebuhr, R. *The Nature and Destiny of Man*, Gifford Lectures, (2 Vols.), New York: Scribners (1941) vol 2, p.166.

26 *ibid.*, vol. 2, p.291.

27 Deane-Drummond, C. *Christ and Evolution*, Minneapolis: Fortress Press (2009), p.285. For background on biotech enhancement in the world's religions, see: Peters, T., Aguilar-Cordova, E., Crawford, C. & Lebacqz, K. 'Religious Traditions and Genetic Enhancement', Lustig, B.A., Brody, B.A. & McKenny, G.P. (eds.) *Altering Nature: Volume Two: Religion, Biotechnology, and Public Policy*, Heidelberg: Business Media B.V., Springer Science (2008), pp.109-159.

cal progress. 'The resurrection Christians hope for is not simply more time on this Earth. It is ... a raising up of both soul and body into a new creation,' is Herzfeld's admonition.<sup>28</sup> Michael Burdett at Oxford reiterates this point forcefully. 'The Christian response to technological futurism is that the future is God's future and must be set within the interpersonal nature of a promissory triune God who brings new possibilities to the world.'<sup>29</sup>

## Conclusion

In conclusion, the human creature like all creatures is fully soil, fully earthly. What distinguishes the human creature is restlessness with this confinement to Earth. It is the human creature who constructs telescopes, studies the stars, and dreams of transcending earth. Perhaps this yearning for transcendence is itself God's invitation to come home.

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28 Herzfeld *op. cit.*, (17), p, 594.

29 Burdett, M.S. *Eschatology and the Technological Future*, London: Routledge (2015), p.2. 'I think that the answer lies in recognising that God's creative purpose is necessarily a two-step process. This world is intended to exist at some distance from its Creator, whose presence must be veiled and activities reserved, if finite creatures are to be able to be themselves and to make themselves without being overwhelmed by the divine infinity. However, it is not God's intention that this state of affairs should go on forever. The life of this world is preparatory for the life of the world to come.... God's purpose is to transform the old creation into the new creation, just as Christ's dead body was transformed into his risen and glorified body.' Polkinghorne, J. 'Scripture and an Evolving Creation', *Science and Christian Belief* (2009) 21:2, 163-173, at 173.