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CHRISTIAN CYBORGS:
A PLEA FOR A MODERATE TRANSHUMANISM

Benedikt Paul Göcke

Should or shouldn't Christians endorse the transhumanist agenda of changing human nature in ways fitting to one's needs? To answer this question, we first have to be clear on what precisely the thesis of transhumanism entails that we are going to evaluate. Once this point is clarified, I argue that Christians can in principle fully endorse the transhumanist agenda because there is nothing in Christian faith that is in contradiction to it. In fact, given certain plausible moral assumptions, Christians should endorse a moderate enhancement of human nature. I end with a brief case study that analyses the theological implications of the idea of immortal Christian cyborgs. I argue that the existence of Christian cyborgs who know no natural death has no impact on the Christian hope of immortality in the presence of God.

I. What Is Transhumanism?

Bostrom\(^1\) provides a useful characterisation of the transhumanist agenda:

Transhumanism is a loosely defined movement that has developed gradually over the past two decades and can be viewed as an outgrowth of secular humanism and the Enlightenment. It holds that current human nature is improvable through the use of applied science and other rational methods, which may make it possible to increase human health span, extend our intellectual and physical capacities, and give us increased control over our own mental states and moods.\(^2\)

In order to define “transhumanism” in a way we can evaluate from a Christian point of view, this needs to be refined in four ways. First, we have to clarify whether transhumanism is a descriptive, predictive, or normative thesis. Second, we have to spell out the concept of human nature deployed in the formulation of transhumanism to specify what transhumanism wants to change and what it does not. Third, we have to distinguish the different possible types of change and the different means

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\(^1\)Bostrom, “In Defense of Posthuman Dignity,” 55.
that in principle can be used to change human nature. Finally, we have to reflect on the very intention to change human nature.\(^3\)

**I.1 Transhumanism as a Normative Thesis**

Humanity has reached a level of technological and scientific development that brings us close to being able to change human nature in ways not possible a few decades ago.\(^4\) As Tirosh-Samuelson says, “Technology is transforming human life at a faster pace than ever before. The convergence of nanotechnology, biotechnology, robotics, information and communication technology, and applied cognate science poses a new situation in which the human has become a design object.”\(^5\)

This new technological situation allows for two different interpretations. On the one hand, transhumanism could be a purely descriptive or predictive thesis according to which human nature is improvable, or as a matter of fact will be improved through the use of scientific means. On the other hand, transhumanism could be understood as a normative demand according to which changing human nature through the means of science is morally valuable.

If transhumanism were only the descriptive or predictive assertion that human nature is *de facto* improvable, or most likely will be improved through the use of applied science and other rational methods, it would not entail any ethical claims. Transhumanism becomes ethically exciting, and perhaps turns into “the most dangerous idea in the world,”\(^6\) only if we understand it as a normative demand according to which it is morally valuable for us to change human nature through the means of science and other rational methods. As Walker says, “Transhumanism does not say that we will create posthumans; rather, it makes a moral claim: we ought to create posthumans.”\(^7\)

**I.2 Human Subjects and Human Bodies**

I assume that human subjects are embodied subjects of a stream of consciousness who experience themselves as autonomous and freely acting moral agents in the world.\(^8\) No morally acceptable interpretation of trans-

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\(^3\)Not every transhumanist will agree with the following specification of transhumanism. That there is a variety of transhumanist theses, though, is a characteristic of the transhumanist movement, cf. Tirosh-Samuelson, “Engaging Transhumanism,” 29.

\(^4\)The idea to change human nature, of course, is as old as human cultural reflection on human nature itself. As Ihde says, “the desires and fantasies are ancient. Historically, they appear in our literatures, our fairy tales, and in our art” (“Of Which Humans Are We Post?,” 126).


\(^7\)Walker, “Ship of Fools,” 95.

\(^8\)It is matter of perennial discussion whether human subjects really are freely acting and moral agents or whether they only perceive themselves as such. Although it seems that human subjects are free acting and moral agents it is enough for the discussion of transhumanism to suppose that they at least experience themselves as freely acting agents. For
humanism entails that the agenda is one of restricting the autonomy of human subjects and nothing that undermines such agency could count as an enhancement. The reason is that being an embodied subject of a stream of consciousness, which at least experiences itself as a free and morally responsible agent in the world, is of intrinsic moral value, if not the very foundation of the possibility of morality itself.

Based on this assumption, I let the expression “human nature” refer to whatever it is that, in suitable environmental conditions, is biologically responsible for the growth and ordinary functioning of an individual living biological organism that (a) satisfies enough of relevant biological features invoked by experts by which one is classified as an instance of *homo sapiens* and (b) in normal circumstances is, or develops to become, a moral agent in the sense defined above. In other words, I deploy the term “human nature” as essentially referring to the body or the genome of a human subject.

Consequently, I understand transhumanism to entail the moral demand to change the body or genome of an individual human subject through the use of applied science.

**I.3 External and Internal Changes to Human Nature**

I will suppose that a change of the human nature of an individual is a physical or biological change that immediately affects the subject’s bodily abilities and, in a mediated way, affects their mental capacities.

We need to clarify the ways human nature can in principle be changed through science, state whether the changes are temporary or permanent, and if permanent whether they only concern one individual or his or her offspring as well.

Now, it is extremely difficult to develop a clear-cut taxonomy of possible types of changes to human nature because, for any suggested taxonomy, there are many borderline cases and counterexamples. Nevertheless, I distinguish roughly between *internal* and *external* changes to human nature. On the one hand, internal changes to human nature concern all the changes that take place exclusively on the level of the organic constitution, or inside, the organism in question. Biotechnologies such as genetic engineering, nanotechnology, and pharmacology provide the means to change human nature internally by changing its biochemical functioning. External changes to human nature, on the other hand, are all

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9That is to say, the transhumanist thesis is consistent with the denial that we should be transformed in ways that make us unable to be moral agents. I am grateful to Mark C. Murphy for pointing this out to me.

10Cf. Hopkins, “A Moral Vision for Transhumanism,” 4: “The first element of a transhumanist moral vision is that the effort to address the human condition requires that we change the physical facts that in part generate the human condition. Curing the human condition requires altering the ‘human’ part of the equation.”
those technical extensions of the body or technical replacements of parts of the body.\textsuperscript{11} Cybernetics, with its human-machine-interfaces and prosthetic replacement of the extremities of a human body, most obviously belongs to this kind of change to human nature.

As a matter of technological fact, external changes to the biological nature of a human being, whether they are essential or contingent for the survival of the organism, are in principle restricted to an individual’s embodiment and cannot be inherited. They are either temporary or permanent only in respect to the life span of an individual because they are technical extensions to, or replacements of, bodily parts that leave the individual’s genetic constitution untouched. In contrast, some internal changes to human nature, whether they are essential or contingent for the survival of the organism, are permanent and can be inherited. For instance, if we genetically change the germ line of a human individual, then this will involve changes in the gametes, which means the changes are transmissible via reproduction to the next generation.

As a moral demand to make use of applied science, transhumanism is committed to authorizing both external and internal changes of human nature. If the moral imperative is to change human nature through the use of applied science, then, within the limit specified, it is hard to find a reason to exclude a particular type of change to human nature. Furthermore, it seems that transhumanism should ensure that the changes are permanent, if possible, if only for the pragmatic reason of not having to repeat the same procedure over and over again for any future individual. As Harris argues, “If the change is important enough to make in the individual, then, if it can be made on the germ line and passed on indefinitely to future generations, that simply avoids the necessity of a separate alteration to each and every future generation.”\textsuperscript{12}

\textbf{I.4 Quantitative and Qualitative Enhancements of Human Bodies}

Since I assume that the transhumanist does not want to change human nature in order to debase the situation of currently living or future individuals—this would itself be morally wrong and thus contradict the transhumanist’s moral motivation—there remain \textit{prima facie} two possible intentions in changing human nature: therapy and enhancement. The idea is that the use of biotechnology is therapeutic if and only if it helps the individual overcome some internal or external limitations that prohibit its normal functioning as a member of its species—the traditional understanding of medicine is one of therapy—whereas an enhancement is said to be something that lifts the individual to a higher level than normal. This distinction, however, is hard to justify.

First, apart from clear cases according to which human bodies normally possess those features and functions that we colloquially associate with a


\textsuperscript{12}Harris, \textit{Enhancing Evolution}, 40.
healthy human being—five senses, two legs, two arms etc.—it is extremely difficult to specify a standard of normality that we could deploy and take as a measure to distinguish between normal and non-normal features of the body of a human subject and the normal and non-normal functioning of an individual’s physical and mental capacities. Second, both therapeutic and enhancing interventions are based on the same motivation to help and benefit a particular organism and the related human subject.13

Although the goal of transhumanism, then, is to enhance human nature, there is seldom reflection on what precisely an enhancement of human nature could be. There is no disagreement that, conceptually, enhancement is good; there is just no agreement on what precisely enhancement of human nature is. For this reason, disagreement occurs when it comes to the following question: “Which change to an individual human nature is an enhancement for that individual?”14

To answer this question, it is useful to distinguish between qualitative and quantitative intentions to enhance human nature. The quantitative way to enhance human nature presupposes objective measuring scales for current human abilities that determine their corresponding efficacy, where a higher value on that scale is better than a lower one. We can run that fast; we can reach such and such an IQ; our immune system is able to deal with such and such situations; we are able to live that long, etc. In principle, quantitative enhancements intend to improve the quantity of known human abilities in order to enable them to reach a higher score on a corresponding measuring scale of physical and mental abilities that are judged to be good to have for human subjects. The idea is that it is good to be smarter, to be able to run faster, to be able to smoke without the fear of cancer, etc.

Qualitative enhancements, by contrast, are concerned with changes in human nature that enable human subjects to do things with their bodies or minds formerly impossible for them to engage in. Here we often enter the realm where transhumanism meets science fiction. One could imagine creating human individuals who can breathe and live under water or human subjects with wings on their back that enable them to fly. The questions include asking what precisely the advantage of such a changed human nature would consist in and whether there is an objective answer to that question at all.

The distinction between quantitative and qualitative enhancements of human nature leads to two different theses of transhumanism that differ

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13 As Harris says, “the distinction between therapy and enhancement, between protection and improvement, cannot be coherently or consistently maintained. . . . The overwhelming moral imperative for both therapy and enhancement is to prevent harm and confer benefit. Bathed in that moral light, it is unimportant whether the protection or benefit conferred is classified as enhancement or improvement, protection or therapy” (Harris, Enhancing Evolution, 57–58).

in respect to their consequences of transforming *homo sapiens* into another or into many new species. What I term moderate transhumanism endorses quantitative enhancements that will not lead to the development of a new species, whereas radical transhumanism supports qualitative enhancements that might well do so because the resulting subjects might, as a matter of biological fact, no longer be able to procreate and breed fertile offspring. Because of the difficulty of specifying which qualitative change to human nature could be addressed as an enhancement of human nature I will concentrate on moderate transhumanism.

I.5 A Thesis of Moderate Transhumanism

According to the moderate transhumanist agenda, it is morally valuable to enhance the human nature of individual subjects, externally and internally, and where it is possible permanently, through the use of applied science, in order to increase their range of human physical and mental capacities with respect to an objective scale of measurement of physical and mental abilities that are judged to be good for human subjects to have. Transhumanism has to respect and ensure that no enhancement, whether internal or external, whether permanent or temporary, conflicts with the character of human beings as free and autonomous moral agents.

II. A Christian Evaluation of Moderate Transhumanism

Before turning to distinctively Christian considerations, let me briefly analyse some popular secular arguments against transhumanism, often deployed by Christians in addition to their own arguments. In a secular context, transhumanism is criticized for reasons that belong to one or more of these categories: technological, social, and individual.

The category of technological problems contains two types of argument. According to the first type of argument, the transhumanist agenda is in principle futile and bound to fail due to its overestimation of the progress of scientific knowledge and technology. Contrary to transhumanist optimism regarding the progress of the sciences, and irrespective of whether we should enhance human nature if we could, the transhumanist agenda fails because we do not know and probably never will know, how to quantitatively enhance human nature. As Tirosh-Samuelson\(^\text{15}\) says, “At present, we do not even know what it means to have a thought, and therefore the transhumanist vision of . . . [enhancing] our personality should not be taken too seriously.”\(^\text{16}\)

According to the second type of technological argument, transhumanism has to be rejected because of its apparently inappropriate stance on the perhaps unintended consequences and the possible misuse of the application of new technologies. On the one hand, we do not know enough about the possible consequences of applying these new technologies and,
therefore, as a matter of prudence, should not enhance human nature even if we could. As it were, the way to hell is paved with good intentions. On the other, it is argued that technologies can always be used in a dual way: If we know how to enhance a certain human trait, then we will also know how to destroy it. The possibility of genocide is of technological necessity entailed by the possibility of enhancement. Therefore, since we cannot exclude the possibility of genocide once the technology is there, we should not endorse transhumanism.

According to social arguments against it, transhumanism might lead to morally unacceptable social consequences. For example, the possibility of enhancing human nature, once it reaches a level that we can successfully handle, will inevitably lead to social injustice and pressure. In a capitalist world, not everyone will be able to pay for the enhancement of his or her human nature, or of the enhancement of his or her offspring. Since most likely those with an enhanced human nature will benefit from it as far as their career is concerned, we should not enhance human nature, in order to avoid this kind of social injustice.

The third category of argument against moderate transhumanism concerns problems potentially arising about the moral or psychological status of the enhanced individuals. Those enhanced will feel like an object created to fulfil the purpose for which they were enhanced, and, it is argued, it is morally forbidden to use the biological nature of a human subject as a means to an end. As Habermas argues, “We cannot rule out that knowledge of one’s own hereditary features as programmed may prove to restrict the choice of an individual’s life, and to undermine the essentially symmetrical relations between free and equal human beings.” Therefore, because we cannot exclude this consequence, we should not permit a transhumanist enhancement of human nature.

Although often encountered in the discussion of transhumanism, none of the arguments is ultimately convincing. Technological arguments against transhumanism, which presuppose that as a matter of principle the transhumanist agenda will fail due to limitations concerning our scientific knowledge or abilities, are hard to justify. The reason is that none of us knows precisely how science will develop. Given the almost exponential growth of scientific knowledge in the last century, however, it is pessimistic to claim that we will not be able to obtain knowledge to bring about moderate human enhancements. Even if we will not be able to quantitatively enhance human nature, this does not conflict with the transhumanist attempts to try to enhance it for the benefit of the individuals involved.

As regards risk and misuse, no reasonable transhumanist will deny that there are risks that we have to take into account, nor will deny that technology can always be used for good and bad purposes. As Blackford

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states, “Future technologies will sometimes be used for spiteful or malevolent purposes and will typically be used for self-interested ones.” This, however, is not a problem intrinsic to transhumanism. We could only avoid the possible misuse and the risk attached to the application of scientific results if we abandoned research altogether.

The social problems, too, are not terribly damaging to the transhumanist agenda. As far as social justice and pressure are concerned, it is of course true that transhumanism might lead to the problems discussed. The problems of social injustice in the distribution of common goods are general to societies, independent of the transhumanist agenda of enhancing human nature. Transhumanism does not bring this problem into the world. Transhumanism, if successful, only provides a new way in which this problem becomes visible and urgent. Enhancing human nature will be a good in addition to all the other goods like education, housing, nurturing, and so on, and no morally responsible transhumanist will deny that we will have to find a solution to problems of social injustice, independently of the question of enhancing human nature. In general, as Harris argues, “Fairness . . . does not require that benefits should not be provided to any until they can be made available to all.”

The worry that enhanced future individuals will feel as if they are treated as a mere means to an end is an empirical question independent of the question of whether the biological nature of a human subject is enhanced or not, and therefore has no normative impact on the question of the legitimation of moderate transhumanism. We are born either with a genetic makeup that to some extent is random and depends on our parents, the personal interests of whom already influence our genome and our very existence, or we are born with a particularly designed genome that enables us to be good in certain ways. It seems plausible that in both cases it is possible that a future individual will question their purpose and existence in the world. This possibility of critical reflection belongs to the very mode of existence of freely acting and embodied human subjects. For instance, to me it would not make the slightest difference if I knew that my genome was enhanced in order to be good at X. If I simply did not enjoy doing X, then I would not actualise my disposition. If there is a problem here, then, it is rather a problem for society if people or parents try to pressure enhanced individuals in a certain direction. This problem exists independently of transhumanism, and we can already see it at work in societies where parents force their offspring to do this or that, even contrary to their will.

I conclude that there is no decisive secular argument against moderate transhumanism on which the Christian could rely.

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21Harris, Enhancing Evolution, 27–29.
II.1 Christian Arguments against Transhumanism

Even if there is no convincing secular argument against transhumanism, there might be good arguments from Christian faith against the agenda of enhancing human nature. From a Christian point of view, we want to know (1) whether this agenda contradicts essential features of a Christian worldview and therefore has to be rejected, (2) whether it is consistent with the essentials of Christian faith and therefore could be endorsed, or (3) whether it is supported by the fundamentals of Christian morality and therefore should be authorized.\(^\text{22}\)

Although transhumanism is “regarded by many leaders and theologians as hubristic, or otherwise morally impermissible, and fair (perhaps even urgent) target . . . for political suppression,”\(^\text{23}\) it is difficult to find a convincing Christian argument against moderate transhumanism.\(^\text{24}\)

Typically, it is argued that transhumanism is in conflict with one or more of the following features of the Christian worldview: (1) the divinely bestowed normative status of human nature, (2) the human dignity divinely attached to human nature, or (3) the fact that Jesus Christ adopted human nature.

First, it is assumed that God created human nature “as it is” and that, as a consequence, it has a normative status that is morally relevant. It is then argued that it is morally forbidden to change human nature. As Cameron and DeBaets argue, “It is plain that all efforts at the enhancement of human nature . . . are theologically excluded since they have the effect of reshaping that human nature that is both God given and God taken.”\(^\text{25}\) In other words, “Only God has both the authority and ability to form and change us. Altering human physical form is taking on a role that human beings do not possess and should not usurp. Human beings are to enjoy and work within the God-given design of the world as we have received it.”\(^\text{26}\)

With respect to human dignity, it is argued that current human nature possesses God-given dignity, a dignity that it would lose if we enhanced...
it. As Tada and Cameron argue, “God made us in his image, weak and strong, those with genes that make life easy and those with genes that can make life very hard. Our task is to treat every human being as someone worthy of the dignity God has granted each of us. . . . ‘Designed’ humans are still humans; but to the extent that they result from someone’s planning, their human dignity is compromised.”\(^{27}\)

Third, it is argued that human nature has a normative status that is morally relevant because Jesus Christ adopted human nature in the incarnation. As Cameron and DeBaets state the point, “The exemplar of *homo sapiens* is the glorified Jesus Christ, and he it is who will return to be our judge. His bearing our humanness sets the standard of all excellences in time and space. . . . Every effort at the enhancement of our human nature as such is doomed to failure. The only way for humans to rise above the givenness of their human station must be illusory; the way up leads as it were, only down.”\(^{28}\) Therefore, “strictly speaking, according to this view there can be no such thing as genetic enhancement, because every genetic change is a move away from God’s intent.”\(^{29}\)

Although some of the arguments derive naturally from particular Christian worldviews and their traditions, none of the arguments as such is a necessary theological consequence of the essential features of Christian faith in general, which is to say that the denial of their respective conclusion is consistent with Christian faith. It even has the resources to support a moderate transhumanist agenda.

Arguments according to which the enhancement of human nature conflicts with the divinely bestowed normative status of human nature are not convincing. Most Christian denominations today are happy to accept that the species *homo sapiens* developed through an evolutionary process. Evolutionary theory, if not understood within a materialist framework, is entirely consistent with Christian faith. If, however, Christians accept the theory of evolution, then they accept that, used in a biological context, the term “human nature” does not refer to a fixed essence, because in the long-run of evolution our genetic constitution is constantly changing due to natural or cultural influences. As Caplan argues,

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\(^{27}\) Tada and Cameron, *How to be a Christian in a Brave New World*, 80, 202. As Bostrom argues, “one of the central concerns of the bioconservatives is that human enhancement technologies might be ‘dehumanizing.’ The worry, which has been variously expressed, is that these technologies might undermine our human dignity or inadvertently erode something that is deeply valuable about being human. . . . In some cases . . . the unease seems to derive from religious or cryptoreligious sentiments” (“In Defense of Posthuman Dignity,” 56).

\(^{28}\) Cameron and DeBaets, “Germline Gene Modification,” 105. Cf. also 113: “General concerns about exercising design power over future generations are restated dramatically in the context of Christian theology, specifically the Christian view of human nature and of our Lord’s having taken that nature to himself. It is supremely in the incarnation that we see what it means to be human, and the human nature of Jesus has been taken into the very godhead, unchanging until the eschatological consummation but ready to return at the appointed time with glory.”

is there a ‘nature’ that is common to all humans, both those that exist now and that have existed in the past? The fight over whether there is any such thing as a human nature is a long-standing one. . . . But one can concede that we have been shaped by a causally powerful set of genetic influences and selection forces and still remain skeptical as to whether these have produced a single ‘nature’ that all members of humanity possess. . . . If one surveys all humans, across cultures, those of all ages and varieties of congenital defects, and those from different times in the past it becomes hard to believe any single trait is defining of human nature.\textsuperscript{30}

If this is the case, though, then God never created a particular biological type of human nature that of necessity is common to all human beings. From an evolutionary point of view, the concept of human nature therefore is a cluster concept that entails biological variations exhibited by the members of the species \textit{homo sapiens}. Consequently, even if it matters to God that somebody belongs to the species \textit{homo sapiens}, this does not entail that this person has to have a specific genome; all that matters is that this genome is one of the multiple variations that belong to the species \textit{homo sapiens}. Therefore, there is no theological reason why, in the context of moderate transhumanism, we should not quantitatively enhance features that belong to human nature thus understood. \textit{Homo sapiens} is already consistent with a variation of different features and traits, and moderate transhumanism only intends to bring about the best possible realization of these features without crossing the border of the species.

Arguments from the dignity of human life confuse the moral status of human subjects with the biological body or genome. The moral status of human subjects consists in the fact that they experience themselves as freely acting, moral, and embodied subjects of a stream of consciousness. This is what constitutes absolute human dignity. It is not a particular biological body or genome to which a person’s dignity is related, and assuming so is ethically absurd.

In the same way, the incarnation was not an apotheosis of the specific biological human nature of Jesus of Nazareth. If one argues that because, as a matter of fact, the Son became incarnate in a particular biological human nature, we should not want to fail to share that biological nature, one confuses the issue by confusing the biological and the soteriological aspect of the incarnation. The incarnation does not entail an apotheosis of a specific biological human nature (say, a particular Aramaic genome). It is concerned with the forgiving of our sins.

From a soteriological point of view, Jesus Christ was both fully human and fully divine because there is no other way for him to forgive our sins and to reconcile humanity with God. To be fully human at least entails

\textsuperscript{30}Caplan, “Good, Better, or Best?,” 202. The difficulty to agree on a biological definition of human nature is due to the fact that “species are not static collections of organisms that can be ‘preserved’ against change like a can of fruit; they wax and wane with every birth and death and their genetic complexions shift across time and space” (Juengst, “What’s Taxonomy Got to Do with It?,” 50).
two implications: to be a freely acting subject of experience and to possess a biological human nature that belongs to the species *homo sapiens*.

First, it seems plausible to assume that the most important feature that is relevant to God and justifies our being created in the image of God, is the fact that Christ was an embodied subject of experience who could respond to or decide against the grace and love of God.

Second, since we know that from an evolutionary point of view, “human nature” refers to a cluster of biological traits constitutive of *homo sapiens*, it follows that the specific biological human nature of Jesus of Nazareth cannot be soteriologically relevant. If it was, then Christ could have only redeemed those human beings with precisely the same specific biological human nature—but apart from Jesus of Nazareth there does not seem to be a second individual sharing his genome.

It is therefore accidental to the incarnation that Jesus of Nazareth had a particular genome.\(^{31}\) What is relevant is that Christ’s biological human nature was an exemplar of *homo sapiens* and belonged to the species *homo sapiens*, which in itself is open to a variation of different biological traits and features. Since the moderate transhumanist agenda does not intend to change *homo sapiens* in a way that results in a new species, but only intends to enhance *homo sapiens*, and since moderate transhumanism does not intend to change the fact that human beings are freely acting subjects of experience, I conclude that there is no convincing Christian argument against the quantitative enhancement of features that are good for human subjects. A Christian worldview can accept the moderate transhumanist agenda.

II.2 Christian Arguments for Transhumanism

There is no convincing argument against the transhumanist agenda of quantitatively enhancing human nature. We can, though, present two theological arguments according to which Christians should fully authorize the transhumanist agenda of enhancing human nature.

The first argument is based on the ontological status that God has bestowed on human beings and their relation to nature in general. Three possible interpretations of this relation are encountered in the discussion: domination, stewardship, and co-creation.\(^{32}\) For several reasons, the theologically most attractive interpretation of the ontological status of human

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\(^{31}\) It is interesting that in the context of exotheology, that is, the branch of theology dealing with questions concerning the existence of extraterrestrial life and their relevance for God’s revelation, similar arguments are considered. In exotheology, it is sometimes argued that the Incarnation is relevant for all freely acting and moral subjects that can respond to, or decide against the grace and love of God, independent of their embodiment. I am grateful to Mark Murphy for his comments on an earlier version of this argument.

\(^{32}\) Cf. Coady, “Playing God,” 157: “[There are] three traditions of response to the relationship between human beings and the natural order: The governing images associated with these are: domination, stewardship, and co-creation. The first two have been prominent in debates about the role of Christianity in promoting what many have seen as bad attitudes to the natural environment.”
beings and of their relation to nature is that of co-creation. Domination is often understood as a strange legitimation of the exploitation of natural resources, which I cannot imagine God to have intended. Stewardship reminds one of an uninterested bureaucratic administration of nature and therefore runs contrary to the necessary existential entanglement of human beings in the natural order. The cultural and technological achievements of human beings strongly indicate that our relation to nature has always been more than brute domination or administration.\textsuperscript{33} The assumption that human beings are co-creators and masters over nature is supported by Scripture itself. For instance, according to Genesis 1:26–28, God created human beings in his own image and (because he) ordered them to be masters over “the fish of the sea, the birds of heaven, the cattle, all the wild animals and all the creatures that creep along the ground” (New Jerusalem Bible). We are supposed to “be fruitful, multiply, fill the earth and subdue it” (Gen. 1:28 NJB). Furthermore, according to Psalm 8, God created human beings “little less than a god, crowned . . . with glory and honour” (Ps. 8:5 New American Bible). He has given us “rule over the works of [His] hands, put all things at [our] feet” (Ps. 8:6 NAB).

Based on the assumption that human beings are co-creators who take care of God’s creation, it follows that, according to the standards of Christian morality, Christians should be \textit{virtuous} and \textit{good} co-creators. Virtuous and good co-creators act to foster the well-being of creation by enhancing the present conditions of all creatures in accordance with the values of Christian morality. Since the human body belongs to the created order itself, it follows that if human beings have the knowledge and the ability to enhance human nature, that is, to foster the well-being of human subjects, they ought to do it. Therefore, as long as the object of enhancement is a particular biological realization of human subjects and not the metaphysical feature of human subjects that justifies addressing them as being created in the image of God, Christians should endorse the agenda of moderate transhumanism.

The second Christian argument in favor of transhumanism is independent of the question of the ontological status of human beings. It is based solely on plausible assumptions concerning the duties of morally acting agents and their compassion towards nature. The argument from compassion runs as follows: If there is a moral, able, and knowing being who can prevent unnecessary suffering in sentient beings and benefit sentient beings by enhancing their physical and mental capacities and

\textsuperscript{33}Cf. Hefner, “The Animal that Aspires to Be an Angel,” 163: “This biocultural human nature has prompted me to construct the idea of humans as God’s created co-creator as a way of interpreting both my experience of human nature and my evolutionary scientific understanding of \textit{Homo sapiens}. I consider these evolutionary processes to be the way in which the created co-creator has come into being. Technology also is to be understood as having its source in this basic human nature.” Cf. also Coady, “Playing God,” 159: “In particular, the astonishing achievements of human creativity in medicine, transport, architecture, labour-saving, and communications seems to be inconsistent with the picture of human beings as mere stewards and caretakers of what is given by God.”
dispositions, then this being is morally committed to prevent unnecessary suffering in those beings and to benefit them when possible. Now, human beings are moral agents who will soon have enough knowledge to prevent unnecessary suffering and benefit other sentient beings by enhancing their physical and mental capacities and dispositions. Therefore, human beings are morally committed to preventing unnecessary suffering in sentient beings, and benefit them as well. To prevent unnecessary suffering and benefit sentient beings by way of enhancing their physical and mental capacities and dispositions, however, is precisely the agenda of moderate transhumanism. Therefore, either it is a mistake to suppose that we ought to be compassionate and prevent suffering where we can, or else it follows that Christians are morally obliged to endorse the moderate transhumanist agenda.\footnote{As Engelhardt says, “although traditional Christianity has concerns that limit and direct human genetic engineering, concerns that it does not share with the secular culture, these do not create a categorical prohibition in principle against such technology” (“A Traditional Christian Reflection on Reengineering Human Nature,” 86).}

III. A Case Study: Immortal Christian Cyborgs

I would like to end with a brief analysis and theological assessment of a particular way of enhancing human nature. Because we have seen that Christians should authorize the quantitative enhancement of human nature, insofar as those capacities and dispositions are good for a human subject to have, it seems natural to use current and future biotechnologies to ensure that human subjects are disposed to have longer lives, even lives that continue for an indefinite life-span. The intuitive idea behind this is that it is good for a moral agent to live, and we should use all available technologies to ensure that no human subject has to die as a consequence of having a body that is no longer able to deal with disease and adverse environmental influences. Christians, according to this idea, should try to turn themselves into what could be referred to colloquially as “immortal Christian cyborgs.”

In principle, there are two kinds of cyborg. The first kind of cyborg is a living biological body that, internally and externally, is enhanced through the use of applied science to increase its resistance to diseases and its ability to continue as a functioning body, without a decrease of its biological integrity, for an indefinite span of life, given appropriate environmental conditions.\footnote{Cf., for instance, Dinello, Technophobia!} The second kind of cyborg transcends the realm of the biological entirely and transfers human consciousness into the realm of virtual reality by creating a mind-clone of the subject in question.\footnote{Cf., for instance, Rothblatt, Virtually Human.} Since the latter kind of cyborg presupposes a radical transhumanist agenda, and since I restricted myself to the evaluation of moderate transhumanism, I bracket the discussion of virtual humans who exist in the realm of virtual machines.
Now, whereas one might argue that it is a legitimate Christian agenda to enhance the mental and physical capacities of embodied human subjects, one might feel uneasy when encountering the question of whether, from a Christian point of view, we should seek to extend our lives over and above their “natural” limits. This worry, however, is inappropriate; the accepted ways of enhancing human bodies most likely will lead to a longer life span of the enhanced bodies. People do not die because of old age, but because of diseases, and if we enhance the physical body of an individual in order to deal successfully with more diseases, humans might live vastly longer just because of this kind of enhancement. Therefore, because Christians ought to support the enhancement of human nature, they should also support the attempts to increase the life span of human individuals through the use of applied science.

Suppose, then, that human subjects have been successful in their attempts to create a human body that has in principle a never-ending span of life. Although there are many social worries that accrue with respect to family structures, over-population and the like, the theologically interesting question is the following: Will we have fulfilled the dream of immortality that is promised in Christian faith once our bodies are enhanced enough to live for an indefinite span of life?

The answer is quite clearly “No.” Although Christians fully enjoy being alive and, in normal circumstances, seek to lengthen their time in this world in order to do good and to recognize and respond to the grace of God, the transhumanist vision of what often is misleadingly called “immortality” is theologically irrelevant. First, even an enhanced human body that knows no natural death is not an invulnerable human body and can be killed or destroyed in numerous ways. Second, our universe has only a finite existence and, according to the second law of thermodynamics, is bound to come to a state in which life is impossible. As a matter of physical necessity, human subjects cannot lead an infinitely long life in this world. Third, from a Christian point of view it is not the duration of a particular human life that is important but the moral quality of the life led and the human individual’s response to the call of God. A short life can be morally exemplary, and a long or an indefinitely long life can be morally horrendous in the eyes of God. The duration of a human life is therefore eschatologically irrelevant.

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37 Cf. De Grey, “SENS Statement of Principle,” 67: “Two thirds of all deaths worldwide, and about 90 percent of all deaths in the developed world, are from causes that only rarely kill young adults. These causes include Alzheimer’s, cardiovascular disease, type 2 diabetes, and most cancers. They are age-related because they are expressions of the later stages of aging, occurring when the molecular and cellular damage that has accumulated in the body throughout life exceeds the level that metabolism can tolerate. Moreover, before it kills them, again imposes on most elderly people a long period of debilitation and disease. For these reasons, aging is arguably the most prevalent medically relevant phenomenon in the modern world, and the primary ultimate target of biomedical research.”

38 Cf. Harris, Enhancing Evolution, 64.

39 Cf. Harris, Enhancing Evolution, 60.

The Christian hope for immortality is not to have a life in this world as long as possible, because the Christian fear is not for the death of the body. The kind of immortality we long for is not immortality that is opposed to the finite duration of a human life, but that which overcomes the frailty of our worldly existence. Our hope is to be resurrected in order to enjoy the beatific vision of God. An indefinitely long span of life, therefore, does not satisfy in the slightest the Christian hope for immortality in the presence of God. In this sense, even immortal Christian cyborgs should not forget the wisdom found in Hebrews: “There is no permanent city for us here; we are looking for the one which is yet to be” (Heb. 13:14 NJB).\footnote{I am grateful to Daniel Came, Mark Murphy, Stephen Priest, Anna Sindermann, and two anonymous reviewers for their comments on an earlier version of his paper.}

References


Tada, Joni Eareckson, and Nigel M. de S. Cameron. 2006. How To Be a Christian in a Brave New World (Zondervan).
Waters, Brent. 2006. From Human to Posthuman: Christian Theology and Technology in a Postmodern World (Ashgate).