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Transhumanism and Christian Social Concern

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Abstract

Both Christianity and transhumanism create social visions capable of engendering hope, motivating action and describing the universe. While some transhumanists see the Christian vision as competing with the transhumanist equivalent, others within transhumanism see a place for 'traditional values.' Certainly in the area of social justice concerns, say addressing poverty and physical suffering, each has potentially compatible things to say. This paper argues that while certain areas of concern overlap, and mutual agreement on the use of certain transhuman technologies can be found, the different anthropological, soteriological and eschatological understandings create potentially insurmountable differences.

In the contemporary world both transhumanism and Christianity offer visions of a better world. The former, following the belief in human reason and scientific progress, argues that the development of appropriate technology will lead to a world with less suffering and more freedom for individuals and communities to achieve their potential. The latter holds that the person and work of Jesus Christ provides the basis for social transformation achieved, in part, by the development of new communities and behavior, shaped by God's continuing creative presence in the world.

While one vision tends toward the secular and the other toward religion both are committed to social concerns, either directly or as a by product of their distinctive emphases. Therefore, a valid question is whether or not there can be dialogue between the two in the area of social concern. If, as Nick Bostrom asserts, "it is perfectly possible to be a transhuman – or, for that matter, a transhumanist – and still embrace most traditional values and principles of personal conduct" are there points of contact between the two social visions?[1]

The purpose of this paper is to enter a conversation, not as a definitive word on it, but rather to begin to identify possible avenues of positive engagement as well as other areas of disjunction. As such it aims to examine transhumanism through the lens of Christian social concern, and in particular from within the Protestant tradition. After précising the transhumanist and Christian social visions several of areas of social and technological concern will be used to compare the two positions. The emphasis is then, not so much upon the assumptions that each makes about the nature of the human person, as it is about the practice of social justice.

The previous quote of Bostrom's about 'traditional values' immediately lends itself to some manner of clarification. What are these values and who determines them? By traditional values are we assuming the dominant social norms of the culture of the day or something else? The list of possibilities is endless. For some they may be particular perspectives on the family, sexuality, economic theory, the rights of the individual, or the need for collective self-governance. James Hughes notes "[t]here is a latent majority constituency for social justice, a caring society, technological progress, and health and longevity for all."[2] Are these traditional values? And do they embrace various religious values or frameworks as asserted by people like Hughes and Mark Walker?[3] For the purpose of this essay I will nuance 'traditional values' as those found primarily within the Christian social justice tradition.

Both transhumanism and Christianity are in a sense utopian. Both assert that all is not right with the world, that there is potentially more – 'rumors of another world' as one popular Christian writer puts it – and that a better, fuller, more realized world or society is possible. Duncan Forrester comments that social visions such as these provide hope by "raising the horizon of meaning within which a society exists, policies are formulated, and actions taken." A social vision offers to those who adopt it a utopian vision that generates goals and momentum towards the future, and allows ethical considerations be to examined outside of existing systems.[4]

The transhumanist social vision is a current end product of the idea that the human condition can be improved through reason, science and technology. Predominantly it focuses upon the autonomous human individual, asserting the primacy of reason as a force for personal and therefore social transformation. In this transhumanism offers the hope of a better world with the increased presence of values such as rational thinking, freedom, tolerance and concern for others achieved through the use of applied reason. Ultimately, this leads to an ever increasing improvement of the human condition.[5]

However, just as within a tradition such as Christianity there are a range of communities and emphases found within the breadth of transhumanism. While transhumanists are, by their very nature, at the techno-optimistic end of the biopolitical spectrum they vary across cultural and economic axes.

For example, those who would call themselves 'democratic transhumanists' align themselves not only faith in reason and technological development but also with the political values of liberty, equality and solidarity. Thus while they are techno-optimistic and see a significant place individual choice they claim to be open to the needs and concerns of the wider community acting as a guide to technological development.[6] At the other end of the spectrum are those who are influenced predominantly by libertarian ideology. These, including those identifying with Extropianism, emphasize the autonomous individual and freedom from outside intervention or regulation.[7] Seeing as much of the current literature tends to be from the libertarian end of the transhumanist spectrum it is this type of transhumanism that will be predominantly engaged with in this paper.

The term transhumanism is also often used interchangeably with the related term posthumanism, though for some there is a clear distinction between the two. For example, Bostrom sees the posthuman as the end product of the application of the transhumanist project, the development of individuals who transcend the existing limitations of humanity both physically and mentally.[8] Others, such as Robert Pepperell, are happy to use the term posthuman to embrace a range of approaches to the convergence of biology and technology that alters the fabric of human existence, though he stops short of including Extropianism in it.[9]

What is clear however, is that transhuman and related posthuman projects represent a broad spectrum of ideas about the human development in light of potential technological advances. As such, these projects represent both the narrow view of human bodies and minds being technologically modified, enhanced and repaired,[10] and on the other as a kind of speculative thought experiment that offers "an opportunity to think anew about the

relationship between humans and their environments, artifacts and tools in a digital and technological age."[11]

Furthermore, in the transhuman differences or demarcations are blurred or obliterated. Bodily existence and computer simulation might be the same, cybernetic mechanism and biological organism are merely constructs of the same basic elements, and robot teleology and human goals merge. The rational mind becomes the definition of the person and the body is seen merely as a temporary vessel for the mind – possessed so to speak. Identity derived from the body, such as gender, race and ethnicity is rejected, as markers of bodily difference are removed.[12]

From within this framework transhumanism, in a broad sense, has a social agenda. It wishes to make the world a better place through the application of technology. In particular to provide choices for individuals so that they can be free of those things such as ill health, inheritable diseases, poverty, prejudice and even finite life span. To allow the human individual to choose to transcend existing limitations and to be able to do so. Democratic transhumanists would nuance this by asserting that the goal is to benefit not just the individual but wider society as well. Therefore enabling wider or equal access to technology within society also becomes a priority for them. As we shall see in the following section some of these goals share many similarities and resonances with Christian social concern.

It should also be mentioned at this point that parts of transhumanism ponder the risks involved with technological development, though as Russell Blackford recently commented more effort in recognizing the downsides of transhumanist technologies might not be amiss.[13] Indeed, one of the areas of contention between transhumanists is over whose role it is to manage the risks involved. Furthermore risk, real or potential, is one of those areas that Christian social concern would also speak to.

A significant part of the wider Christian social vision is a social concern, an understanding of social justice that is rooted in both the Christian understandings of God, particularly as revealed in Jesus Christ, and of human nature. Both Protestant and Roman Catholic views hinge on the understanding that the individual person, the person in relationship and the wider world matter to God.

In Roman Catholic social teaching this concern is seen in the two core principles of social transformation and human dignity. The first of these principles argues that the relationship of faith between the believer and God demands that faith be engaged with every aspect of the everyday world, whether that be socially, politically, culturally or economically. The second principle is that human dignity, realized in social relationships or community, is of utmost value.[14]

This approach tends to be manifested through engagement using natural law, where Aristotelian concepts have been routed through figures such as Thomas Aquinas.[15] Specifically, this view holds that human self-interest is transcended by a natural order present in the wider world, an order derived from the one who sustains it. This, following the Thomist approach, allows for the recognition of some fixed general understanding of good and evil by human beings, and to a lesser degree other creatures, across historical-cultural settings.[16]

In the Protestant tradition the basis primarily for understanding social justice concerns rests with the interpretation of biblical texts – the Hebrew Scriptures, especially the prophetic literature, and the writings of the early church found in the New Testament. This is not to say, however, that philosophical thought is ignored within the Protestant tradition. For example, Luther uses it in regards to socio-political engagement, but theologically it has tended to be downplayed. Likewise, in the Catholic tradition biblical material is not ignored for, as Forrester notes, it has an increasing presence in papal encyclicals.[17]

The biblical traditions drawn upon in shaping Christian social concern are various. There is the assertion the physical universe is somehow intentionally created and therefore of value to

God. There are the prophetic traditions of the Hebrew Scriptures, and in particular the writings that date from the eighth century BCE. Here we see in the tradition of Micah that human beings should be doing justice, loving kindness and walking humbly with God.[18] And so too in the writings associated with Amos where suffering caused by social and economic oppression condemned.[19] Justice is expressed in social relationships, as the very substance of faith, not just its application. It becomes the how and why of living.[20]

These themes are picked up in the Gospels. The Lucan tradition narrates Jesus reading the prophets and proclaiming that the good news was for the poor, the oppressed and the blind to be released from their suffering,[21] while in the Matthaen tradition biblical justice is constantly seen as the vindicating the poor and the oppressed as they can turn to God and those who follow him for redress and support.[22] While not predominantly oriented within this type of theistic framework these concerns are ones that transhumanists can sympathize with. In a literal sense things like recovery of sight, helping the lame to walk and freedom of choice for those oppressed by physical and economic suffering are key aspects of transhumanist social concern, and echoes of this biblical language can be seen in some transhumanist writings.[23]

Two final strands weave together with these previous ones. Firstly that justice is always set into an eschatological framework, the sense that Christianity looks forward to the full realization of God's justice in the future. That justice is to be done here in the present in anticipation of the coming kingdom of God.[24] The second strand is the anthropological metaphor, the *imago Dei*, that somehow human beings bear the image and likeness of God.[25]

At this point is it well worth noting that the combination of these strands into a vision of social concern serves to convict much of Western Christianity. While many examples of individuals and groups that embrace social concern can be given, historical relationships between Church and State, as well as the institutionalizing of the Christian faith and often equating it with the contemporary value system of the age, e.g. repacking Christianity as Western consumer culture, mean that social concern has often been tragically lacking. It is not without good reason that the prophetic tradition of the Hebrew Scriptures spoke critically about the people of God in this respect. Nevertheless, it is this vision of social concern that will be used here, with the critique of the actuality of Christian social concern needing more scope that can be dealt with in this paper.

Returning to the image of God motif, it is perhaps best expressed as an understanding of a functional relationship. That being made in the image of God human beings possess a dignity by virtue of God valuing them. That valuing of the individual cascades out into embodied social relationships between human beings and the wider world that God values too. In the past one hundred years or so the interpretation of the image has shifted from something that is found inherently in the human person, e.g. reason, through the concept of relationship and to a definition of humans as agents of God within the world. As such it has moved to reinforce the concept that human being is linked to embodiment within the natural world, and with technological agency within that world.

The concept of *imago Dei* continues to be nuanced by conversations with others both inside and outside the Christian tradition. Within the tradition the *imago Dei* forms a key part of many contemporary liberationist, feminist and ecological conversations.[26] Criticism from outside, such as White's view that Judeo-Christian anthropocentrism being responsible for an ecological crisis, has prompted many to reexamine the concept.[27] And others, such as Lutheran theologian Philip Hefner, look to both culture and genetics to develop an understanding of the image that takes them into account.[28]

The concept of the *imago Dei* though represents a possible point of disjunction with transhumanism. Beyond the obvious disagreement between secular and theistic worldviews that might occur, one of the ethical distinctives noted by some transhumanists is the rejection of *speciesism*. That is, moral status is conveyed not by being a particular biological species, such as *homo sapiens,* but rather by the combination of factors such as individual autonomy

and membership in a community.[29] The emphasis upon how privileged humanity is in the scheme of things within the Christian tradition varies but it is unavoidable in one form or another.[30]

As we shall see later the metaphor of the *imago Dei* do not necessarily force a rejection of technologies such as genetic engineering or cloning, but it does affect both aspects of Christian ethics and the understanding of why human beings are technological.

The theological virtue of charity is a common argument for the development and application of technology. The technological endeavor becomes the avenue through which "material mercies" are introduced into society delivering humankind from suffering.[31] But it may be that justice and charity are not always the same thing, in that justice is often concerned with the maintenance of a social peace and stability that resists technological innovation. Such innovation may lead to society having to renegotiate what public opinion is on new issues raised by technology and often this is a traumatic and combative process. Thus there is a tension between science and technology and wider society as new questions are raised when old ones are answered.[32]

Ian Barbour picks up some of this tension when he recognizes that within the biblical tradition human potential is considered ambiguously. On one hand he argues it offers an idealistic vision affirming the potential to promote human flourishing through intellectual application, while on the other the tradition is also pragmatic about the human tendency to abuse power. A tendency he sees manifested in both the individual's quest for power and institutional rationalization in corporations, labor unions, governments, and religious institutions of their own self-interests.[33]

Furthermore, Barbour argues that technology's potential tends to be interpreted in three categories of relationship in both wider society and within Christianity. Here, he asserts, technology is perceived as either a liberator, an oppressor or an ambiguous instrument of power.[34] These types of relationships are identified by the emphasis they place upon different sets of values. From the perspective of the individual, things such as food and health, meaningful work and personal fulfillment are to be valued. In a social setting justice, participatory freedom and economic development become concerns, while in an environmental context resource sustainability, environmental protection and respect for all forms of life are likely to be considered.[35] Emphasis on particular combinations of these values in the process of doing social justice leads to a variety of responses to technology.

For example, transhumanism falls within the category that sees technology as liberator where the values of personal fulfillment, participatory freedom, economic development and utilitarianism form key influences upon its thought and direction. Within Christianity each of the types of relationship is manifested, from pessimists that see technology as somehow introducing more problems than it solves and dehumanizing persons, through to others that clearly identify all technological progress as divinely mandated.[36] Both Mark Walker's proposal of a neo-Irenaean technological *theosis* and Kevin Kelly's concept of *regenesis* fall within this latter techno-optimistic category.[37]

Barbour himself falls within the third category which sees technology as both a product and instrument of social power and fits with the theological understanding of human beings as being capable of both great good and great evil.

It is with these categories in mind that the following two examples of engagement with transhumanist ideas, *uploading* and *biotechnology*, will be considered before some more general comments are made.

Notwithstanding the influence of Neo-Platonic thought upon historic Christianity, nor premillennial rapturist visions of escape from the material world, the orthodox Christian understanding of the human person as an embodied individual raises questions relating to transhumanist aspirations for uploading their understanding of the essence of a person, the

intellect or consciousness, into a synthetic environment. In particular the narrative being told here seems to argue for an escapism from the physical. Hayles puts it like this,

> Such views are authorized by cultural conditions that make physicality seem a better state to be from that to inhabit. In a world despoiled by overdevelopment, overpopulation and time-release environmental poisons, it is comforting to think that physical forms can recover their pristine purity by being reconstituted as informational patterns in a multidimensional computer space.[38]

Margaret Wertheim argues this is vision is similar to the one of a Gnostic ascendancy to becoming one with the Infinite and is concerned that the tendency of such religious traditions to lead to a lack of earthly concerns – specifically for the physical world and communities embedded within it.[39] As we noted before the Christian motif of the *imago Dei* roots Christianity in valuing the flesh, of being intentionally part of the physical created order and in a web of relationships with the divine and the natural – a notion that the physical community is important to both human and God.[40]

A danger here is, that assuming a materialist vision that intellect or consciousness is an epiphenomenon of the biological hardware, then the flesh becomes in a Manichean sense evil or at least an intermediary state to be transcended. What then binds those in fleshly existence to those in living in cyberspace? Is it possible for community to be maintained? And in Wertheim's words "[w]hy bother fighting for earthly social justice if you believe that in cyberspace we can all be as gods."[41] Brenda Brasher raises similar concerns to when she argues that the increasing hybridization of the human person will lead to a time when the non-augmented human will be perceived negatively, redefining the essential nature of human identity and perception.[42]

Transhumanists favoring uploading rejection of these criticisms in two ways. Firstly, they argue that uploaded existence would provide the full range of experience available to a biological human. And secondly, interaction with the physical world and persons would be somehow maintained.[43] Yet solidarity with the other is often forged in the bond of common human experience. If this bond is radically changed, say by the hypothetical increase of speed in the 'uploadee's' thought processes, and the underlying motivation for uploading is driven by a concern for individual liberty of choice, the possibility for disjunction from the physical world becomes very real. Furthermore, it is unclear in transhumanist literature how the uploaded community are supported economically, of what their obligations are to the structures supporting their existence, which raises questions of how oppressive those support structures might become.

Given the current impracticability of uploading the main concern with uploading from a Christian social justice perspective comes more from the its intent to reject embodiment. Just as religious fixations with transcending the physical world can lead to emphasis on saving 'souls' rather than addressing physical need, and also to environmental neglect, so too fascination with uploading might have similar implications. Embodiment though is key to discussing implications raised by biotechnology, and it is here that maybe more helpful connections can be made.

Lutheran theologian Ted Peters is one who sees the positive possibilities present in transhumanist technologies such as genetic modification and cloning. He rejects the predominantly conservative religious reaction that tends to retreat towards perceived safety in the face of new technologies. In particular he asks of these technologies, "Does God really say 'No'?".[44]

Motivated by the potential of a future vision found in Christ, Peters argues that humanity is being drawn forward towards an end. Under this 'evolutionary' pressure morality changes or adapts, making it is wrong to morally place what is delivered to us by nature above how nature can be influenced through technology. In fact, he argues that it is immoral not to strive to make the world a better place through the use of technology, just a morality develops through history bringing about a fairer and more just society. He puts it succinctly

when he comments "[t]he situation as it is does not necessarily describe how it ought to be."[45]

However, while Peters is optimistic about the use of technology he is not so optimistic about technologists and the socio-political forces that shape the use of technology. So, when it comes to a technology like cloning Peters bases his assessment upon human dignity being found in relationship to God. For him this provides the basis to resist what he sees as to the dignity of children under pressures of commodification.[46]

Peters rejects the ideas that our DNA is in someway sacred and that human beings are strictly individuals. Rather he argues that we are individuals in relationship and that those relationships define human dignity. That is, in practice dignity is experienced as worth or value communicated by relationships. So he says,

> It is not individualism or identity per se that constitutes a person's dignity. Uniqueness does not determine dignity. Our value as a person comes experientially from the people who love us and, ultimately if not ontologically, from God's love for us.[47]

From this position two other strands of thought are interwoven, those of origins and beneficence. The first of these, origins, demands that humanity stop looking back to some early stage that we can say is or isn't human and instead continually look forward with hope and potential. And in doing this we need to engage with technology not just in the ethical sense of non-maleficence, of doing no harm, but also with beneficence. If we can use technology to do good then we are obliged to do so and if we don't then we reject the potential God has given humanity for social transformation found in the *imago Dei* motif.[48]

This anthropological understanding draws upon the term 'created, co-creator' that Hefner develops in his theological reflection upon technology.[49] Peters picks this up and highlights human beings as finite creatures who are part of a wider creative enterprise which transforms the natural world, including humanity, and is governed by an ethical mandate derived from discerning God's purposes.[50]

So interacting with transhumanist ideas, and in particular biotechnology, Peters' approach would see merit in the transhumanist claim that the current state of the contemporary world is inadequate and even "characterized as a 'vast sea of human suffering due to heredity'."[51] However his ethical stance derived from giving priority to those yet to come and of value being derived from relationship with God would mitigate against those who would view children produced by asexual reproduction as the product, rather than the person, of a technological process with quality-control standards.[52]

This model of engagement focuses on the value of the individual from being in relationship with others. The fact that it is not based upon an innate property or aspect of the human person will place it in tension with perspectives that do. For example, Hughes provides a framework of basing personhood primarily upon cognitive capabilities. In Peters' scheme children and adults are ascribed equality of dignity and personhood, while in the other it is possible to interpret a progressive scale of personhood or humanness that alters a person's inherent rights based upon the level of cognitive development.[53]

Dena Davis notes though that the concepts of beneficence and respect for the autonomy are often in tension in the area of biotechnology. On one hand the need to do good for an individual comes up against that individual's right to make their own decisions.[54] Within the Christian worldview the doctrine of *imago Dei* might be a helpful starting point for resolving this tension. There the emphasis on the individual as valuable in their own right before God is combined with the sense of obligation toward others because they are also equally valued by God. The human individual is not isolated from the rest of the world, but rather embedded in a range of social and physical relationships, and that need to be recognized.

The tension between individual and community priority is an ongoing one. On one hand the Christian tradition affirms that individuals are responsible for their own actions and should be

free. Yet on the other, communities are also held to account for their actions, or lack of them, and the command to love one's neighbor puts the other before self. Where individual Christians are on this spectrum is often more in line with their political affinity rather than theological position.

A practical way forward might be found in adapting the 'ethic of accommodation' that the apostle Paul uses in his correspondence with the Corinthian church.[55] Here Paul describes the tension between believers being 'free in Christ' yet also having responsibility toward others. As he puts it, everything is permissible but not all things are beneficial. In dealing with how to live within Corinthian society Paul sets out a three-tier ethic. Firstly, you are free to do what you want provided it does not compromise your allegiance and witness to Christ. Secondly, if the first criterion is met, then you must never do anything to destroy the faith of another. And finally, if the first two conditions are met defend your freedom. So an ethic nuanced by concern for God, other and then self.

In applying technology, say psychopharmaceuticals, the ethic might serve as follows for a person or community within the Christian tradition. Firstly, does the application bring glory to God in some way or not compromise the understanding of God's will in this area? Secondly, what are the implications for others – not just for those immediately around, but the wider social and physical networks was well? And if both these areas can be satisfied then consider proceeding with it. Admittedly this is a very brief sketch and questions like "what is God's will?" will be debated but rigorous discussion and engagement must form part of the consideration.

While discussion about transhumanism is often on particular technologies, such as the ones mentioned above, there are a variety of broad areas of engagement as well. Areas such as technological risk, economic and political forces and the relative definition of terms like poverty and suffering will be discussed in the following section before some final concluding remarks are made.

One of the issues that arises in the discussion of technological development is the concept of risk. In the case of transhumanist technologies this is particularly pertinent and there is ongoing discussion for the potential of things like nanotechnology to cause harm in the world.[56] Transhumanist literature recognizes the possibility of these risks and proponents have gone as far as categorizing technological risks into those which might be considered endurable and those which are existential in nature. The latter being defined as those that result in the annihilation or restriction of intelligent life originating on this planet, while the former are risks that individuals or communities would survive.[57]

It is the endurable risks that I wish to concentrate on specifically. One of the previously noted strands of Christian social concern is the biblical theme of God's concern for those who have no voice or power in society. In effect, their autonomy as individuals and as a community has been restricted. In the case of survivable technological risks it would be those with less resources available to them, say economically, who are most at risk. Thus there isn't a single level of risk to be assessed but rather a spectrum of risk that needs to take this into account. As Graham states, "[s]ocio-economic inequalities may thus represent as profound a threat to human dignity as biotechnologies."[58]

An example of this might be the recent case of famine-struck African nations wrestling with whether or not to accept food aid that contained genetically-modified grain. For them the power to manage the technological risk was limited by the socio-political situation they found themselves in. So policies that work to empower these communities and reduce their perceived exposure to risk should be worked towards.[59] Thus the use of these technologies is not simply rejected but rather its use is nuanced by a social ethic that takes the potential risk to other parties into account.

The assessment of risk might however prove problematic. In the case of emerging technologies who should decide what is or is not permitted? Bostrom comments that a

differential development of technology is desirable, separating out the beneficial options from the harmful ones, but who makes this subjective decision?[60] As previously noted libertarian transhumanist respect for individual autonomy and choice tends to resist overt pressure from the state or other public bodies in directing what would or wouldn't be acceptable. Furthermore to say that the decision would be determined purely on rational grounds would fail to take into account wider economic and political agendas present in society.

The situation involving generic pharmaceuticals in developing nations demonstrates this by showing that simply developing the technology to address particular issue of suffering only goes part of the way toward solving the problem.[61] The tension between the valid concern for compensation for costly research and the immediate and pressing problem of intense human suffering is unresolved. The perspective that in the long term technological benefits will become cheaper and trickle down to the less affluent does little to alleviate suffering in the short to medium term.

This last point brings us to a final issue raised by Mitcham and Grote as to the relative nature of terms such as poverty and suffering. What might be considered poverty and suffering in one society may not be considered so in another. They argue that suffering might be seen as "the result of an unsatisfied need".[62] If this is the case then the range of individual, communitarian and environmental values proposed earlier by Barbour might be helpful here in moving the term away from merely a problem of the individual, as well alerting us to the possibility that it is not merely a product of the material body being oppressed or restricted. They comment that if dissatisfaction is integral to a human condition exiled from God then it will ultimately be unable to be alleviated technologically.[63]

Nevertheless the vision constructed by Christian social concern demands that Christians take the possibilities of alleviating human suffering and oppression through technological application seriously. It is not possible to love one's neighbor, to work on the side of those who are suffering, without being accountable to God for the creative abilities that human beings possess. Therefore engagement with both the reality and possibility of transhumanist technologies is demanded by this social vision. The human condition can be improved through the judicious use of technology, though the Christian understanding of this condition is that it will reach its consummation in the ultimate coming of the Kingdom of God.

Therefore it is possible that dialogue with transhumanism can exist where there are avenues to work together to achieve similar ends with respect to improving the human condition.

Conclusion

The development of transhumanist technologies and ideals provides both an ongoing challenge and an opportunity for those working within a framework of Christian social concern.

In a positive sense, Christian concern or 'traditional values' found in love of neighbor, compassion for the poor, justice for the oppressed, and an vision of human equality found in the *imago Dei,* demands that technology that can alleviate suffering and improve quality of life must be taken seriously. That means that an automatic rejection of technology, say found in bioconservatism, would be antithetical to the calling to love and serve others. It also means that those operating within this framework of social concern are obliged to commit themselves not only to the application of new technologies, but also to a deeper understanding of them and to contribute toward the development of new ones.

However, while one might be positive about new developments this must be nuanced by a rejection of overt techno-optimism. There are plenty of examples that demonstrate that human ingenuity and the promotion of human reason does not always work out positively. It would be better to assume a position that recognizes that technology is often a two-edged sword and seek to highlight the risks involved and the need to maintain a balance between the rights of the individual and those of the community.

While many resonances might be found between Christian social concern and variants of transhumanism such as democratic transhumanism, with its apparent stress on equality of all, there are also significant differences in the understanding of the human person. If one follows the view that human dignity or personhood derives not from some quality inherent in a person, such as rationality, but rather is sourced outside the human in value bestowed by God then difficulties will arise as to what is or is not considered appropriate application of technology within the human community. Furthermore, strands of transhumanism that follow an emphasis upon individual liberty will also find tension with a social vision that recognizes the dignity of the individual but also balances that against ethics such prioritizing another over oneself for the benefit of the wider community.

Other difficulties will also arise between strands of each tradition or community that see secularism or religion as diametrical opposed to each other. While the ultimate goal of each may be the easing of human suffering the fundamental motivation for performing technological work is different. The basic understanding of the human person and its place in the universe are radically different, as are the visions of the future that each holds. Secular transhumanism has its own good news of salvation through human hands and minds alone, while Christianity is shaped by the perspective that salvation is sourced in God alone and humanity is capable of both great creativity and destructiveness if left to its own devices.

It is with both these positive and negative aspects of engagement in mind that Christian social concern will have to wrestle with as it seeks to critique not only transhumanist agendas, but also those within the wider Christian community.

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[6] James Hughes, *Citizen Cyborg : Why Democratic Societies Must Respond to the Redesigned Human of the Future* (Boulder, Colo.: Westview Press, 2004), 183-84.

[7] Max More, *Transhumanist FAQ* [Internet] (Extropy Institute, [cited November 2004]); available from http://www.extropy.org/faq.htm.

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[10] Elaine Graham, "Bioethics after Posthumanism : Natural Law, Communicative Action and the Problem of Self-Design.," *Ecotheology* 9, no. 2 (2004): 178.

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[12] N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics* (Chicago, Ill.: University of Chicago Press, 1999), 3-4.

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[16] Paul T. Durbin, "Thomism and Technology : Natural Law Theory and the Problems of a Technological Society," in *Theology and Technology : Essays in Christian Analysis and Exegesis*, ed. Carl Mitcham and Jim Grote (Lanham, MD: University Press of America, 1984), 212-13.

[17] Forrester, "Social Justice and Welfare," 195-96.

[18] Micah 6:8

[19] Amos 8:4-8

[20] Forrester, "Social Justice and Welfare," 197.

[21] Luke 4:18-19

[22] Forrester, "Social Justice and Welfare," 198. Especially Matt 5:1-12 (The Sermon on the Mount).

[23] Hughes, *Democratic Transhumanism 2.0* ([cited]). See section “Disabled Cyborgs and Secular Scientists.”

[24] Forrester, "Social Justice and Welfare," 199.

[25] Genesis 1:26-28

[26] For liberationist, feminist and ecological see respectively,

Gustavo Gutiérrez, *A Theology of Liberation*, trans. Sister Caridad Inda and John Eagleson (London: SCM Press, 1974; reprint, British Edition).

Phyllis A. Bird, ""Male and Female He Created Them": Gen 1:27b in the Context of the Priestly Account of Creation," *Harvard Theological Review* 74, no. 2 (1981).

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[27] Lynn White, Jr., "The Historical Roots of Our Ecologic Crisis," *Science* 155, no. 3767 (1967). For a discussion of the impact of White’s paper see: Gunnlaugur A. Jónsson, *The Image of God : Genesis 1:26-28 in a Century of Old Testament Research*, *Coniectanea Biblica. Old Testament Series ; 26* (Stockholm Sweden: Almqvist & Wiksell, 1988).

[28] Philip Hefner, *The Human Factor : Evolution, Culture and Religion*, *Theology and the Sciences* (Minneapolis: Fortress Press, 1993).

[29] Bostrom, *Transhumanist FAQ* ([cited]).

[30] Jim Ball, "The Use of Ecology in the Evangelical Protestant Response to the Ecological Crisis," *Perspectives on Science and Christian Faith* 50, no. 1 (1998). He notes a variety of approaches within Protestant theology with respect to imputing creation with moral status.

Hefner too looks to reshape the *imago Dei* in such a way as to reduce its anthropocentrism. See Hefner, *The Human Factor*, 237-40.

[31] Carl Mitcham and Jim Grote, "Aspects of Christian Exegesis : Hermeneutics, the Theological Virtues, and Technology," in *Theology and Technology : Essays in Christian Analysis and Exegesis*, ed. Carl Mitcham and Jim Grote (Lanham, MD: University Press of America, 1984), 33.

[32] Ibid., 35-36.

[33] Ian G. Barbour, *Nature, Human Nature, and God* (Minneapolis, MN: Fortress Press, 2002), 136.

[34] Ian G. Barbour, *Ethics in an Age of Technology: The Gifford Lectures 1989-1991*, vol. 2 (San Francisco: HarperSanFrancisco, 1993), 1-23.

[35] Ibid., 26, 53.

[36] For an example of a more pessimistic view see, Jacques Ellul, *The Technological Bluff*, trans. G.W. Bromiley (Grand Rapids: Eerdmans, 1990).. An optimistic view can be found in Richard Kadrey, *Go Forth and Multiply* (Wired Magazine, March 1998 [cited 16 May 2003]); available from http://www.wired.com/wired/archive/6.03/seed_pr.html.

[37] Walker, *Becoming Gods* ([cited]).

Kevin Kelly, "Nerd Theology," *Technology in Society* 21, no. 4 (1999): 388-90.

[38] Hayles, *How We Became Posthuman*, 36.

[39] Margaret Wertheim, *The Pearly Gates of Cyberspace: A History of Space from Dante to the Internet* (New York: W.W. Norton, 1999; reprint, London: Virago Press, 2000), 278-79.

[40] This is in spite of the escapist fantasies of things like "Left Behind" theology, which in effect demonstrates this principle with its depreciation of earthly concerns for things like the environment. For a critique of eschatological escapism with respect to the environment see Steven Bouma-Prediger, *For the Beauty of the Earth : A Christian Vision for Creation Care*, *Engaging Culture* (Grand Rapids, Mich.: Baker Academic, 2001), 76-79.

[41] Wertheim, *The Pearly Gates of Cyberspace*, 279.

[42] Brenda E. Brasher, *Give Me That Online Religion* (San Francisco: Jossey-Bass, 2001), 151-53.

[43] Bostrom, *Transhumanist FAQ* ([cited]).

[44] Ted Peters, "Cloning Shock : A Theological Reaction," in *Human Cloning : Religious Responses*, ed. Ronald Cole-Turner (Louisville, Ky.: Westminster John Knox Press, 1997), 16.

[45] Ibid., 20-21.

[46] Ibid., 21.

[47] Ibid., 22.

[48] Ted Peters, *Is Our DNA Sacred?* [Internet] (Response: The Seattle Pacific University Magazine, Summer 2004 [cited 5 November 2004]); available from http://www.spu.edu/depts/uc/response/summer2k4/dna.html.

[49] Philip Hefner, *Technology and Human Becoming* (Minneapolis: Fortress Press, 2003), 77.

[50] Ted Peters, *Science, Theology, and Ethics*, *Ashgate Science and Religion Series.* (Aldershot, Hants, England ; Burlington, VT: Ashgate, 2003), 222-23.

[51] Ibid., 215.

[52] Peters, "Cloning Shock," 22.

[53] James J. Hughes, *The Future of Death : Cryonics and the Telos of Liberal Individualism* [Internet] (Journal of Evolution and Technology, July 2001 [cited 13 November 2004]); available from http://www.jetpress.org/volume6/death.htm.

[54] Dena S. Davis, *Genetic Dilemmas : Reproductive Technology, Parental Choices, and Children's Futures*, *Reflective Bioethics* (New York: Routledge, 2001), 22-23.

[55] 1 Cor 8 and 10-11:1 with specific emphasis on 1 Cor 10:23-11:1.

[56] For example Bill Joy's often cited paper on the perils of emergent technology. See Bill Joy, *Why the Future Doesn't Need Us.* [Internet] (Wired Magazine, April 2000 [cited 29 November 2004]); available from http://www.wired.com/wired/archive/8.04/joy.html.

[57] Nick Bostrom, *Existential Risks : Analyzing Human Extinction Scenarios and Related Hazards* [Internet] (Journal of Evolution and Technology, March 2002 [cited 13 November 2004]); available from http://www.jetpress.org/volume9/risks.html. Bostrom goes further in dividing each of these categories into personal, local and global in scope.

[58] Graham, "Bioethics after Posthumanism," 189.

[59] *The Use of Genetically Modified Crops in Developing Countries* [Internet] (Nuffield Council on Bioethics, 28 December 2003 [cited November 2004]); available from http://www.nuffieldbioethics.org/fileLibrary/pdf/gm_crops_paper_final001.pdf. For example, the supply of food aid consisting of GM crops in milled form reducing the possibility of undesired environmental exposure.

[60] Bostrom, *Transhumanist FAQ* ([cited]).

[61] Rory Carroll, *Africa's Aids Drugs Trapped in the Laboratory* [Internet] (Guardian, 21 May 2003 [cited 30 November 2004]); available from http://www.guardian.co.uk/international/story/0,,960106,00.html.

[62] Mitcham and Grote, "Aspects of Christian Exegesis : Hermeneutics, the Theological Virtues, and Technology," 37.

[63] Ibid.