ural exegesis

Everyday Theology

How to Read Cultural Texts and Interpret Trends

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Baker Academic
Grand Rapids, Michigan

(2007)

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Editorial Introduction

We now turn to a radicalized version of human enhancement present in the transhumanist movement. Perhaps unfamiliar to many, this movement combines an unwavering devotion to technological progress with the desire to "improve" humanity to anticipate the next stage in "biological evolution." This essay introduces a number of vital issues that span a vast area of theological, philosophical, and ethical questions that beg to be addressed by the contemporary church. In so doing, this essay represents the sort of forward thinking that should overcome the reactive mentality that often marks how the church responds to technology and cultural trends.

Human 2.0

Transhumanism as a Cultural Trend

MATTHEW EPPINETTE

Introduction

I WAS BORN human.
This was merely due to the hand of fate acting at a particular place and time. But while fate made me human, it also gave me the power to do something about it. The ability to change myself, to upgrade my human form, with the aid of technology. To become cyborg—part human, part machine. This is the extraordinary story of my adventure as the first human entering into a Cyber World; a world which will, most likely, become the next evolutionary step for humankind.[1]

A shocking statement to be sure. No doubt straight from the inside flap of the latest science-fiction best seller. But this is no fictional monologue. These are the opening words of Kevin Warwick—a leading researcher and professor of cybernetics at the University of Reading, England—as he recounts his experience of becoming the first cyborg.

There is a group of people who, like Warwick, believe that human beings are simply a product of "the hand of fate," that the present life is all there is, and that no greater being or higher power exists. Yet, like all humans, they have a longing for transcendence. So how can this gap be bridged? Warwick and others are applying the tools of reason and technology to flesh and blood, skeleton and muscle, in order to create a new kind of humanity that goes beyond who we are today and reaches for immortality.

The World Transhumanist Association has banded together to put the tools of body and brain to work in pursuit of transcendence and immortality. Transhumanists are looking to technology to alter radically what it means to be human, to become posthuman. Just as a chimpanzee cannot conceive of what it would be like to be human, so we cannot conceive fully what it would be like to be posthuman. A posthuman is a being so completely different, so advanced, that it is difficult—if not impossible—to describe. A transhuman, then, is someone working toward becoming posthuman. Transhumanism is a small but growing cultural movement that is a logical outworking of the spirit of our age: whatever *can* be done scientifically and technologically *should* be done.

Transhumanism attempts to present a comprehensive account of human existence. It tries to answer "two of the most important universal questions: (1) 'What does it mean to be human?' and (2) 'How do I live my life in a way that brings true happiness?'"[2] Belief systems answer these questions in the way that they explain w*here we are and how we got here*, and *where we are going and how to get there*. In light of this, as we will see, transhumanism presents a gospel of technological salvation with striking parallels to the scriptural message. Thus, the biblical story line of creation, fall, redemption, and consummation provides a framework for evaluating and responding to transhumanism. We will explore transhumanism as a logical extension of commonly held assumptions about technology and the physical world.

Upgrading the World

The last quarter of the twentieth century was marked by the rise of the information age with innovations such as the personal computer and the Internet. Related to this informational revolution was the growth of the field of applied biology, or biotechnology. Biotechnologies are employed in the manipulation of human and animal tissues, in the modification of plants and crops, and in the development and delivery of pharmaceuticals. Examples include DNA fingerprinting, genetically modified corn, home pregnancy tests, and synthetic insulin.[3]

This convergence of technologies has led some to refer to the twenty-first century as the "biotech century."[4] Already, the complete human genome has been sequenced and made available for download via the Internet.[5] As of the summer of 2005, more than 170 biotech drugs were available and at least three hundred more were in clinical trials; there were 1,473 biotechnology companies in the U.S. employing around two hundred thousand people, and the 314 publicly held biotechnology companies had a market capitalization of $311 billion.[6]

While the prospect of a biotech century has encountered mixed reaction—protests have been held at the Biotechnology Industry Organization,[7] and three California counties have banned genetically modified crops[8]—transhumanists have embraced it with passion. They view biotechnology as the source of tools for improving the human condition. Among the specific biotechnologies they embrace are genetics, stem cell research, cloning, and nanotechnology. Transhumanists believe that progress in these areas has put us on the cusp of a colossal breakthrough—the ability to modify our very selves, to alter human nature in a fundamental way.

The "whatever can be done should be done" spirit of our age is a symptom of the belief that technology is inherently good and that it holds the solution to many, if not most, of the problems intrinsic to human existence: contingency, dependency, and finitude. Ours is an era of unprecedented technological advancement that both depends on and supports this technicism. These ideas underlie not only transhumanism but also the assumptions of many in our society. For example, the mainstream publication *Popular Science* proclaims, "Science will help us live longer, smarter, stronger" by the development of artificial muscles, smart drugs, and external wombs, which will lead to "a better brain," and "cures for everything."[9]

As a highly technological movement, transhumanism makes many of its important and explanatory documents available solely in electronic format. For example, *The Transhumanist Declaration*, *Transhumanist Values*, and *The Transhumanist FAQ* are all available online at www.trans humanism.org. In addition, the peer-reviewed *Journal of Evolution and Technology* is available only on the Internet at www.jetpress.org.

Scientific developments have set only part of the stage for transhumanism; philosophical and cultural trends such as individualism and postmodernism also contribute. Individualism is the idea that one's own needs, interests, and desires are more important than those of others or of any larger group or community. In our culture, this emphasis on individuality has, in many ways, become a radical personal autonomy under which each person is a law unto himself or herself. The term "postmodernism" is used in a variety of ways, most of which encompass the idea that any kind of universal story or metanarrative is at best suspect and more likely a tool of manipulation or control. Postmodernity thus rejects traditional religious views and values, favoring—in conjunction with individualism—personal constructions of origins, ethics, and eschatology.

One area where technicism, individualism, and postmodernism intersect is in the nascent discussions on the distinction between therapy and enhancement.[10] Historically, medicine has been dedicated to the treatment of disease and the restoration of health, but emerging biotechnologies make it increasingly possible to move beyond traditional notions of healthy toward "better than well."[11] This echoes the eugenics movement of the early twentieth century, which sought to improve humanity by careful breeding. The present incarnation is a form of private eugenics through which individuals pursue their own personal sense of betterment and wellness. Examples include the use of performance-enhancing drugs in sports and the kind of plastic surgery excesses for which (allegedly) Michael Jackson is famous.

Onto this stage, enter transhumanism. Oxford philosopher Nick Bostrom cofounded the World Transhumanist Association (WTA) in 1998 and set forth a statement of its views in a document entitled *The Transhumanist FAQ*. A second version of the *FAQ*, which will provide our primary reference point, was released in October 2003.[12]

Of Nanos and Cyborgs: Or, Whatever Happened to Mice and Men?

The term "transhuman" is a confluence of the words transitional and human. While transhumans view themselves as existing somewhere along a continuum between human and posthuman, they maintain that the entire notion is so fuzzy that it defies explanation. Aside from simply being an advocate of transhumanism, a transhumanist is "someone actively preparing for becoming posthuman. Someone who is informed enough to see radical future possibilities and plans ahead for them, and who takes every current option for self-enhancement."[13] In order to become a transhumanist one need only "adopt a philosophy which says that someday everyone ought to have the chance to grow beyond present human limits."[14]

James Hughes, WTA secretary, indicates that since 1998, approximately four thousand people have joined the WTA via its website. He estimates that more than one hundred thousand worldwide "would self-identify as transhumanist' . . . [but] since many of them are anarchists and libertarians they are difficult to organize and get on mailing lists."[15] The WTA publishes a peer-reviewed journal, the *Journal of Evolution and Technology*, and *The Transhumanist FAQ* lists a number of like-minded people and organizations. Thanks to Dr. Bostrom and the World Transhumanist Association, transhumanism is well on its way to becoming a "serious academic discipline."[16]

Where We Are and How We Got Here

Science and the scientific method are the primary means by which transhumanists come to understand reality. Physics, chemistry, and biology reveal the way in which the world operates and how it can be manipulated and improved. The universal language of logic and mathematics "enables the mind mentally to homogenize the entire world, to turn it into stuff for our manipulations."[17]

One of the main premises of transhumanism is that human beings are at a relatively early phase of our evolution. We are here because of naturalistic Darwinian evolution, and the visible material world is all there is. What they call the "human condition" receives much attention in *The Transhumanist FAQ*. While it is never defined explicitly, it is always spoken of in terms of something that needs improvement, transformation, and genuine change. Transhumanists acknowledge that "we might not be perfect" and "science has its own fallibilities and imperfections," but provide no root cause for either of these imperfections.[18] It is simply a given, a part of the human condition.

In transhumanism, as in humanism, "man and his capabilities are the central concern."[19] While humanism is interested in maximizing human development, transhumanism adds the idea that by using technology,

humans can progress beyond human to become posthuman. Given the emphasis in transhumanism on the human, it is interesting that transhumanists tend to take a negative view of the human body. Human brains are referred to as "three-pound lumps of neural tissue that we use for thinking," or "that gray, cheesy lump inside your skull."[20]

Where We Are Going and How to Get There

To understand transhumanism, one must look to its ultimate goal: becoming posthuman. Posthumans are "beings whose basic capacities so radically exceed those of present humans as to be no longer unambiguously human by our current standards."[21] To be posthuman is to

> reach intellectual heights as far above any current human genius as humans are above other primates; to be resistant to disease and impervious to aging; to have unlimited youth and vigor; to exercise control over their own desires, moods, and mental states; to be able to avoid feeling tired, hateful, or irritated about petty things; to have an increased capacity for pleasure, love, artistic appreciation, and serenity; to experience novel states of consciousness that current human brains cannot access.[22]

The posthuman era will be ushered in by "the singularity," a hypothesized point in time when changes of such magnitude occur that everything beyond that point is altered in ways that are impossible to describe accurately. The singularity will occur when we are able to create computers that are smarter than humans or that possess "superintelligence."[23] The term "singularity" comes from the world of physics. Just as physics cannot explain the center of a black hole (the singularity), we cannot explain a world in which superintelligence and posthumans exist. Ultimately, proponents of the singularity hope to achieve a "positive feedback loop" such that the human mind builds a superintelligent mind which in turn builds a mind that is smarter still.[24] The quest for the singularity is buoyed by speculation that it might occur in the first half of this century.[25]

Reason and technology, particularly biotechnology, are the keys to overcoming "fundamental human limitations";[26] they are the means by which we can become posthuman. The future of humanity is indeterminate, waiting to be shaped and molded. The posthuman goal, therefore, will require the rational application of all possible technologies to redesign or enhance the human organism.[27] It is as though, through the proper application of reason and technology, humans can become perfect people,

in a perfect society, on a perfect earth. Three technologies merit a closer look: nanotechnology, uploading, and advanced genetics.

Nanotechnology, which involves the ability to manipulate matter at the level of the atom, is expected to play a key role in such areas as cryonics and uploading. Cryonics involves freezing a person's body when he or she dies in the hope that when technology and medicine are sufficiently advanced the body can be thawed out, brought back to life, and restored to health. Nanotechnology will be necessary to undo the damage done by the freezing process. Moreover, nanotechnology "will enable us to transform coal into diamonds, sand into supercomputers, and to remove pollution from the air and tumors from healthy tissue."[28]

Uploading, which is connected closely to the transhuman negative view of the body, involves transferring a person's essential self from his or her body into a computer. Nanotechnology would be required to re-create electronically or synthetically the brain states of the person. The conjectured benefits of uploading include backing up and rebooting the self when needed, living economically, thinking faster and learning better, traveling via the Internet, and escaping from physical decline and death. Transhumanists argue that it is "a common misunderstanding" that people who upload themselves "would necessarily be 'disembodied' and that this would mean that their experiences would be impoverished."[29] Instead, "an upload could have a virtual (simulated) body" or could "rent robot bodies in order to work in or explore physical reality."[30]

Transhumanists hope to take genetic techniques to a more advanced level, especially in reproduction. Parents have an implied duty to make use of genomics and preimplantation screening to ensure the health of their children. At its theoretical extreme, genomics could allow parents to make a child to order: "Would you like tall, dark, and handsome with that?" Preimplantation screening involves removing a single cell from an embryo created by in vitro fertilization in order to test for certain diseases or traits; embryos deemed insufficient are "discarded." While the realization of the full potential of genomics is, at best, many years away, preimplantation screening currently is offered at a number of clinics in the United States.[31]

Ethical Implications

Like genomics and preimplantation screening, many aspects of where we are going and how to get there are ethically charged. Transhumanist ethics are based on a combination of radical personal autonomy, defined

Two values that are intrinsically held and protected by American culture are autonomy and utilitarianism. Autonomy is rooted in our concepts of individualism and freedom. Utilitarianism is an ethical theory that emphasizes the pragmatic belief that the ends justify the means, or that whatever produces the most pleasure for the greatest number is the good. As with technicism, awareness of core cultural perceptions or values gives us important initial insights to understand emerging trends.

Part of interpreting a cultural text or trend is to see where it leads. What are the implications of the cultural work? Transhumanists are willing to risk the destruction of all intelligent life for the chance to become posthuman. This risk says a lot about how much they detest the current state of humanity. It is important to take a careful measure of the things that one believes, and the far-reaching implications that beliefs can have.

as "the ability and right of individuals to plan and choose their own lives,"[32] and utilitarianism. Each person should be able to decide which technologies to apply to his or her own body and to what extent. Similarly, people should be free to choose when and how they reproduce and have complete say in the results of their reproduction. In practical terms, this means that people should be free to use "genetic medicine or embryonic screening to increase the probability of a healthy, happy, and multiply talented child."[33] Transhumanists would advocate restrictions on "procreative liberty" only in the case where definite harm would come to a child, or where the child's "options in life" would be seriously limited.[34]

Autonomy is also a factor in transhuman views on death: "everybody should have the right to choose when and how to die—or not to die."[35] Transhumanists further assert "Voluntary euthanasia, under conditions of informed consent, is a basic human right." The only acceptable restraint on radical personal autonomy is based in utilitarianism. For example, reproductive cloning is considered from a utilitarian view:

> When thinking about whether to permit human reproductive cloning, we have to compare the various possible desirable consequences with the various possible undesirable consequences. We then have to try to estimate the likelihood of each of these consequences. This kind of deliberation is much harder than simply dismissing cloning as unnatural, but it is also more likely to result in good decisions.[37]

A Posthuman Future?

The spirit of our age evokes a sense that whatever can be done, not only should be done, but in fact *must* be done. This is an unacknowledged assumption that many hold and upon which transhumanism plays when refusing to consider the possibility of setting aside any technology, no matter

how dangerous. Several transhumanist writings and one section of *The Transhumanist FAQ* are devoted to existential disaster, the possibility that a man-made disaster might destroy or permanently damage all intelligent life.[38] Yet they will not and cannot disavow perilous technologies. Transhumanism assures that what we do *while continuing to pursue these technologies* will make the difference. The technological breakthrough most essential to their hopes of becoming posthuman is also one of the riskiest. When describing the singularity, they mention that it will probably occur, "provided that we manage to avoid destroying civilization."[39] It is all too true that "humanity's entire future may depend on how we manage the coming technological transitions."[40]

Transhumanism is, in many ways, a project that blends modernity and postmodernity. Its biotechnological pursuits rest solidly on the "modern scientific project, to which mankind was summoned almost four hundred years ago by Francis Bacon and René Descartes."[41] This has become "an almost blind faith in inevitable progress" that redefines good as the suppression, repression, replacement, and/or total control of the "natural" via science and technology."[42] Postmodernity supplies "the belief that there is nothing intrinsically valuable about the biological form, particularly not the human form."[43] In addition, transhumanists point to the postmodern emphasis on "explod[ing] conceptual barriers in order to widen the reach of human creativity" as at least a partial warrant for their agenda.[44] In sum, "because there are no true norms for existence or behavior, we may create any reality we desire, and change ourselves in any manner to our suiting."[45]

Transhumanists believe that the pursuit of immortality is an ancient human quest. They call attention to the fact that various philosophical systems have attempted to find meaning in the fact of death and that religions have attempted to convey a sense of hope regarding what follows death through teachings such as resurrection and reincarnation. In addition, developments in medicine, science, and technology have led to longer life expectancy. "If death is part of the natural order," transhumanists point

out, "so too is the human desire to overcome death."[46] A recent book asserts that the posthuman "potential to play God, to pursue immortality, pushes these issues beyond the ethical into the theological."[47] Appropriately, therefore, it is to the theological we now turn.

Toward a Christian Future-Human

Both transhumanism and Christianity attempt to offer comprehensive explanations for human existence and answer questions regarding what it means to be human and how to find true happiness. On transhumanism's view, to be human is to be infinitely malleable, to have a disposable body, to have no one to answer to but the self, to be strongly optimistic about the progress of technology and humanity. To live a life of true happiness is, therefore, to pursue various technologies and work toward becoming posthuman. For Christians, true happiness—purpose, meaning, significance, fulfillment—is found only in relationship with God through faith in Christ. To be truly human is to be rightly related to God through Christ.

The Christian account of where we are and how we got here is that we are created in the image of God yet are born into a fallen world (Gen. 1:27; 3). Because this is a fallen world and we are fallen creatures, we are estranged spiritually from God and subject physically to despair, disease, and death. In addition, we are in active rebellion against God. We suppress the truth, and are subject to spiritual blindness (Rom. 1:18; 2 Cor. 4:4). For this, we rightly bear a measure of guilt that we cannot assuage. Yet we desire redemption (the restoration of relationship with God) and consummation (permanent dwelling in the City of God). While the reality of these desires may be unknown to us due to our suppression of the truth and spiritual blindness, they are nonetheless real.

The good news (gospel) about where we are going and how to get there is that God sent his only son, Jesus Christ, to take on human form (a body), live among us, lay down his life, and rise again (John 3:16; 1 Cor. 15:3). Through faith in the completed work of Christ, the relationship with God for which we were created is restored. It is only in the New Jerusalem (a real, physical place) that we will experience total relief from the effects of the fall in resurrected bodies (Rev. 21).

To state it another way, the root cause of our troubles is sin and the resulting estrangement from God. The symptoms manifest themselves in many ways, not the least of which is the desire for freedom from despair, disease, and death—in a word, for immortality. Rebellious truth suppression and spiritual blindness often cause us to seek treatments for the symptoms of the fall rather than for the underlying disease of sin and guilt. An additional effect of the fall is that we rely solely on human reason and human means in our attempts to alleviate the effects of the disease of sin. As a result, human solutions are often distortions of the reality defined by Scripture and the person of Jesus Christ.

Transhumanism constructs a noteworthy antithesis between itself and religion. While its adherents acknowledge that "transhumanism might serve a few of the same functions that people have traditionally sought in religion," they maintain, "there is no hard evidence for supernatural forces or irreducible spiritual phenomena, and transhumanists prefer to derive their understanding of the world from rational modes of inquiry, especially the scientific method."[48] When talking about the earliest roots of their thinking, transhumanists point to ancient Greek philosophers such as Socrates who relied on logic rather than faith. They lump together religious fanaticism, superstition, and intolerance" and label them "weaknesses."[49] The transhuman position is reminiscent of a line from U2's "The Wanderer": "They want the kingdom, but they don't want God in it."[50]

Despite transhumanism's disavowal of religion, many of the driving forces behind transhumanism can be defined properly as religious. Transhumanism distortedly mirrors, in some ways, key Christian doctrines, particularly in areas of eschatology. The singularity represents a kind of apocalypse, and the idea of posthumanity, or of a posthuman era, in many ways mirrors Christian teaching regarding resurrection and consummation. Consider the parallels between the description of the posthuman condition—"resistant

The truth that God has created humanity in his image has emerged repeatedly in these essays. Pope John Paul II often said the key question facing the world was what it means to be human, and these texts and trends reflect that. Whether we are in God's image is significant for the Universal Declaration of Human Rights, transhumanism, and fantasy funerals. For a Christian cultural hermeneutic to move forward, therefore, we must continue to think biblically and creatively about what the image of God means. How does seeing human beings as God's image-bearers play out in the controversies of our day, such as in bioethics? What points of contact with the wider world does this doctrine offer? Working hard in this area will have a multiplying impact in our ability to respond to cultural texts.

to disease and impervious to aging; unlimited youth and vigor—and Revelation 21:4—"He will wipe every tear from their eyes. There will be no more death or mourning or crying or pain, for the old order of things has passed away."

Christian beliefs about resurrection involve genuine improvement, transformation, and change of the body, and offer an answer to the transhumanist hope of uploading. Christ's resurrection was a physical, bodily resurrection. Because Christ rose from the dead, Christians believe that they will rise from the dead. In the same way that Christ's resurrection was a bodily resurrection, Christians trust that we too will undergo a bodily resurrection (1 Cor. 15). This resurrection will be a genuine transformation of our bodies in such a way that bears both continuity and discontinuity with our present bodies. While we do not know the precise nature of such bodies, it is clear that they will be physical, and that we will be recognizable to one another. While the resurrection body will not be subject to death, decay, and despair, the Christian view of immortality is of a very real physical existence. In our earthly, fallen bodies we "groan" for our future, immortal bodies. Christians and transhumanists share the view that death is unnatural and an enemy, yet Christians believe that Christ has overcome—and will one day destroy—death.[52]

The Christian doctrine of the fall is visible in transhuman discourse regarding the human condition. While the human condition in transhumanism appears to involve fundamental aspects of what it means to have been created by God—contingency, dependency, and finitude—as well as factors attributable to the fall—despair, disease, and death—no root cause (i.e., Satan, evil, sin, or rebellion) is given. In many ways it seems that the human condition covers only unintentional sorts of failings, and that if only everyone were given a proper chance, all would be well. Indeed, transhumanism sounds at times as if it denies the reality of evil. The implicit claim is that people basically are good and technological advancement will somehow purify the human condition.

When transhumanists state, "In some ways, human minds and brains are just not designed to be happy," they unknowingly acknowledge humanity's estrangement from God.[53] A central Christian claim is that human beings were designed in God's image and thus for relationship with God, and only there is found true and enduring joy and happiness. Transhumanists also assert, "There is no reason why pleasure, excitement, profound well-being and simple joy at being alive could not become the natural default state of mind for all who desire it."[54] Christians would counter that it is only due to Christ's atoning work on the cross and bodily resurrection that profound well-being and simple joy are available through faith in the risen Christ.

Distorted correspondence with other biblical themes can also be found. In this way, transhumanists look to scientific revelation to find a biotechnological savior to bring them into a posthuman kingdom. Inasmuch as humanity and its potential are the ultimate concern of transhumanism, humanity has replaced God; their theology is anthropology. In the same way that Christians look to Scripture as the source for knowledge of God, transhumanists look to science as the source for knowledge of human life. Reason has replaced faith; existential disaster is damnation. Human beings have a God-given yearning for significance beyond space and time as we know it, could it not be that human beings have the ability subconsciously replace God-ordained structures with those of our own making?

In the same way that a transhuman is a transitional human, Christians are also humans in transition, living in a kingdom that has come and yet is coming, "strangers in the world."[55] Could we not, in fact, go further? Could it be that to be truly human is to be, in a sense, posthuman? Perhaps to be truly human is to be *post-fallen-human*, to have a resurrected body to dwell with the Triune God in the New Jerusalem, to return to the full, or truly human state in which humans were created. To be transhuman then would be to live in the tension between the "already" and the "not yet," to be in the world but not of the world, to be a new creature in Christ. As this is possible only because of the finished work of Jesus Christ, who as the firstfruits of the resurrection sent the Holy Spirit as guarantee, perhaps Christians should appropriate and fill out the terms "transhuman" and "posthuman" with the gospel of Jesus Christ.[56] At the very least, this brief foray may help reveal specific points of dialogue with transhumanists and others who would look to technology as "the sole and ultimate solution to the problems of the world."[57]

Conclusion

As Christians, we can easily miss the way the world must look to those who are convinced that the present life is all there is and that no other being or higher power exists. Examining transhumanism through a theological lens reveals that with which transhumanists are ultimately concerned as well as the structures and methods constructed in order to address these concerns. The Transhumanist FAQ represents the very real

beliefs of an increasing number of people. The world that it projects is the very world in which they see themselves. They are striving to live out the way of being human that the *FAQ* describes.

Twenty-first-century Western civilization is in real danger of allowing our technological abilities to become an "unquestioned commitment to technological control of the body for the sake of eliminating 'misery and necessity.'"[58] The result will be that science, medicine, and technology focus solely on "efforts to eliminate suffering and expand human choice."[59] This view stands in stark contrast to the fact that contingency, dependence, and finitude are inescapable aspects of the human body specifically and life generally. Rather than trying incessantly to remove all suffering, we should instead seek a correct orientation to our limitations. We can do that best "by recovering the moral significance of the body" specifically, and the material realm in general.[60]

Christianity and transhumanism both acknowledge the transitional nature of our current bodies. Yet, for Christians that does not lead to devaluation of the body; rather, there is regard for its place, even as we look forward to a resurrection body. This is an important realization for those who traditionally have tended toward an underdeveloped theology of the material realm. As Christians, we need to consider "what our bodies are for, how suffering relates to these purposes, and how technological medicine assists or hinders these purposes."[61] Rather than trying to cure every disease and overcome every obstacle, recognizing the contingency, dependency, and finitude of our bodies will ultimately enable us to care better for others.

Christians should be involved in discussions over science, technology, biotechnology, and medicine with all of their potentials and pitfalls. We have a role to play in shaping the future, and can be involved in technological discussions in a number of ways. We can study to work as scientists and researchers who develop technologies while recognizing the sovereignty of God over all things. Christians must model appropriate and God-honoring utilization of technology, and we can engage the designers and developers of technology to argue for its wise creation, implementation, and use. As citizens, we can participate in the political processes surrounding the regulation and oversight of technology.[62]

It is important that we recognize not only the threats that technology presents, but also the opportunities for obeying the cultural mandate that humans have been given by God. One theologian asserts, "the problem is not with technology itself but our lack of a moral framework that can tell us how rightly to resist and appropriate it."[63] We must strike a balance

Begotten or Made?

Recent developments in pharmacology, neuroscience, and genetic engineering not only affect the practice of medicine but raise important theoretical questions about what it is to be human. Oliver O'Donovan's *Begotten or Made? Human Procreation and Medical Technique* (New York: Oxford University Press, 1984) tackles these questions head-on in an insightful book whose small size belies its importance.

New technologies raise the possibility of the ultimate makeover. Sex-change operations that go against the natural given encourage the transgendered to think that gender is artificial rather than something determined and given by God. If the term "revolution" signals the moment when a community assumes responsibility for its own future, then we are indeed in the midst of a technological revolution. It is a fact of more than lexical significance, O'Donovan suggests, that the word "revolution" entered the vocabulary of the West only when its faith in divine providence was weakening.

O'Donovan sees into the soul of our technological culture when he identifies "making" as a key category in modernity's interpretative framework. Indeed, "making" may be one of the most important root metaphors in contemporary culture. Much of what we do—everything from dinner to sex ("lovemaking") to cars to public opinion—is viewed in terms of instrumental making. When every activity becomes "artifactual," however, technical intervention becomes appropriate everywhere and everything comes to be seen (by postmoderns, for instance) as "artificial."

What our technological culture needs, O'Donovan contends, is a good dose of trinitarian theology. To be precise: we need to recover the distinction between "making" and "begetting" that was the keystone of Nicene orthodoxy. The church fathers at Nicaea declared that Jesus was "begotten, not made" of the Father. Why? Because that which we make is fundamentally *unlike* us; it is the result of human will and human work and is therefore something to be used rather than loved. That which we beget, by contrast, is beyond our ability to determine or control; we do not make what we beget but we receive it as a gift from God to be cherished, not manipulated or made over. According to O'Donovan and the church fathers, only God can "make" human beings. It is the better part of human maturity and wisdom not to chafe against the givens (including our being male or female) but to accept them as God's gifts.

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between completely rejecting technology and viewing technology as the solution to all of humanity's problems. Ours is an age of unprecedented technological development, which fuels and is fueled by the belief that technology is inherently good and that it holds the solution to all of our

problems, and the resulting belief that whatever can be done must be done.

Is it possible that in our actions and attitudes we are overly optimistic about technology? Most people, including Christians, are not aware that they hold these assumptions, yet these assumptions shape nearly every public debate regarding new technologies. These are not scientific beliefs but philosophical and moral presuppositions to which Christians need to call attention. It is all too easy to get swept up in the message our culture sells about the "need" for the latest and greatest gadget and forget where our ultimate solution lies. Instead, "the prophetic witness of Christians must challenge the assumptions of technicism and offer a more realistic and fruitful alternative."[64]

Finally, Christians must appropriately model the biblical idea of community. We are the body of Christ, joined together and functioning in concert. This contrasts starkly with the cultural notions of individualism and radical personal autonomy upon which transhumanism relies so heavily. We are not our own, nor do we live for ourselves alone (1 Cor. 6:19; Rom. 12). The biblical emphasis on neighbor-love should motivate us to cultivate biblical communities, to care for one another, and to engage technology.

Transhumanism is a logical extension of assumptions about technology and the physical world that many, even some Christians, hold. Seeing ostensibly innocuous assumptions pressed to their logical conclusions should stimulate reconsideration of the ways in which we look at, think about, relate to, and live in the world. Then perhaps we can begin to more fully bear one another's burdens and better offer our own bodies as living sacrifices. What all of us need, Christians, transhumanists—whatever label we choose to wear—is the gospel. We need to hear and proclaim the good news that God became man in order to restore us to the relationship for which we were created.

Suggested Readings

Alcorn, Randy. *Heaven.* Wheaton: Tyndale, 2004.

Houston, Graham. *Virtual Morality: Christian Ethics in the Computer Age.* Leicester, UK: Apollos, 1998.

Kass, Leon R. "*L'Chaim* and Its Limits: Why Not Immortality?" *First Things* 113 (May 2001). http://print.firstthings.com/ftissues/ft0105/articles/kass .html (accessed January 12, 2004).

Kurzweil, Ray. *The Singularity Is Near: When Humans Transcend Biology.* New York: Penguin, 2005.

President's Council on Bioethics. *Beyond Therapy: Biotechnology and the Pursuit of Happiness.* Washington, DC: President's Council on Bioethics, 2003. http://www.bioethics.gov/reports/beyondtherapy/index.html (accessed September 21, 2005).

Pullinger, David. *Information Technology and Cyberspace: Extra-connected Living.* Cleveland: Pilgrim, 2001.