began my academic career in the fall of 1989, just as the first human gene-therapy protocols were getting underway. Hired in part to teach biomedical ethics and convinced that gene therapy would be the medicine of the future, I learned what I could about this field by reading and attending conferences. Mindful of the potential for religious opposition to an extraordinary development with the power to unsettle as well as excite, organizers of conferences devoted to the ethics of gene therapy were often eager for theologians to participate along with scientists, physicians, and moral philosophers. Like nearly everyone at these conferences, theologians expressed support in principle for continued research in human gene therapy, so long as this research was governed by widely recognized ethical conditions, whose precise nature and implications were, of course, debated. As frequently happens in such settings, the theologians (along with some moral philosophers) tended to think ahead of the research curve, raising hypothetical scenarios in which gene therapy would be used to alter a wide range of human characteristics. They were quickly reassured by the scientists and physicians that such scenarios were purely speculative—that both scientific and technical considerations made it virtually certain that gene-transfer techniques in the foreseeable future would be applied exclusively to serious single-gene disorders, and that early success in these areas was likely.

Ten years later, the outlook for human gene therapy had changed dramatically. Despite the prediction of early success, gene-transfer research had yielded no clinically reproducible results. More significant for our topic, the focus on the serious single-gene disorders—a focus that had supplied the field with so much of the initial moral capital it needed to clear regulatory hurdles and gain the support of a potentially anxious
public—had shifted. Hungry for funding and faced with a small demand for cures for serious but rare single-gene disorders, many in the field followed the market into new targets for genetic intervention. These new targets included genetically more complex conditions, such as AIDS and cancer, but also conditions that technically speaking were not diseases at all. By the late 1990s, those on the cutting edge of gene-transfer research found it easier to secure funding for protocols aimed at male baldness than for protocols aimed at single-gene diseases.

Meanwhile, during the 1990s, related developments were occurring elsewhere. In his bestseller, Listening to Prozac, Peter D. Kramer reflected on how a class of drugs used to treat depression also has the capacity to alter basic features of personality. Drugs developed for the treatment of erectile dysfunction found a large (and perhaps not unexpected) recreational market. Drugs designed to halt or reverse male baldness likewise became a growth industry. These pharmacological technologies have become so popular that today we can identify them by simply referring to brand names: Prozac, Propecia, and Viagra now represent whole classes of technologies that seek, respectively, to change features of the personality, to alter the appearance or form of the body, and to increase various human capacities or performances.

Collectively, these technologies are commonly referred to as enhancement technologies. In addition to the pharmacological and (potential) genetic enhancements just discussed, there is also a wide variety of surgical enhancements. While efforts at enhancement of personality, appearance, and capacities or performances have had a long history, perhaps as old as medicine itself, the striking successes of pharmacology in the past decade or so, combined with the (as yet unrealized) prospect of genetic enhancements and the steady development of reconstructive surgery, have pushed enhancement technologies to the front and center of debates about biomedical research and practice. For all of these reasons, enhancement technologies offer an ideal case for theological inquiry into technology.

Technology as a Theological Problem

We begin by looking at technology more generally. What do we mean when we inquire about technology? At one level, the answer is perfectly clear: We are inquiring about the development and use of devices and techniques—the new software program, the new diagnostic test, or, in the case we have just examined, the new gene-transfer vector—that enable us to carry out desired functions. At a second level, the question is more complex: We also think of technology in terms of the apparently endless array of effects that come in the wake of the new devices and techniques. Thus, for example, we include under the heading of technology, not only the mechanical respirator, but also the intensive-care unit, the specialty of

\[1\) (New York: Viking, 1993).
intensive-care medicine, policies regarding brain death, the army of bioethicists and attorneys who address the ethical and legal implications of abating mechanical respiration, the remarkable and often tragic power struggles between the medical establishment and patients or their surrogates that have altered the practice of medicine, and the widespread execution of advance directives. When we think of technology in this way, we also include practices and self-understandings: Consider how advance directives alter the ways in which we prepare for and anticipate our own deaths, how reproductive technologies change the meaning of parenthood, and how network computing changes the nature of relationships and the identities of those who enter into them. At a third level, technology designates an entire way of relating to the world. Technology may be viewed as a distinct form of action (for example, as making, \( \textit{poi\'\"es} \)) in contrast to doing, \( \textit{praxis} \), one whose modern form may be characterized, in contrast to other kinds of acting, by the immense scope of its effects and by the cumulative and irreversible nature of its interventions.\(^2\) Technology may also be viewed as a way of constituting the world as means to ends or as objects for human manipulation.\(^3\) Finally, it may be viewed as a fundamental attitude—a relentless refusal to accept what is as it is, a rejection of the given.

It is immediately clear that the third level offers ample material for theological reflection on enhancement technologies. This has especially been so in the case of the final point, technology as a fundamental attitude characterized by a rejection of the given. Friedrich Nietzsche expressed one implication of this point when he remarked that “even using the yardstick of the ancient Greeks, our whole modern existence is nothing but \( \textit{hubris} \) and godlessness... . . . \textit{Hubris} today characterizes our whole attitude towards nature, our rape of nature with the help of machines and the completely unscrupulous inventiveness of technicians and engineers.”\(^4\) Nietzsche does not do so, but a theologian may (as some have done) take the \( \textit{hubris} \) found in technology as a kind of impiety, a lack of gratitude for the goodness (or simply the existence) of creation or a sinful self-assertion of a humanity unable to accept its limits and therefore bent on achieving a godlike mastery over all that is other. One theologian, Mark J. Hanson, has offered, by way of Reinhold Niebuhr’s analysis of sin and anxiety, an insightful treatment of enhancement technologies from roughly this perspective.\(^5\) Alternatively, this same rejection of the given may appear in a positive light as an expression of the \textit{imago Dei}. Precisely by not resting content with nature as it is, human beings participate in the \textit{creatio}

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continua, the ongoing divine act of creation. Thus, in his explorations of genetic ethics, theologian Ted Peters argues that through genetic technology humanity exercises its vocation as created co-creator.6

There is much to be said for examining technology at this third level. Theology is on its own turf here, speaking in its own idiom. Moreover, there is a genuine theological issue at stake here, namely, the question of where to inscribe technology in the narrative of creation, fall, and redemption. The problem, though, is that the third-level toolbox contains blunt instruments. As Hanson and Peters both realize, this kind of analysis does not help us much in evaluating particular technologies and their uses. Pressed to say something about these particular technologies, theologians who work on the third level often step down to the first level, which is where technology assessment usually operates. Here, devices and techniques, along with their proposed uses, can be evaluated in terms of benefits, risks, costs, and justice (in its many aspects). This is appropriate, since enhancement technologies quite obviously raise major first-level ethical questions, many of which have been insightfully addressed.7

With regard to justice, we may ask whether the pursuit of these technologies draws resources from the pressing health needs of others (including those who suffer from the single-gene disorders that are no longer the primary object of gene-transfer protocols), whether they confer unfair competitive advantages on those who can afford to benefit from them, and whether they reinforce suspect social norms (for example, the norms that govern physical appearance, which may be racist or sexist). With regard to risks and benefits, we may worry that levels of risk that are justified in the case of serious diseases may not be appropriate in the absence of the latter—especially where children are concerned. We may puzzle over whether there are any characteristics so vital to our humanity that to alter them technologically would be to imperil our very humanity.

At this first level, however, theology fades into the background. There may be theological reasons for favoring one theory of justice over another or weighing one kind of harm over another, but these reasons will generally serve as a preamble to discussions conducted in the standard terms of policy discourse. The result is that theology is marginalized in most debates about the concrete implications of technology.

In this essay, I disrupt this division of labor in which theology offers insightful third-level analyses while technology assessment carries out its concrete, first-level task. The disruption occurs when we inquire at the second level. For the most part, the second level has belonged to the social sciences and critical theories, perhaps because it is the level at which technology has the most concrete and pervasive effects on our lives. But this is precisely the reason why it should be the object of theological

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inquiry. Below, I show how enhancement technologies can be approached from this level. I am encouraged in this effort by the success that theologians have had in approaching other biomedical technologies from the second level.

Before embarking on that voyage, however, we have unfinished business at the third level. For there are two third-level critiques that claim to address enhancement technologies concretely by focusing on technology not as a fundamental attitude but as a mode of action.

**THIRD-LEVEL CRITICISM: TECHNOLOGY AS ARTIFICE AND AS OBJECTIFICATION**

One of these critiques charges that the technology of enhancement replaces the natural with the artificial and thereby offends against natural order or creation. This charge faces an immediate problem: It is notoriously difficult to distinguish between the natural and the artificial. Consider two methods of attaining a psychological state of tranquility, one of which employs a drug, the other of which employs a practice of prayer or meditation. Both methods effect possibly extensive alterations of the psyche; if “natural” means free from deliberate human intervention, then both methods are artificial. The pharmacological method is designed to act directly on certain identifiable biochemical processes; by some definitions, this would count as more “natural” than a religious practice, which falls into the “artificial” realm of culture (although the development and use of drugs for such purposes is itself a significant cultural phenomenon, and there is evidence that some forms of prayer and meditation have measurable physiological effects). In neither of these senses, then, is technology more artificial than nontechnological interventions. It can be argued, however, that prayer and meditation effect the desired state by means of purposive human activity, whereas the actual operation of the drug (as opposed to the activities of choosing and ingesting it) occurs apart from purposive human activity. In this sense one may claim that technological methods of enhancement are artificial insofar as they replace or bypass human activity, which (it is alleged) is the natural way for human beings to pursue their ends.

This claim raises two questions: First, do technological enhancements bypass human activity? Second, even if they do, what is wrong with that? Let us consider a report on the ethics of genetic interventions authored by a committee convened under the auspices of the UK Catholic Bishops. One matter the report ponders is whether parents may pursue genetic enhancements for their children. The report distinguishes between “environmental” and “mechanical” interventions. Environmental interventions involve “a mere response to selected existing potential of the child” and are “open-ended” in the sense that they do not specify the exact characteristics or the degree to which the intervention will prove favorable. Mechanical interventions involve “an amendment of existing potential” and “are something that happens to the child rather than something the
child does in a certain environment." The issues, then, are whether an intervention designed to enhance a trait preserves the existing potential of the person, whether it operates through his or her activity, and whether its effectiveness remains contingent on that existing potential and that activity.

The report offers two arguments in favor of prioritizing environmental over mechanical interventions. The first argument appeals to a principle that, whenever possible, health should be promoted "through the normal channels of human activity, whether conscious or non-conscious." In other words, medicine should intervene only when the normal means to fulfillment (that is, human activity) are unavailable or unsatisfactory. This principle applies equally to "therapeutic" interventions (treatment of diseases) and "nontherapeutic" or "perfective" interventions (enhancements). The second argument in favor of prioritizing environmental over mechanical interventions concerns the widespread worry that the increasing pursuit of enhancements may lead parents to consider their children as products of their own design or may involve the exercise of too much control over children. The report concedes that both types of intervention run these risks but asserts that the risk is greater in the case of mechanical interventions.

Both of these arguments are open to challenge. First, the report focuses on enhancement of traits, such as intelligence, that will almost certainly require a combination of mechanical and environmental interventions, since (as the report notes) such traits involve both genetic and environmental factors. However, if genetic enhancement of intelligence or similarly complex characteristics will involve environmental as well as genetic interventions, in what sense can it be said to bypass human activity? The environmental interventions required in addition to the genetic intervention will almost certainly involve human activity. The same will often be true of pharmacological interventions aimed at highly complex traits. Of course, this will not necessarily be the case for all enhancement technologies; the actual operations of many pharmacological and surgical interventions occur apart from human activity. However, in many of these cases (for example, surgical alteration of facial features), human activity would not have brought about the desired result; the principle favoring environmental interventions ("whenever possible . . .") simply does not apply in such cases.

Second, the assumption that mechanical interventions are more likely to involve excessive parental control and manipulation or to lead parents to think of their children as products they have designed confuses two concerns, both serious. One concern is that parents who seek to enhance

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9Ibid., 22.
certain capabilities of their children will abdicate the parental role of interpersonal interaction with children in favor of a technological fix. However, we have seen that many capacities parents seek to enhance still require environmental interventions in which parent-child interaction will be central. The second concern is parental control and manipulation itself. However, parents who are determined that their child will succeed in scholastic endeavors, sports, beauty pageants, or other activities may control the child’s environment at least as severely as any control technology is likely to facilitate, precisely because the former type of control acts directly and (if desired) continuously on the child’s behavior, volition, and personality. Even if environmental interventions are more “open-ended” than mechanical interventions, few enhancement technologies—aside from some surgical interventions—permit users to choose with much precision either the characteristics or the degree of effectiveness. In short, mechanical interventions will not necessarily lead parents to abdicate their traditional roles, while refraining from such interventions will not necessarily diminish parental control and manipulation. Gilbert Meilaender is correct: Cultivation of “a renewed sense of the mystery of the person and the limits to our own efforts at shaping and transforming character” will be more effective in addressing these legitimate worries than will the disfavoring of any one technique at the expense of another. The answers to our two questions now seem clear: Enhancement technologies often do not bypass human activity, and even if they did, the problems they raise are at least as applicable in the case of nontechnological enhancements.

A similar argument is often raised against the use of technological enhancements in certain activities involving strength and skill. Will games such as chess lose their meaning if the high levels of concentration and memory required to excel in them are made available through pharmacological means? Will athletic activities lose their meaning if strength and endurance can be obtained through pharmacological agents or genetic interventions? If the concern is that technology will replace human activity, there is little cause for worry. Concentration-enhancing drugs will probably not replace the activity of concentration; they will, if effective, simply enable chess players who exercise their powers of concentration to do so at higher levels than they now do. Athletes who ingest performance-enhancing drugs have to train just as rigorously and engage just as thoroughly in their performances as they did before; only now the drugs, if effective, enable them to do so with better results. Both of these cases raise questions of potential harms to those who use drugs with unknown or questionable safety and questions of fairness in relation to competitors who do not use them. Moreover, in a world in which training for such activities is increasingly governed by the innovations of sports medicine, such enhancements raise the difficult question of how to locate the line

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between natural talent and discipline on one hand and technology on the other. These are urgent questions, but they are not questions about whether technology bypasses human activity. Of course, we may imagine future scenarios in which technology does enable a competitor to bypass activity. It may be possible someday to implant a chip encoding a program that reveals the optimal response to an opponent’s chess move without any deliberation on the part of the player. Surgery or pharmacology may make it possible to develop muscles to any level one desires without the discipline of workouts. When and if these science-fiction scenarios occur, worries about bypassing human activity will be legitimate.

What if the results of engaging in religious or spiritual practices, or progress in the latter, could be secured by means of biomedical enhancements? Consider again our example of a drug that offered a sense of tranquility that its user previously sought through prayer or meditation. Here we seem to have a genuine case in which human activity is bypassed. Or do we? Is the pharmacologically induced tranquility the same state as that reached through prayer or meditation? In a narrow, physiological sense, it may count as the same. On a broader view, however, it is doubtful that we could adequately characterize the state without including its relation to the practices and mental states that have led to it and those that are expected to accompany and follow it. From many theological perspectives, the state itself is only one point in a narrative that includes the path to that state and the way of life that expresses it. In such cases we are not dealing with alternative means to the same end, one of which does and one of which does not bypass human activity. Rather, we are dealing with altogether different ends.¹¹

The second third-level critique charges that technology is ethically problematic because it instrumentalizes or objectifies human beings. One version of this argument comes from James F. Keenan, a Catholic moral theologian. Although he now approaches enhancement technologies in a very different way, Keenan earlier found in genetic interventions a combination of reductionism (treatment of the person in purely materialistic terms) and a new mode of intervening into evolutionary processes (one that seeks to affect those processes from within human nature itself rather from outside human nature).¹² This combination amounts to objectification: Just as the process of directing external nature has objectified the latter, so genetic interventions will objectify the human subject. In the case of genetic enhancements, “the human genotype itself becomes the object

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of our work. We are no longer attempting to objectify a disease for treatment; we are rather objectifying a person for treatment.”

Two questions may be posed to Keenan. First, in what sense do genetic enhancements objectify the person? Keenan’s argument seems to be this: (1) Genetic enhancements objectify the genotype itself; (2) the genotype is the person; therefore (3) genetic enhancements objectify the person. Let us assume that one can secure the first premise by showing how therapies (unlike enhancements) target (and thereby objectify) only defects of the genotype and not the genotype itself. It is still unclear, however, why we should accept the second premise, which identifies the genotype with the person. Is not the view that the person and the genotype are identical, a view known as “genetic essentialism,” itself a form of reductionism, entailing that the person or the subject is identifiable with DNA? Second, even if we concede that genetic enhancements objectify the person or subject in the way Keenan suggests, why should we assume that this objectification is more problematic than that involved in nongenetic interventions, ranging from psychotherapy to ascetic practices that also (and in their case, unquestionably) work “from within”? Granted, there is no materialistic reductionism in these cases, but do not objectification and instrumentalization occur when one’s ways of thinking and acting become the object of therapeutic or ascetic refashioning, often for ends that serve the desires and interests of others than oneself? The point is not to cast a moral shadow over the latter practices but to recognize that objectification takes various forms. This point suggests that one can address another as a person, even as one is treating one of that person’s characteristics as an object of genetic intervention; likewise, one can fail to address another as a person, even as one is seeking to alter that person’s self-perception through psychotherapy.

Perhaps we are missing the point here. Perhaps the point is not that technology instrumentalizes or objectifies us as persons or subjects but that through technology we as person or subject instrumentalize and objectify everything else—including, thanks to enhancement technologies, even our own psychological traits. The concern here would be that, for us, to be a subject is precisely to set ourselves against objects over which we seek control. The natural world around us, our own bodies, our psychological makeup, perhaps even one day our very character—all are constituted through technology as objects for subjects who control everything but who, precisely for this reason, are alienated from everything, including, ultimately, even their own bodies and psyches. This situation would call for a renunciation of technological control over ourselves—a theology and ethic of contentment with or gratitude for the given—in order to overcome alienation.

There are two problems with this position, however. First, in what does alienation consist? Alienation may occur when we treat ourselves as

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objects for technological intervention, but does it not also occur in the resistance with which our unenhanced bodies and personalities oppose our aims and ideals? If enhancement technologies succeed in rendering our bodies and personalities as the expression of our aims and ideals, can they really be said to alienate us from our bodies and personalities? Do they not instead overcome alienation? Second, who is this subject who exercises this control and is in a position to renounce it? Technology is as much our fate as it is our freely chosen project. Or, rather, it is neither: The "technological imperative" is as much a fiction as the stable subject who constitutes the world through knowledge as power. Technology creates us as subjects as much as we create it.

It seems, then, that neither of these third-level critiques captures what is of theological and ethical significance in enhancement technologies. More significant, it also seems that the examination of technology as a mode of action does not offer much more in the way of concrete guidance than does the examination of technology as a fundamental attitude. Neither the report sponsored by the UK bishops nor Keenan argues from third-level critiques to normative conclusions about enhancement technologies. The former argues only for a presumption in favor of environmental over mechanical means, leaving unanswered questions about which conditions and circumstances, if any, justify overriding the presumption and making use of mechanical means, and whether mechanical interventions are justifiable in principle for conditions that do not admit of environmental interventions. Keenan argues only that the threat of objectification will require "the creation of conditions in which the person, though objectified, is not solely treated as an object." In both cases, the third-level analysis does little to determine the conditions under which technological enhancement would or would not be justified.

THEOLOGY AND TECHNOLOGY: ADDRESSING THE SECOND LEVEL

In recent decades, much insightful theological and ethical evaluation of biomedicine has occurred at the second level of technology. This evaluation has been directed toward medicine's preoccupation with fighting disease and prolonging life. Modern medicine (or the culture that values modern medicine so highly), we are told, is so oriented to curing that it neglects caring; obsessed with prolonging life, it is unable to assist in, and even obstructs, the task of living and dying in a worthy manner. The conflict of theology and medicine centers around the issues of suffering and death, as the rival parties disagree over whether to prioritize curing or caring in response to suffering and over the role of life-prolonging technology in the *ars moriendi*, the art of dying. Theological and pastoral reflection on modern medicine—I have in mind here the work of Stanley Hauerwas and William F. May—criticizes the attitudes and practices regarding suffering and death in modern medicine from the standpoint of alternative attitudes and practices that modern medicine is said to have
displaced. Essential to these critiques, although not always explicitly stated, is the role of life-prolonging technology in altering the practice of medicine and in constituting the material and institutional matrix of our attitudes to suffering and death.

The increasing shift to enhancement requires a radically different theological and ethical response. To state the obvious, enhancement medicine involves a shift in medical research and practice from an overriding focus on the diagnosis, prevention, and cure of disease to an increasing interest in reordering bodily processes in accordance with particular aims, desires, and ideals. This does not mean that medical research and practice are no longer occupied with disease, or that they were never before occupied with enhancement. It does not even mean that the latter has taken priority over the former. It does mean, however, that enhancement technologies are now receiving more and more of the attention and resources of the biomedical professions and of the public at large.

It is difficult to exaggerate the significance of this shift for the theological and ethical evaluation of biomedical technology. Today we seek technological control over the body, not only to cure disease and postpone death, but also, and increasingly, to make our bodies serve our desires, to realize our ideals of beauty, vigor, and normality, and to carry out our various projects. The body is less the needy and vulnerable body of disease and death than it is the body of desire—the body as the perfect expression of one's aims, ideals, and projects. It is not need but desire that propels the expansion of technology into the enhancement of appearance, personality, and performance; enhancement technologies are technologies of excess. Indeed, even the postponement of death undergoes a subtle shift in meaning. The task of dispelling the threat of mortality now gives way to the task of bringing the feature of embodied life that is the most intractable to our aims and ideals, namely death, under the domain of the latter. Reports of progress in research into the slowing or reversing of cellular degeneration inspire fantasies according to which the time and the manner of death will no longer be a matter of fate but of choice. (That many will continue to die from causes other than diseases or degenerative processes is conveniently ignored in such fantasies.) The relation between theology and medicine shifts accordingly. While still rival techniques of dealing with human finitude, they are also and increasingly rival ways in which views of human flourishing are proposed and pursued. In an age of biomedical enhancement, medicine takes its place along with philosophy and theology, and perhaps ahead of them, as a science and practice of the human good. When we ask whether there is any theological or ethical significance in the fact that enhancements are pursued through technology, we are asking less about the way in which technology conditions our response to death than about the way technology conditions our pursuit of

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the good. This, in turn, requires a new way of thinking about biomedicine from theological and ethical perspectives.

With these observations in mind, we can see that the pursuit of enhancement through technology is theologically and ethically problematic for several reasons. First, technology, in the broad sense in which we understand it at the second level, introduces a selection bias into our pursuit of the good. This is not to say that technology causes our preoccupations with larger breasts and penises, the ability to concentrate in school, an upbeat personality, and so on. If such desires were not already present at some level, it would be difficult to explain why the technologies that address them were ever developed in the first place. Technology does not simply create our desires. However, the development and dissemination of technologies oriented to these and other desired states may change certain desires from fanciful wishes into realistic projects, give them a priority over other desires, and invest them with an urgency that they would not otherwise have had. Because enhancement technologies act directly on the body and therefore register effects that may be seen, felt, or measured, such technologies often have an advantage over alternatives whose most significant effects may not register at all in what is visible or measurable. Consider a now hypothetical drug that reliably produces in its users a state of self-contentment. The state itself, the precise procedures one must follow with respect to dosage and intervals in order to attain it, the effects, positive or negative, that will accompany it—all of these factors can be more or less precisely defined and measured. In comparison to this, the satisfaction that comes from, say, living a morally worthy life can now come to appear abstract and remote, and the route to its attainment unclear. Precisely these factors may lead one to assign a priority and urgency to the pursuit of the former state, perhaps at the expense of the pursuit of the latter state.

"As biomedical technology expands beyond the domain of disease and death into the domains of appearance, personality, and performance, it increasingly sets the agenda for how we understand and act on ourselves in those domains and what we believe we owe to others in those domains."

Second, in addition to its role in the selection of which goods one will pursue, technology also affects the manner in which they are pursued. Technology facilitates the medicalization of characteristics that fall outside the domain of pathologies. Consider concentration-enhancing drugs. Parental attention is now expressed through medical management as
children are monitored in relation to normal ranges of behavior. This medicalization and normalization of bodies and capacities creates new anxieties for parents and transforms an area of parental discretion into an area governed by determinate duties regarding the health of children.

Finally, technology affects the meaning of our activities, determining which aspects of these activities receive our attention and what counts as success or fulfillment in these activities. For example, drugs such as Viagra turn fantasies of sexual endurance into reality and thereby alter the meaning and experience of sex. Of all the features of human sexual interaction on which we may focus our attention and concern, these technologies highlight a certain aspect of sexual performance, around which the meaning of sexual activity may come to revolve.

These observations suggest that, like other technologies, enhancement technologies are neither neutral means employed to fulfill antecedent desires and purposes nor causes responsible for the generation of desires and purposes that otherwise would not exist. Rather, they turn inchoate desires and purposes into determinate projects that come to assume a certain priority and urgency (including a moral priority and urgency) in our lives. They determine the meanings of various human endeavors by giving them a focus oriented to what current technology can accomplish in those endeavors. In sum, as biomedical technology expands beyond the domain of disease and death into the domains of appearance, personality, and performance, it increasingly sets the agenda for how we understand and act on ourselves in those domains and what we believe we owe to others in those domains. It follows that a significant task of ethical inquiry in the face of enhancement technologies is to determine what agenda is being enacted through these technologies and what role, if any, these technologies should play in our pursuit of the good.

One plausible answer to the question of the agenda behind these technologies follows a familiar line of thinking about technologies applied to the body. When we consider some of the enhancements, actual or potential, that people commonly desire for themselves and their children—thin or muscular bodies, enhanced memory and concentration, diminished need for sleep, a vibrant and upbeat personality—it is difficult to ignore the coincidence between our desires and ideals on one hand and the bodies and personalities best suited for a fast-paced, competitive society on the other hand. Even characteristics not directly tied to economic productivity reflect this concern with maximizing the body's productive forces; we have just seen how the popularity of Viagra reconfigures male sexuality and the male body in terms of stamina and endurance. From this perspective, then, enhancement technologies are the latest episode in a modern project of reordering bodies in accordance with societal goals by stimulating—not suppressing—our desires for the very kind of body that is most useful in modern societies.

Whatever agenda is being pursued through the development and use of enhancement technologies—whether the one just described or another—the very presence of any such agenda only makes the second question
more urgent: What bodies, psychological traits, capacities, and performances should we desire for ourselves and others, and what should be the role, if any, of biomedical technology in achieving these? This question, in turn, breaks down into three more specific sets of questions. First, what practices, activities, and states are worth pursuing and engaging in, and what importance do they have relative to one another? Second, what counts as fulfillment or accomplishment in these practices, activities, and states? Third, how do enhancement technologies further or hinder this fulfillment or accomplishment?

These are imposing questions. Their complete answers would require nothing less than a thorough description of what constitutes a worthy life and of what role the body with its capacities and limitations plays in such a life. Even then, concrete conclusions would inevitably require a great deal of particular discernment. However, we need not envision anything this pretentious. Theological evaluation can proceed in this case as it has in the case of life-prolonging technologies, namely, by critical inquiry into the ways in which particular emerging technologies are altering domains of our lives, combined with reflection on what shape our pursuits should take in those domains. This is still not an easy matter to get hold of, but it is one we must pursue if technology is to serve rather than dictate our moral projects.

**ABSTRACT**

There are several different levels on which technology poses theological and ethical problems. At the first level, technology consists of devices and techniques. At the second level, technology involves the transformations that it effects in various areas of our lives. At the third level, technology expresses an entire kind of action or a basic attitude human beings take to the world and to themselves. Theologians typically address technology at the third level, while moral philosophers and policy experts remain at the first level. This division of labor often leaves theology on the margins of debates over particular technologies, while crucial issues at the second level remain unaddressed. This essay examines the growth of biomedical enhancement technologies in order to argue for a theological engagement of technology at the second level.
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