

## The Role of Human Nature in the Bioethics Debate

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On November 28, 2001, President George W. Bush passed an Executive Order establishing a National Bioethics Council for the purpose of studying and advising the President “on bioethical issues that may emerge as a consequence of advances in biomedical science and technology” (Executive Order 13237). The aim of this council was not merely evaluation of scientific development, but inquiry into “the human and moral significance” of such progress. While the establishment of this council testifies to the growing ethical implications of biotech power, this power remains only somewhat familiar to the popular mind. Many people have heard of a cloned ewe named Dolly, others are aware of current controversy over stem-cell research, and a smaller number have read about the exciting and early completion of a human genome “map”. But despite the fact that these stories have entered public awareness, the more radical implications of such science, the creation of “designer babies” for example, remain largely distant, abstract and irrelevant to daily life. Comments from the President’s Council support his impression, stating that “the subject of using biomedical technologies for purposes ‘beyond therapy’ has received remarkably little public attention” and is “arguably the most neglected topic in public bioethics” (Beyond Therapy chapter 1, section II).

### Reality is stranger than fiction

In contrast to this lack of serious public attention, many students of science believe biotechnology will soon allow us to “write a new page in the history of life.” Some of these students suggest that the words on this “page” will announce an intense challenge to basic understanding of what it means to be human (Stock 2). So, what exactly is this remarkable, revolutionary power? Webster’s Universal College Dictionary defines biotechnology as “the use of living organisms or other biological systems in the manufacture of drugs or other products for environmental management” (“Biotechnology”). The President’s Council on Bioethics calls biotechnology “a new word for our new age”

and defines the term as “processes and products[...] offering the potential to alter and, to a degree, to control the phenomena of life – in plants, in (non-human) animals, and, increasingly, in human beings” (Beyond Therapy chapter 1, introduction). These definitions provide an outline of what biotechnology refers to, but the content and even the outline itself, remain vague. Phrases such as “environmental management” and “control the phenomena of life” barely illuminate the science and only hint at its future possibilities.

Ironically, many of the grand possibilities of biotechnology are being made intelligible by the imaginative depictions of science fiction. Sci-fi stories about genetic manipulation, cloned children, artificial intelligence, molecular robotics, cyborgs, androids, and more, abound, and in the minds of some, forecast the future (Hough). Such models have their limitations of course. These technological tales are intensely dramatized and can be misrepresentative. But, whether it is Mary Shelley’s Frankenstein, Aldous Huxley’s Brave New World, or The Matrix, such dramas provide vivid portrayals of biotechnology in action and almost always point our attention to the most controversial theme of bioethical debate – human nature.

The reality of human nature is itself a controversy in philosophical circles. What is it? Does it exist? Does it change? While I may touch these issues in passing, my research will not answer the question of what human nature is, but of what role the idea plays in bioethics. In order to answer this question I will first review ideas from some of the most radical biotech enthusiasts – people who wish to transcend human nature through technology. This will help reveal the future some biotech advocates envision and long for, and provide a contrast for the conservative arguments to come. I will examine three such arguments, each different, but all arguing for technological restraint according to a specific conception of human nature. First, I will explain the views of the group that is deemed to most strongly oppose biotech development – religious conservatives. Then I will discuss two explicitly non-religious views, the sociopolitical concerns of bioconservative Francis Fukuyama, followed by the practical and personal objections of writer Bill McKibben.

### Healthy and Happy

One of the most contested issues of bioethical discussion is the hotly debated distinction between therapy and enhancement. That is, the use of biotechnology for medical treatment of failing health or disease,

versus its use in improving human nature and performance. While the President's Council on Bioethics concluded that this distinction is ultimately ambiguous and problematic, its importance is nonetheless understandable. There is a recognizable difference between screening embryos to avoid a baby with Down syndrome and screening for an athletic build, blonde hair and blue eyes (*Beyond Therapy* chapter 1, sec. V). By this type of contrast we understand how biotech advance has, in the words of the President's Council, "revived ancient dreams of human perfection" (*Beyond Therapy* chapter 1, sec. VI). And these "revived dreams" have ignited vigorous debate over the nature of human nature.

In our time, this "revival" has become a growing philosophical movement that goes by several names. One name is "transhumanism." As conceived by its current proponents, transhumanism primarily maintains that humanity's destiny is bound with revolutionary technological development that should be diligently studied and warmly welcomed ("The Transhumanist Declaration" articles 1-4). The term, however, refers to more than just avid technophilia. We can fathom the essential philosophical ambitions of transhumanism by referencing a 1957 article that takes the term as its title. Written by Julian Huxley before the blossom of the biotech age, the article expresses a hopeful belief that a new, better species of human being will eventually emerge. "We need a name for this new belief," explains Huxley. "Perhaps transhumanism will serve: man remaining man, but transcending himself, by realizing new possibilities of and for his human nature." It is this belief, now envisioned according to emerging forms of technological power, that defines modern notions of transhumanism.

The belief that human nature can be transcended through technology is also commonly called "posthumanism" – a term with even greater conceptual impact as regards the reinvention of our species. Posthumanists imagine this new species as "potentially immortal beings [...] with unprecedented physical, intellectual and psychological capacities, as well as the ability to self-program and self-regulate" (More qtd. in "Posthumanism"). This fantastic state is projected to evolve from young but quickly maturing sciences such as nanotechnology, neuropharmacology, neurological interfaces, wearable computers, artificial intelligence and genetic engineering ("Posthumanism"). While such futuristic propositions may initially seem to be mere fantastic imaginings, serious minds believe biotechnology holds the potential to produce some version of the transformation posthumanists yearn for. In these minds biotechnology is setting the stage for a new era of progress in which humanity will abandon the slow crawl of classical biological

evolution for a "new, fast and *directed* technological evolution" (Cordeiro). Recognizing the horizon of such an age, subscribers to posthuman ambitions are pursuing its unfolding with passion common to the most vital political causes. "We must go bravely, calmly and responsibly into our new posthuman world," they proclaim, since to do otherwise "would be inhumane and a grave injustice to ourselves and our descendants" (Dvorsky). Underlying such beliefs is the implication that human nature is either a meaningless concept or a highly malleable reality that invites our transformation, and in direct antithesis to such propositions are the views of religious conservatism.

### A Battle for the Soul

In many minds the battle lines of the biotech debate are drawn between those who welcome technological revolutions and the conservative moral forces of the religious right. While such a sharp split is oversimplified, religious conservatives, many Christian, do form a substantial core of those either concerned or outraged by looming developments. Christians, of course, have concerns about biotechnology that are common to those without religious inclinations, a concern with potential social injustices for example (Hook 40). Still, the most prominent concerns of Christian thinkers are, unsurprisingly, theological. These concerns may be reduced to two core beliefs about human nature that form an interesting contrast: The belief that man is made in the image of God and the conviction that unredeemed man is inherently sinful.

Man, teaches the Book of Genesis, is made in the image of God (1:27). In this view man's nature is a divinely ordained identity. Thus, even without defining the specific attributes of that nature, the implication of technologies such as cloning, genetic engineering, cybernetic implants or cryogenics – each a significant artificial enhancement – is clear. Pastor and theologian Erwin W. Lutzer comments: "To experiment with creating a human being according to our liking is to tamper with that which is most sacred [...] We dare not reconfigure human beings according to our whims and purposes." From a Biblical perspective such sciences are tampering with a nature given by God and attempting to remake man's nature according to his *own* "image". This manipulation is regarded as kin to Adam and Eve's reaching out for the forbidden fruit, lured by the promise that "you shall be like God" – a temptation leading to the destruction of the divine human identity (Lutzer).

The familiar narrative of the fall in the Garden of Eden (Genesis Chapter 3) depicts the origin of sin and implicates a second serious theological concern – human sinfulness. By consequence of the fall, says the scripture, the nature of unredeemed man has become hopelessly wicked and incapable, absent salvation, of true goodness (Romans 3:10-19). This sinfulness, being intrinsic to our nature, is regarded as pervading every human endeavor. Christian thinkers evaluating the advance of biotechnology accordingly admonish us to understand that all technological innovation “will not only fail to produce true happiness but also will be corrupted intrinsically by sin” (Hook 40). This scriptural view of human nature explicitly contradicts the belief that technology would or could make man “perfect” and implicitly suggests that tragic consequences could follow.

In accordance with these theological concepts about human nature Christian thinkers regard radical biotechnology such as cloning and genetic engineering as overstepping scripturally-defined boundaries and destined to some degree of corruption. From these beliefs it is easy to understand how distrust of human knowledge and the belief that we are “playing God” has arisen. Christians evaluate the world through the lens of Biblical scripture and measure technological development against this special view of God and man. Such arguments contain lines of reasoning, but are not assailable from a purely rational level, since they are ultimately based on faith. By consequence, the validity of such faith has become the topic of debate. Apart from debate however, even bioethical secularists acknowledge that religious values and views should not be rashly dismissed, since they reflect values also common to many non-religious individuals (Fukuyama 90). It is also worth noting that these religious thinkers, contrary to stereotype, do not propose abandoning all new technologies. Rather, most informed commentators endorse the pursuit and use of technology tempered by respect for the dignity of human nature – albeit an admittedly religious conception (Hook 40, for example).

### **Apolitical Rights, Technology and Human Nature**

While religious principles are a well-known source of arguments for technological restraint, they are not the only source. The capacity of human nature has produced sophisticated technological powers, and the long history of these powers reveals their advance to render significant, sometimes disruptive, social and political consequences. Reflection on

the future possibilities of biotechnology reveals similar potential, and from such reflection concerns for sociopolitical stability emerge as another source of calls of technological restraint. Conservative bioethicist Francis Fukuyama articulates just such a call in Our Posthuman Future, but grounds his concerns not simply in biotechnological advance, but in the relation between this advance and human nature. This concern is expressed in the balanced context of what Fukuyama regards as the great dilemma of the biotech revolution: great promise paired with great threat (84). The essence of this promise is the betterment of humanity, while the heart of the threat is the possibility of destroying a shared human nature that founds shared human rights (101-2).

Fukuyama’s early discussion reviews three “pathways to the future”: Brain sciences, neuropharmacology (that is, the use of psychoactive drugs such as Prozac), and sciences advancing the prolongation of life (chapters 2-4). Yet while Fukuyama notes that these pathways are important sciences whose application is of more imminent concern, he devotes much of his energy in spelling out the consequences of what he regards as the most significant of potential biotech developments – genetic engineering (81-2). This technology is currently of two important types: somatic gene therapy, which involves the alteration of individual genetic makeup, and germ-line engineering, which includes the alteration of inheritable genes. It is the latter science that most concerns the author (76-77). While acknowledging that the wildest imaginings of this science are still distant, Fukuyama explains that we must nevertheless begin to confront the possibility of a “new eugenics” which can redesign human nature (72).

Fukuyama’s conception of human nature is at first glance strange, but with explanation, reasonable. He gives what he calls a “statistical definition” of human nature, which he describes as a more precise terming of traditional philosophic conceptions (133). An example is Aristotle’s famous declaration that “man is a political animal by nature.” Aristotle, argues Fukuyama, did not mean that all human beings were political. Rather, the statement is either probabilistic or conditional, as when we say “it’s human nature to betray.” Such comments refer not to how all people are, but to how most are likely to behave in common circumstances (133). While the details of this argument are tenuous, the point, I think, is clear: when we describe a certain nature as having a particular attribute, we are referencing most of that kind. I can assert that it is human nature to love your children and

yet find humans who do not.

Fukuyama thus defines human nature as “the sum of the behavior and characteristics that are typical to the human species, arising from the genetic rather than environmental factors” (130). The key to this definition is the underlying concept of “species-typical behavior”, which includes a wide variety of traits, emerging through a complex evolutionary history. These traits Fukuyama categorizes according to classic philosophical notions of accidental and essential characteristics (148-9). Accidental traits are those that occur in human beings, but do not define them as such. For example skin color or height. Essential traits are those without which a human being could not be so identified – what makes a human a human. This elusive essential trait Fukuyama calls “Factor X”. While the content of such a designation may be criminally vague, the role of this idea is clear in and critical to Fukuyama’s argument. Equal rights, he explains, demand human equality, which demand a common human essence justifying “a certain minimum level of respect” (149). Of course the aforementioned vagueness allows for quick dismissal of such a supposed essence. But, Fukuyama warns, the rejection of a common human nature opens the door for serious social and political discrimination. Without this common ground, differing groups of human beings may be regarded as different types of creatures with different rights (153). In an age revolutionized by technology, such a belief structure could lead to what is arguably the most feared biotechnical invention: the creation of a genuine “genetic aristocracy” (156-7). The rejection or denial of the “X” factor therefore leads down “a very perilous path” (160).

The obvious question is what is “X” and where does it come from? Fukuyama answers that Factor X is not simple or reducible to one thing; instead, it is “a genetic endowment” that allows each human “to become a whole human being” (171). The continuation of an understandable but nebulous conception is obvious here, perhaps indicating its unavoidability, certainly implying Fukuyama’s primary concern for practical sociopolitical stability. In harmony with this concern, Fukuyama’s unequivocal recommendation for dealing with biotech power is not philosophy but political regulation. While acknowledging that certain practices such as cloning should be “banned outright”, his general formula for regulation revisits the distinction between therapy and enhancement: biomedical therapy should be researched, biotechnical enhancement restricted (207-8). This need for political action Fukuyama expresses in urgent tones, admonishing us that

we are poised to enter a time in which technology will provide us with the capacity to alter our human essence. This alteration may in turn cause us to lose any clear idea of what a human being is, and with it any notion of a “shared humanity” (216-7).

The outline of Fukuyama’s argument is clear. Human rights are based on the idea of a common human nature, but this idea may be destroyed by technology that can radically alter our genetic makeup. The concept of human nature is thus the foundation for his “bioconservatism”. But is this foundation sound? The need for the postulation of a common nature seems agreeable. It was not that long ago many Americans were enslaved on the argument that though they seemed human, they were not. They were sub-human, meaning they had a different nature. Yet Fukuyama sounds unsure as to whether such a nature really exists. In fact, he concludes Our Posthuman Future by noting that our political stability rests not on the existence of a human essence, but on *belief* in this essence (217). This equivocation corresponds to what seems like an inherent contradiction in Fukuyama’s conception. He implies the need for a fixed idea of a common human nature, yet argues this nature is created by evolutionary processes and is susceptible to future change. While Fukuyama’s intellectual aim is admirable, this tension may not be philosophically reconcilable.

### The Meaning of Life

While issues of the blurred bioethical line between therapy and enhancement, between what makes us well and what makes us more than well, clearly invoke political dynamics, these issues will ultimately be matters of personal questions and choices. As discussed, current and future biomedical technologies raise possibilities of increasing highly coveted human attributes, and this in turn raises a challenging ethical question. How smart, strong, beautiful, loving or happy is sufficient? How much is enough? This is the question Bill McKibben confronts in Enough: Staying Human in an Engineered World. McKibben’s writing proposes that we stop and think before taking our next technological steps and its supporting argumentation revolves around one central thesis – the idea of the human being as a creature defined by “meaning” (McKibben 44). What exactly McKibben means by “meaning” is a sometimes slippery, subtle concept, but the general idea can be grasped by understanding the nature he suggests might be destroyed by overreaching technological development.

McKibben first engages the implications of what we have already suggested to be the greatest controversy in the biotech debate – manipulation of inheritable traits through germ-line engineering. In evaluating the consequences of this science he begins with the cryptic comment that “we stand on the edge of disappearing as individuals,” but follows with poignant, elucidating examples. If a parent who loved music utilizes genetic programming so that their daughter likewise loves music, does the girl really love music in any meaningful sense? Even more poignantly: if a boy is genetically engineered to have spiritual faith, what value does his faith really have (46-8). Such people will never be entirely sure what is driving them – is it their heart and soul or their designer genes? Such examples reveal the possibility of reducing a subtle freedom unique to our nature: the search for a deeper sense of identity (49). And in the light of such examples McKibben’s simple question is haunting: “If all our decisions are programmed who are we?” (65).

McKibben also considers other technologies that might chip away at human meaning. Robotics and nanotechnology (molecular robotics), which some think may eventually eliminate the need for humans to work, sound enchanting until we seriously consider the meaninglessness of “retirement from birth” (92-4). Cryogenic technology is hailed by some as an imminent solution to human mortality, but this too would lead to practical problems and philosophical meaninglessness. “Our understanding that we will die,” writes McKibben, “is in some powerful way the essence of who we are” (158-9).

Such a manipulation of human nature may seem too fantastic to be relevant, until we consider some already existing technologies, their accelerating timetables and the human ambition that underlies them. Texas A&M, for example, recently unveiled a small zoo of cloned animals. Cloned cattle are being sold on the Internet, but a Wisconsin high school student did not need to place an order since he managed to do it himself. Enough? These developments make the creation of Dolly seem like old news. Scientists have also mixed animal genes (“transgenics” is the science), such as in the glow-in-the-dark rabbit infused with genes from a phosphorescent jellyfish (McKibben 15-17). Too much? There is also the matter of the increasing speed of technological development. Consider just the one example of the Human Genome Project, which aimed to map our entire genetic structure. When initially proposed, critics scoffed that it would take 10,000 years. Supporters suggested it might be completed in 2010. It was finished in

the year 2000 (McKibben 70). Underlying these developments is the ambition of human nature. McKibben’s writing includes plenteous examples. Regarding genetic engineering, Princeton’s Lee Silver thinks we should “seize the power” (56). The CEO of Advanced Cell Technology, Michael West, dreams of being able to edit DNA the way we edit “a document on a word processor” (12). And Hans Moravec regards future machines as “our progeny” (99). (Nor do these examples include more bizarre characters, such as the Rael and the Raelians, who say they want to clone Jesus.) In the context of this information it seems reasonable, even sensible, to begin discussing the practical implications of technologies that still seem fantastic and far off.

What then is the meaning of the meaning that McKibben is arguing for? In short, it is the profound sense of fulfillment found in the expression of our nature. These advances would reduce and automate what is most real and vital in our nature: choosing, struggling, losing and winning, and eventually dying. In this conception of human nature it is the process that gives value. This process is already contextualized by technology, but the new technologies we are bringing into our lives may surpass context and irreversibly infect content. It’s the distinction between how we live and who we are. What then is McKibben’s recommendation? How much is enough? His answer is loud and clear. We are, in most ways, already there. “We need to survey the world we now inhabit and proclaim it good. Good enough” (107). Saying “enough” however, especially in a consumer culture, is difficult. The desire to be “better” is strong in our part of the world. Because of this I think that although McKibben’s warnings against eliminating meaning are intriguing, possibly valid, certainly alarming, they are not necessarily compelling. McKibben’s notion of human nature as arising from meaning has a certain degree of fluidity. The meaning arises from the relation between the content of our beings and the context of our lives, the context changes and that content adjusts. Such adaptation, however, is largely led not by concern with deeper meaning (though we sometimes grow in this direction), but by the desire for basic satisfaction. It is in this pursuit to get what we desire and think we need that we adapt and I think this esteem will be the gist of our response to such warnings: we’ll adapt... it’s our nature.

### **Matters of Speculation**

In reviewing some of the ethical discussions about the

remarkable implications of biotech development we have found that the concept of human nature plays a critical role in bioethical debate. This is most prominently so in the cases of those voices calling for conservative and restrained approaches. While these voices differ in what they say, they all share the concern that biotechnological development will alter human nature in a way that will incur serious negative consequences. In contrast, those who welcome radical technologies, even such as may transform our nature, tend to see this nature either as something needing change to reach fulfillment or as an altogether problematic concept. These people, many excited by the idea of being “posthuman”, believe the wondrous benefits will outweigh any risks and advocate social, political and scientific freedom to pursue this brave new world.

When I reflect on what I have learned I feel fascinated, a little excited and very concerned. I don't feel that I've learned enough to predict who will be right or to what degree – such matters of speculation are difficult to conclude. My ambivalent feelings run a close race, but concern wins. And if I were to narrow the cause of my concern to just one thing, I would have to return to the issue of human nature. My concern is based on a two-fold premise. First, human nature exists and is inescapable. Francis Fukuyama argues this point deftly when he explains that all the philosophers who argue against the reality of human nature subtly include the idea in their argument (120). Second, whatever else human nature may or may not be, it is flawed. This is the idea Christians call sin. By this later point I am not suggesting whether we should or should not proceed with biotech innovation; I am simply justifying my concern and perhaps advocating caution. And I am suggesting that no technology will completely remedy the flaws of our nature. As the moral defects of human nature disturbed primitive societies of the past so they will exercise themselves in the most advanced societies of the future. This is why Huxley's Brave New World is mentioned in the most sober bioethical discussions (the President's Council for instance). To seriously hypothesize whether our future will look anything like Huxley's classic dystopia I will need to watch and learn more, and watch again. Such matters of speculation are notoriously difficult to conclude. Human nature, however, is not always impossible to predict.

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