

CHAPTER I

*Biotechnology, Normative Status,
Human Nature*

If biotechnology aims not only at the prevention and treatment of diseases and injuries but also at desired changes in our performances, behaviors, and physical characteristics, and if these changes involve our nature as human beings, then the ethics of biotechnology cannot avoid asking about the normative status of human nature. Does our nature have some normative significance that we must take into account when we consider biotechnological interventions that involve our nature? This question is not an esoteric one, of interest only to bioengineers and professors of ethics. People who follow developments in biotechnology or hear of them intermittently as they are reported in the media may find themselves wondering what all this means for us as human beings and whether whatever it does to us as human beings matters. However, it is a difficult question, and the twofold purpose of this chapter is to get clear about how biotechnology involves our nature, what it means to speak of the normative status of our nature, and why some people think it is problematic to attach normative status to human nature on the one hand and what is at stake for Christian ethics in this whole matter on the other hand.

I begin this chapter by identifying the various ways in which biotechnology implicates human nature. I then say why I think that the normative status of human nature is a matter of importance for Christian ethics, and I go on from there to introduce four views of the normative status of human nature that the following chapters consider in detail. Next, I try to express more precisely what it means to say that normative status attaches to human nature in the context of biotechnology. I then turn to the major criticisms of attempts to attach normative status to human nature. Finally, I set out what I think is ultimately at stake for Christian ethics in the normative status of human nature in the context of biotechnology.

How Biotechnology Implicates Human Nature

An inquiry into the normative status of human nature in the context of biotechnology should begin by clarifying how biotechnological interventions implicate human nature.¹ The following classification enumerates five ways in which current and prospective biotechnological interventions do this. Although it is not exhaustive, the list includes the ways that are most relevant to claims that normative status attaches to human nature:

1. Many pharmacological interventions, including anabolic steroids, selective serotonin reuptake inhibitors (SSRIs), and concentration enhancers (for example, Adderall or modafinil), as well as some neural-digital interface devices (for example, those that link brains with computers), do not change existing biological functions and traits (at least not profoundly) but rather exercise temporary *control* over them to achieve a desired state or performance.
2. In the realm of reproduction and genetics, techniques of gamete selection (as may occur in artificial insemination and in vitro fertilization) and embryo selection (as occurs in preimplantation genetic diagnosis) make it possible to *select* desired genetic characteristics by choosing for fertilization or implantation those gametes or embryos that possess the desired characteristics.
3. Other current or prospective reproductive technologies such as in vitro fertilization and reproductive cloning *bypass* biological functions or traits (in this case, the sexual function that is exercised in the conception of offspring) without acting on them.
4. In at least some cases, neural implants and mechanical prosthetics *replace* biological functions, doing (presumably in a superior or more desirable way) digitally or mechanically what was previously done biologically.
5. Finally, there is a wide variety of prospective interventions that aim to bring about heightened cognitive abilities; new or expanded perceptual capacities; a wider, narrower, or more intense emotional range; greatly increased physical strength or agility; or a vastly extended life span, and that thus *alter* biological functions or traits by bringing about permanent quantitative or qualitative changes to them.

¹ The phrase “implicates human nature” sounds vague, but it covers all the items in the following classification, which includes not only biotechnologies that act directly on biological functions and traits but also those that substitute for biological functions.

Two additional classifications pertain to this last category. First, there are changes *to* human nature (which remains human, albeit in an altered form) and changes *of* human nature into something else (as in “transhumanist” or “posthuman” scenarios in which human beings become something other than human). Second, there are changes that involve individuals only (so that *their* nature will have changed in one of the prior two ways) and changes that have population-level effects (so that human nature itself will have changed in one of the two prior ways). In some contexts involving the alteration of human nature, one or both classifications are significant; in other contexts, neither is significant. But they are especially important to keep in mind (as they too often are not) when dramatic alterations of human nature are under consideration.

In sum, biotechnology may control, select, bypass, replace, or alter aspects of human nature (or, in the last case, human nature itself). In any of these ways of implicating human nature, it may put the normative status of human nature at stake, but in the four positions I consider in the following chapters that status is put at stake mostly by the selection, replacement, or alteration of human functions or traits.

Human Biological Nature and Christian Ethics

Why should any of these ways of implicating human nature matter for Christian ethics? Why shouldn't Christian ethicists simply concern themselves with the ends of these interventions (that is, whether they promote genuine goods) and the means to those ends (that is, whether they violate any moral requirements in the pursuit of those goods)? Why take their implications for human nature as a theme? The premise of this book is that the implications of biotechnology for human nature cannot be a matter of indifference for Christian ethicists because human nature is not a matter of indifference to Christian ethics. To be sure, the significance of human biological nature, which is what is directly at stake in biotechnology, is for Christian ethics a qualified significance. Human biological nature is not the whole of human creaturely nature, which includes characteristics that are not reducible to biology. Whether the notion of a soul is necessary to render these characteristics fully intelligible or only a notion of emergent or supervenient properties, Christian theology understands human nature as a complex reality that cannot be reduced to biology. Moreover, for most Christian theologies, human nature as we experience it is not simply identifiable with the nature God created; like the rest of creation, it suffers the effects of the fall. These two points qualify the significance

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for Christian ethics of what biotechnology might do to implicate human biological nature. The biological nature on which biotechnology acts is not the only aspect of human nature to be considered when evaluating those acts, and the effects of the fall must also be considered in any such evaluation. Nevertheless, human biological nature is an important component of the human nature that, along with the rest of creation, God pronounced good and destined for eschatological fulfillment, and notwithstanding the effects of the fall, it is still part of the human nature that God created. For these two reasons, it matters to Christian ethics.

Of course, few Christian ethicists would deny this point. But they seldom give it its due. When they turn their attention to the creation narratives of Genesis 1 and 2, for example, Christian ethicists, like Christian theologians more generally, typically focus on those aspects of human nature and vocation that distinguish humans from other biological creatures. The divine grant of dominion over creation (Gen. 1:26–28), the vocation of tilling and keeping the Garden (Gen. 2:15), and the recognition of the other as one's fellow human (Gen. 2:23) all play prominent roles in Christian ethical reflection on the relationships of humans to one another and to the natural world. Less attention is paid to the overall picture of humanity that emerges from the striking depictions in these creation narratives of humans as biological creatures – depictions that are even more striking when they accompany a depiction of humans as godlike. Like other creatures of the earth, humans are characterized by sexual reproduction (Gen. 1:28); like other creatures of the sixth day, they are dependent for their survival on metabolic exchanges with other biological life (Gen. 1:29); and they are mortal beings who return to the earth from which they were formed (Gen. 2:7). Sexual reproduction, metabolism, mortality – whatever else they also are, humans are biological creatures.²

As biological creatures, humans are also destined (along with the rest of creation) for eschatological fulfillment. Scripture is ambiguous regarding the eschatological status of our biological nature. Is it transcended, as might be asserted of human sexual nature in Jesus' statement that "in the resurrection they neither marry nor are given in marriage, but are like angels in heaven" (Mt. 22:30)? Is it rather a matter of continuity, as we might infer from the eating and drinking of the resurrected Christ (Lk. 24:41–43)? Or

² My point is not that Christian ethicists ignore or fail to appreciate these features of human nature. It is hardly the case that sexual reproduction and mortality have been neglected, and now perhaps eating is beginning to receive due attention. My point is simply that features such as these have not been incorporated into a conception of human biological nature as a distinctive matter of normative significance.

is it in some way transformed, as the Apostle Paul seems to say of mortality in I Corinthians 15? It is not surprising that Christians have held a variety of positions on the eschatological status of human biological nature, but it is also not surprising that most Christians have resisted the idea that our biological nature is excluded from our eschatological fulfillment.³

Of course, a few simple citations of Scripture taken out of context do not begin to do justice to the extraordinary complexity of these matters, which will become apparent enough in the chapters that follow this one. Nor do they supply us with an explicit conception of human biological nature. They do, however, suggest that what we understand as human biological nature is a component of the human nature that God created good and destined for eschatological fulfillment, and that it is therefore not a matter of indifference to Christian ethics. And this suggestion – or so I will argue – is one that Christian ethics is not free to ignore in the context of biotechnology. To state the point positively and in the technical terms that the rest of this book will employ, for Christian ethics *normative status attaches to human biological nature*, which is to say that human biological nature counts in the ethical evaluation of human actions that implicate it. To say only that human biological nature *counts* in the evaluation of actions that implicate it is a deliberately weak claim that says nothing about how much it counts, but for now I only want to assert two claims that this book will establish, namely, that Christian ethics is not indifferent to actions that implicate human biological nature, and that to the extent that biotechnological actions are among these actions, Christian ethics cannot avoid coming to terms with the normative status of human biological nature in the context of biotechnology. To once again put the issue in positive terms, a necessary task of Christian ethics in relation to biotechnology is to determine what the normative status of human biological nature is and how it counts in the evaluation of biotechnological interventions that implicate human biological nature.

Christian ethicists who take on this task quickly find themselves amid a lively, ongoing debate in which Christian ethics participates but that also extends far beyond this field.⁴ However, if they seek to formulate and

³ A treatment of the nature of the postresurrected human being as it has been conceived in patristic and medieval Christian theology is, of course, well beyond the scope of this inquiry.

⁴ The question of the normative status of human nature considering biotechnology has been taken up in the following books, all of them published since 2000: Nicholas Agar, *Humanity's End: Why We Should Reject Radical Enhancement* (Cambridge, MA: MIT Press, 2010); David Albertson and Cabell King, eds., *Without Nature? A New Condition for Theology* (New York: Fordham University Press, 2010); Harold W. Baillie and Timothy K. Casey, eds., *Is Human Nature Obsolete? Genetics, Bioengineering, and the Future of the Human Condition* (Cambridge, MA: MIT Press, 2005); Allen Buchanan, *Beyond Humanity? The Ethics of Biomedical Enhancement* (Oxford: Oxford University

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defend the claim that normative status attaches to human nature in the context of biotechnology, they should not expect guidance or even sympathy from the academic field of bioethics. Most bioethicists today flatly deny that normative status attaches to human nature. Some of them argue that we are in principle at liberty to do as we wish in biotechnological engagements with our nature, while others argue that we are under a broad obligation to make use of biotechnology to promote the well-being of humans regardless of what becomes of our nature in the process. In either case, they hold that actions that implicate human biological nature are constrained only by generally applicable moral principles that see to it that the choices made by individuals are self-determining and not coerced (autonomy), that interventions meet an acceptable ratio of risks to benefits (safety), and that access to the relevant technologies is fair (fairness). Considerations having to do with human nature do not feature in their ethical deliberations.⁵

Press, 2011); Mark Coeckelbergh, *Human Being @ Risk: Enhancement, Technology, and the Evaluation of Vulnerability Transformations* (Dordrecht: Springer, 2013); Ronald Cole-Turner, ed., *Transhumanism and Transcendence: Christian Hope in an Age of Technological Enhancement* (Washington, DC: Georgetown University Press, 2011); Celia Deane-Drummond and Peter Manley Scott, eds., *Future Perfect? God, Medicine, and Human Identity* (Edinburgh: T&T Clark, 2006); Francis Fukuyama, *Our Posthuman Future: Consequences of the Biotechnology Revolution* (New York: Farrar, Straus and Giroux, 2002); Jürgen Habermas, *The Future of Human Nature* (Cambridge: Polity Press, 2003); Philip Hefner, *Technology and Human Becoming* (Minneapolis: Fortress Press, 2003); Malcolm Jeeves, ed., *Rethinking Human Nature: A Multidisciplinary Approach* (Grand Rapids, MI: Eerdmans, 2011); Paul Jersild, *The Nature of Our Humanity: A Christian Response to Evolution and Biotechnology* (Minneapolis: Fortress Press, 2009); Gregory Kaebnick, ed., *The Ideal of Nature: Debates about Biotechnology and the Environment* (Baltimore: The Johns Hopkins University Press, 2011); James C. Peterson, *Changing Human Nature: Ecology, Ethics, Genes, and God* (Grand Rapids, MI: Eerdmans, 2010); Michael J. Sandel, *The Case against Perfection: Ethics in the Age of Genetic Engineering* (Cambridge, MA: Harvard University Press, 2007); Tamar Sharon, *Human Nature in an Age of Biotechnology: The Case for Mediated Posthumanism* (Dordrecht: Springer, 2014); Allen Verhey, *Nature and Altering It* (Grand Rapids, MI: Eerdmans, 2010); Brent Waters, *From Human to Posthuman: Christian Theology and Technology in a Postmodern World* (Aldershot: Ashgate, 2006).

⁵ I say more in the following text about the stance of mainstream bioethics toward the claim that normative status attaches to human nature. Most criticisms of the claim are found in brief dismissals of it or critical reviews of books by authors who defend it, but a thorough critical treatment of it is found in Buchanan, *Beyond Humanity?* A progenitor of contemporary critics of the claim is John Stuart Mill, who famously identified two concepts of nature, one of which includes “the sum of all phenomena, together with the causes which produce them,” and the other of which opposes natural to artificial and thus includes “whatever takes place without the voluntary agency of man.” As Mill points out, every human action accords with nature in the first sense and every human action violates nature in the second sense. Mill concludes that nature is unsuited to be a normative guide: According to the first sense, whatever we do, whether good or bad, right or wrong, is in accordance with nature, while in the second sense, whatever we do violates nature. See Mill, “On Nature,” in *Essential Works of John Stuart Mill*, edited by Max Lerner (New York: Bantam, 1961), pp. 367–401. The problem with Mill’s analysis is that it excludes the concept of nature as an order created by God, which in one form or another is central to the understanding of nature in many theistic traditions.

Contrasting with this mainstream bioethical stance, however, is a strong and persistent countercurrent represented by certain Christian, Jewish, and secular thinkers who in most cases are not professional bioethicists. Most of these thinkers agree with mainstream bioethicists that biotechnological interventions are subject to principles of autonomy, safety, and fairness. But they also hold that normative status attaches to human biological nature and that this status is relevant to the ethical evaluation of human biotechnology. They defend this status either by appealing to some meaning, value, or purpose of human biological nature or by presenting human biological nature as a condition of goods, rights, identity, or agency that biotechnology may imperil or promote. (The claim that biotechnology may promote such values rather than imperiling them indicates what Chapters 3 and 4 will demonstrate, namely, that some versions of the claim that normative status attaches to human nature are favorable to biotechnological enhancement.) Christian ethicists have their own grounds for ascribing normative status to human biological nature, as I have already noted and as Chapters 2 through 5 of this book will elaborate. Because this book is an inquiry in the field of Christian ethics, it is principally a critical elucidation and development of these grounds and their implications. However, claims regarding the normative status of human nature by Christian theologians and ethicists cannot be adequately understood apart from similar claims that have been made by Jewish and secular thinkers, so that any examination of how the former have carried out their task would be incomplete without attention to the body of literature produced by these thinkers, who have their own reasons for attaching normative status to human biological nature. Moreover, inasmuch as this book not only examines what Christian theologians and ethicists *have* said about the normative status of human nature but also makes a proposal about what they *should* say, it stands ready to receive instruction and correction from others who have attempted from their own perspectives to say what the normative status of human nature is and what relevance it has to biotechnology, and even to learn how to avoid problematic formulations of the normative status of human nature from the criticisms of bioethicists who reject that status. The point is that while there are reasons internal to Christian ethics for carrying out an inquiry into the normative status of human nature, there are also reasons for conducting that inquiry as a conversation with interlocutors from Jewish and secular bioethics, and that is what this book does.

I have drawn a distinction between a bioethical mainstream that denies that normative status attaches to human nature and a countercurrent that

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affirms it, but I want to warn against the temptation to divide the mainstream and countercurrent along familiar lines. The mainstream position, we might assume, is secular and favorable toward biotechnology, while the countercurrent is religious and opposed to biotechnology. However, that assumption is mistaken on both counts. First, regarding the secular-religious axis, the most prominent figures who represent the countercurrent are in fact secular thinkers who explicitly disavow religious grounds for their positions, while most Christian and Jewish bioethicists who write about human biotechnology fall clearly in the mainstream. Second, regarding the favorable-opposed axis, some important countercurrent figures hold that the particular normative significance human nature has makes biotechnological determination of human nature at least permissible and possibly obligatory, while it is at least in principle possible to argue against the determination or alteration of human functions and traits from within the mainstream by insisting on strict criteria for autonomy, safety, and fairness. In short, the mainstream includes religious voices and voices that oppose biotechnological determination of human nature, while the countercurrent includes secular voices and voices that strongly support biotechnological determination of human nature. These complex alignments of religious and secular voices and proponents and opponents of human biotechnology are reflected in the chapters that follow, in which Christians who claim that human biological nature has normative significance will be joined by some prominent secular thinkers (who are opposed or ignored by most Christian bioethicists in the mainstream), while they will disagree over whether the normative significance of human nature allows or disallows biotechnological determination or alteration of human nature (a disagreement in which both sides find support from mainstream bioethics). In sum, what divides the mainstream and the countercurrent is whether normative status attaches to human nature. Differences over religious and secular and acceptance of or opposition to biotechnology cut across this division.

Normative Status of Human Nature: Four Views

In the four chapters that follow (that is, Chapters 2–5), I formulate and critically examine what I take to be four distinct versions of the claim that normative status attaches to human nature in the context of biotechnology. My reconstructions, analyses, and critiques of these positions are my attempt to fulfill what I have just said is a necessary task of Christian ethics in relation to biotechnology, namely, to determine what the normative

status of human nature is and how it counts in the evaluation of biotechnological interventions that implicate human nature.

The first version (NS₁) appeals to people who want biotechnology to leave human nature as it is. It claims that normative status attaches to human nature as that which exists apart from intentional human action. On this view, acting to heal or restore human nature leaves it as it is, but acting to select or alter human functions or traits does not; it therefore violates the normative status of human nature. The typical rationale for this position is not, as one might suppose, the conviction that human biological nature is sacred and therefore must not be touched. It is rather the conviction that only if one has a biological nature that has not been chosen or altered by others can one be treated or recognized as the ontological or moral equal of others, be able to speak and act in one's own person, or be loved simply for who one is. For some subscribers to NS₁, this person-centered conviction is accompanied by the additional conviction that intentional intervention into human biological nature involves a problematic attitude or stance in which one wrongly objectifies nature or treats it as mere raw material for human ambitions and desires. This additional conviction may seem identical to the conviction that nature is sacred, but the attitude or stance may be proscribed because it is an affront to God, not nature, or because it expresses a problematic desire for mastery; in either case, it is a nature-regarding but not a nature-centered conviction. Early versions of one or both claims were put forth by Hannah Arendt, Hans Jonas, and C. S. Lewis; more recent proponents (who are the focus of Chapter 2) are Jürgen Habermas, Oliver O'Donovan, and Michael Sandel.

The second version (NS₂) focuses on human nature as the condition for human goods and rights. Subscribers to NS₂ claim that normative status attaches to human nature as the ground of human goods or rights, and some of them worry that these goods or rights may be imperiled by the alteration of biological functions and traits. If, as they believe, human goods and rights are not simply constructed by society but are grounded in human nature, what becomes of them when biotechnology makes it possible to bypass or alter biological functions and traits? Will persons with different functions and traits have different rights? Will interventions into our nature put our overall well-being at risk or forfeit desires and attachments to others that depend on our vulnerabilities and limitations in favor of the enticing but ultimately superficial desires and attachments that accompany the overcoming of vulnerabilities and limitations? Francis Fukuyama, Leon Kass, and Martha Nussbaum all argue that human rights or the worthiest human goods depend in some way on our nature as it

now is, while others argue that biotechnology is not necessarily a threat to nature-dependent goods and may even help us to realize them more fully. In both cases, it is the dependence of goods or rights on human nature that marks NS2.

The third version (NS3) appeals to many people who support biotechnological enhancement. It claims that normative status attaches to human nature as indeterminate, open-ended, or malleable. Some theologians who subscribe to NS3 point to these characteristics of human nature in arguing that humans are authorized to employ biotechnology to fulfill their God-given vocation to bring human nature to its completion or perfection, or at least to its next stage. Pierre Teilhard de Chardin and Karl Rahner were early proponents of this claim that has recently been championed by Philip Hefner, James Peterson, and Laurie Zoloth. Other subscribers to NS3, including Donna Haraway, stress the emancipatory possibilities that are opened by this understanding of human nature while also showing how the indeterminacy, open-endedness, and malleability of human nature undermine the support which notions of human nature as fixed and bounded have lent to racism, sexism, and other problematic “isms.”

These three versions of the claim that normative status attaches to human nature are widely represented in the literature on the ethics of human enhancement. However, they have not been categorized in an intelligible way, and in some cases they have not been presented in their most plausible formulations. As a result, the claim that normative status attaches to human nature is not well understood, and both criticisms and defenses of this claim are often facile. Chapters 2 through 4 offer a systematic presentation and a thorough critical examination of these claims in the hope of bringing clarity to them and assessing their viability. Chapter 5 introduces into the debate a new version (NS4), which claims that normative status attaches to human nature as that which suits or equips humans for a certain form of life with God and with other human beings. In this form of life with God and other humans, I will argue, humans image God, and they have been given their particular biological characteristics by God because these are precisely the characteristics that suit them for the form of life with God and with other humans for which God has created them. Normative status thus attaches to human nature as a condition for this form of life with God and with other humans. Although it is my construction, this claim is strongly influenced by the views of the human being as creature propounded by Karl Barth and Kathryn Tanner.

Because this book is an inquiry in Christian ethics, it is appropriate to point out in advance the theological grounds of each of these claims