

# CREATION ETHICS

Reproduction, Genetics, and Quality of Life



*David DeGrazia*

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*Reproduction, Genetics, and Quality of Life*

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DAVID DeGRAZIA

# OXFORD

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## Creation Ethics



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## Introduction

To create is to bring into existence. Creation may involve simply making something, or it may involve invention—coming up with something new. Human beings create myriad things: buildings and books, thermometers and theories, microphones and marriages, paintings and peace treaties. Human beings even create, or decide not to create, human beings.

First, and most obviously, we human beings create other human beings through *procreation*—reproduction, as it is usually called. Most human reproduction occurs naturally, by way of sexual intercourse. Some reproduction, though, is made possible by artificial means such as in vitro fertilization. And, of course, people sometimes decide to terminate the process of reproductive creation by aborting pregnancies.

In addition to creating new human beings, people sometimes deliberately create, or refrain from creating, particular *kinds* of human beings—that is, human beings with *particular characteristics*—by controlling reproduction in various ways: carefully choosing a reproductive partner, or a sperm or egg donor; deciding to carry a fetus to term or aborting in view of what they think the offspring will or would be like; employing prenatal genetic diagnosis and selecting embryos on the basis of test results. At some point in the future, we will probably have the options of prenatal genetic therapy and prenatal genetic enhancement, which will extend the power to create human beings with particular characteristics.

Sometimes human creative activity is self-directed because people sometimes engage in *self-creation*. Although a person does not literally bring herself into

existence, she may work to change certain of her traits or acquire new traits in an effort to become a different sort of person. Deliberate self-improvement is nothing new, but novel technologies expand the tools available for such projects. Genetic enhancements are likely to be added to the toolbox of self-creation.

Finally, our reproductive acts, considered collectively, create *new generations*. Importantly for future generations, our choices determine not only who will come into being, but also what sort of world future generations will inherit. Thus, we not only create future generations but, in a sense, we create the state of the world in which they will find themselves.

The choices we make about creating other human beings, particular kinds of human beings, ourselves, and future generations—not to mention their world—all provoke ethical and philosophical issues. Many of these issues involve reproduction, genetics, or both. The term *reprogenetics* is sometimes used to refer to the intersection of the fields of assisted reproduction, human genetics, and embryo research. Some portions of this book will concern ethical and philosophical issues in reprogenetics, thus understood. But the scope of this book is considerably broader insofar as it also addresses ethical and philosophical issues connected with reproductive choices, considered independently of genetics, and ethical and philosophical issues pertaining to genetics, considered independently of reproduction. Moreover, in thinking about future generations, we will explore ethical and philosophical issues less in relation to reproduction than in relation to how our lifestyles affect the world that later people will inherit, with foreseeable effects on their quality of life.

In characterizing the topics to be explored in this book, I have several times made reference to ethical and philosophical issues. It bears mentioning that the discussion of distinctively philosophical issues—such as “At what point in the reproductive process does one of us come into being?” “What is human nature?,” and “Do future people have interests?”—will primarily be in the service of ethics. That is, we address the philosophical issue in order to achieve sufficient conceptual or metaphysical clarity to put us in a good position to address the ethical issues. This is not at all to deny the independent importance and interest of the philosophical issues (which fascinate me); it is simply to make explicit that this book is primarily a work in ethics. *The overarching aim of this book is to illuminate a cluster of ethical issues connected to human reproduction and human genetics through the lens of moral philosophy.*

## RELATIONSHIP TO EXISTING LITERATURE

The ethical issues addressed in the present volume are represented by a vast literature. This literature comprises many books and an enormous number of articles. The book-length discussions include such monographs as Heyd’s

*Genethics*, Steinbock's *Life Before Birth*, Kamm's *Creation and Abortion*, Silver's *Remaking Eden*, Glover's *Choosing Children*, Green's *Babies by Design*, Harris' *Enhancing Evolution*, and Buchanan's *Beyond Humanity?*; they also include such anthologies as Savulescu and Bostrom's *Human Enhancement* and Roberts and Wasserman's *Harming Future Persons*.<sup>1</sup> These are just some of the better books on the topics explored here. How will my book add to this impressive literature? How is it distinctive?

As suggested by their titles, each of the representative books just mentioned focuses more narrowly than *Creation Ethics*, which covers an exceptionally wide range of topics. Sometimes, of course, breadth of coverage comes at the cost of superficiality. I believe, however, that within the literature on ethical issues in reproduction and genetics, *Creation Ethics* offers a unique combination of breadth and philosophical depth. If I have succeeded in my aims, another unusual feature is the simultaneous achievement of accessibility, on the one hand, and precision and argumentative rigor, on the other. The book is also well versed and up-to-date in ethical and philosophical theory while being scientifically well informed wherever science is crucial to the discussion. Needless to say, many discussions feature one of these two academic virtues in the absence of the other.

*Creation Ethics* is also somewhat unusual in addressing reproductive ethics without shying away from prenatal moral status and the attendant ethical issues of abortion and embryo research. In confronting these issues, Chapter 2 strives to avoid the one-sidedness that characterizes so much work in this area. Indeed, among discussions that arrive at a definite position, perhaps none is fairer to the vision and arguments that animate the opposing side. I take some pride in believing that the book as a whole is exceptional in the degree to which it takes alternative moral visions seriously.

Several, more specific distinguishing features of *Creation Ethics* will become apparent in the overview of the six major chapters.

## OVERVIEW

Chapter 2, "Prenatal Moral Status and Ethics," is the book's longest chapter. Its first major task is to defend a framework for understanding prenatal moral status. The framework has three key components: (1) an account of the essence, numerical identity, and origins of human beings; (2) a view about the relevance of sentience to moral status; and (3) a version of the "time-relative interest account" (TRIA) of the harm of death and its relevance to prenatal moral status.

According to the first component, we are essentially human animals or organisms so that our origins—the point in the reproductive process when we come into being—and the criteria for our numerical identity—that is, for our continuing to exist over time—are to be understood in biological terms. This

view, which I defended in *Human Identity and Bioethics* and which has been most comprehensively defended by Eric Olson<sup>2</sup>, swims against analytical philosophy's mainstream currents, which carry various psychological views of our essence, origins, and identity. The biological view suggests that we come into existence as early as conception and no later than two weeks after conception, when integration among the embryo's cells has been unambiguously achieved and spontaneous twinning is no longer possible. I argue that we come into existence between several days and two weeks after conception, but acknowledge that the conception view is defensible.

The second component of the tripartite framework claims a strong connection between sentience and moral status. Sentience is sufficient for having interests and therefore, I argue, for moral status. Unlike most liberals who embrace similar views, though, I do not assume that sentience is *necessary* for interests and moral status. Indeed, I argue that the view that *potential* for sentience and/or personhood is sufficient for moral status is about as compelling as the view that sentience is necessary. Thus, for all I have argued so far, a coherent pro-life view remains standing. For, once one of us comes into being at or shortly after conception, that being possesses the relevant potential. One aim of this discussion is to clarify appeals to potential, which are routinely misrepresented by liberal critics.

While the first two components of the tripartite framework leave the argumentative door open to pro-life views, the third closes the door by deploying a version of the TRIA of the harm of death. Developed by Jeff McMahan, the TRIA holds that an evaluation of the harm of death must take into account not only (1) the value of the future life lost by the individual who dies, but also (2) the degree of psychological relatedness between the individual just before dying and the later individual who otherwise would have lived.<sup>3</sup> Whereas McMahan develops the TRIA such that the presentient fetus has no interests and no moral status—indeed, on his psychological view of our essence, identity, and origins, the presentient fetus and later sentient fetus are *numerically distinct individuals*—I consider an alternative understanding according to which a presentient fetus has significantly diminished (but not the absence of) interests and moral status. This more moderate position can be defended on the basis of (1) the presentient fetus' numerical identity to a possible future individual like us (a type of potential), grounding its moral status, and (2) the absence of mental life, which justifies the claim of *relatively weak* time-relative interests and moral status. My tripartite framework ultimately supports a liberal position on prenatal moral status and, consequently, on the ethics of abortion and embryo research insofar as the killing of fetuses and embryos is judged to be considerably less morally problematic than the killing of sentient beings and persons, if problematic at all.

But is my framework justified? It is one thing to provide a framework a preliminary defense, but quite another to show that the strongest possible objections cannot overturn it. The strongest opposition to a liberal position like mine is found in the literature on the ethics of abortion, so the discussion turns to what I take to be the three strongest arguments represented in that literature: the Future-Like-Ours Argument, the Appeal to the Practical Necessity of Early Moral Protection, and the Appeal to Our Essence and Kind Membership. After rebutting these arguments, thereby strengthening the case for my framework, I turn to what many philosophers consider the strongest argument for a pro-choice view: the Good Samaritan Argument (GSA). I contend that the success of the GSA is highly uncertain. So the TRIA remains crucial to my defense of a liberal position.

Perhaps surprisingly, I next argue that there are respectable grounds for doubting the liberal position I have defended. For example, I might be mistaken about the defensibility of the TRIA. Or, even if I'm right that my framework, including the TRIA, and the liberal position it supports comprise a reasonable position, perhaps the strongest pro-life position is about equally reasonable. Thus, I argue, there remains room for reasonable disagreement about our origins and prenatal moral status, as well as their ethical implications. In response to such ontological-moral pluralism, or plurality of reasonable views, I shift the discussion from moral philosophy to political philosophy.

From the standpoint of political philosophy, I argue, justified public policies regarding abortion and embryo research must be fairly liberal. In defense of this thesis, I highlight the three pivotal assumptions on which the pro-life position rests: (1) We human beings come into existence at conception; (2) We have full moral status—including a right to life—throughout our existence; and (3) If we have full moral status from the time of conception, then abortion and embryo research are impermissible (with few, if any, exceptions). *The pro-life view requires all three of these controversial assumptions.* Yet, by this point in the discussion, we have found that each can reasonably be doubted. I argue that the government must not impose significant restrictions on the liberty of pregnant women and biomedical researchers on the basis of such contestable assumptions. This supports broadly liberal policies.

The last major section provides details. The analysis vindicates most of the legal status quo regarding abortion in the United States, including the prohibition of public funds for this procedure, but it rejects the Supreme Court's ruling on "partial-birth" abortions. My analysis also carves out a "no responsibility" exception (which includes but is not limited to rape) to the prohibition of public funds. In the analysis of embryo research policy, which gives special attention to embryonic stem-cell research, one notable result is my rejection of the view that it is permissible to use spare embryos from fertility clinics *but not*

to create embryos for research purposes. Both, I argue, are permissible—unless and until research demonstrates that use of “adult” stem cells has benefits comparable to those afforded by use of embryonic stem cells.

Chapter 3, “Creation Through Genetic Enhancement,” addresses self-creation (self-shaping or -transformation) and the creation of particular sorts of human beings—that is, human beings with desired characteristics—by way of genetic enhancement. Rather than providing a comprehensive analysis of the ethics of genetic enhancement, which would require several chapters if not an entire book, the ethical analysis is focused through the conceptual lenses of human identity and human nature. The first section explores the concept of enhancement and finds two conceptions—one that contrasts enhancement with treatment, another that understands enhancement in terms of expanding capacities—about equally defensible and useful. The next section presents examples of possible genetic enhancements of the future. Eight have a fairly clear basis in current scientific understanding and are, in that sense, relatively near-term. Two further examples have the feel of science fiction, given the current state of technology, yet are entirely conceivable. One of these thought-experiments involves the gradual evolution via genetic enhancement of *post-humans*, a new hominid species that is greatly superior to *Homo sapiens* in various respects. The second thought-experiment features *post-persons*, who are characterized by their superior moral agency. In view of their vastly superior moral capacities, post-persons entertain a new ontological distinction between reliable moral agents (them) and haphazard moral agents (us). Post-persons wonder whether they have higher moral status than persons, just as persons have traditionally regarded themselves as having higher moral status than nonhuman animals.

With this background, the chapter proceeds to the primary philosophical and ethical issues. First, since many concerns about enhancements are expressed in the language of identity, what is the relationship between biomedical enhancement and identity? I argue that here it is absolutely crucial to distinguish between *numerical identity*—the relation something has to itself in being one and the same thing over time—and *narrative identity*, which concerns a particular person’s self-conception.<sup>4</sup> It becomes apparent that the only enhancements, genetic or otherwise, that anyone is ever likely to use would not disrupt numerical identity—that is, eliminate one individual and replace her with another—but would at most change a person’s narrative identity. But, then, what’s wrong with that? The most promising answer appeals to authenticity, so this concept is analyzed. Ultimately, the appeal to authenticity is found unpersuasive as an objection to genetic or any other kind of enhancement.

The chapter proceeds to objections that appeal to perceived risks to human nature—and, in some variations of the objections, to humanity itself. In

addressing the concern about human nature, I present the structure of the underlying reasoning and evaluate each step. First, it is assumed that there is such a thing as human nature. I briefly defend this assumption. Second, it is assumed that genetic enhancement threatens human nature. After exploring what it would mean to threaten human nature, I argue that the nearer-term possibilities of genetic enhancement considered earlier would not pose such a threat whereas the emergence of post-humans or post-persons would. The third premise is that threatening human nature is morally unacceptable. In response, I first argue that there is nothing *inherently* wrong with threatening—that is, surpassing or changing—human nature. But consequentialist concerns about risks to humanity (not to human nature itself) prove more significant: The emergence of post-humans or post-persons could endanger humanity due to a massive power differential between humans and the superior beings. Unenhanced human beings, that is, might be vulnerable to exploitation, domination, or worse.

Considering the possibility of such a disastrous outcome, what sort of precautions would be appropriate? I argue that prohibiting genetic enhancement in order to foreclose the possibility of disaster would be no more sensible than it would have been to prohibit travel by ships and airplanes in view of the possibility of lethal epidemics or annihilation through warfare. I proceed to more moderate strategies for reducing the long-term risks of genetic enhancement while protecting possible benefits from this technology, and ultimately defend the view I call Moderate Regulation.

Chapter 4, “Prenatal Genetic Interventions,” tightly integrates the themes of reproduction and genetics as it addresses three types of interventions: (1) prenatal genetic diagnosis (PGD), the testing of gametes (sperm or egg cells) prior to fertilization, embryos prior to implantation, or fetuses in utero; (2) prenatal genetic therapy (PGT), genetic therapy performed on a gamete, embryo, or fetus; and (3) prenatal genetic enhancement (PGE), the genetic enhancement of a gamete, embryo, or fetus. PGD is a current reality, with an ever-expanding range of conditions for which testing is possible. PGT and PGE are both fairly likely to become available in the not-so-distant future. Even if PGE is not officially permitted when PGT is, the blurred boundary between therapy and enhancement will probably permit PGE to sneak in under the guise of therapy.

The chapter begins with an overview of the current state of reprogenetics. The next section, the chapter’s longest, addresses three prominent objections to prenatal genetic diagnosis that have been advanced by disability advocates: (1) the loss-of-support argument, (2) the “expressivist objection,” and (3) the thesis that disabilities are really just differences. Although commonly voiced, the loss-of-support argument proves easy to rebut. The other two objections to PGD, however, demand detailed investigations. The expressivist objection argues that



PGD conveys hurtful messages regarding persons who have the disabilities for which PGD tests, thereby wronging those persons. I argue that, when directed at prospective parents who use PGD, the objection misfires because parents do not necessarily express the negative messages attributed in the objection; when the objection targets routine, aggressive promotion of PGD by medical institutions, though, it is more persuasive. According to the third objection to PGD considered here, disabilities are not objectively disadvantageous conditions, but rather different ways of functioning that prove disadvantageous only as a result of contingent social conditions. Responding to this objection requires an excursion into value theory, which features competing accounts of what ultimately constitutes human well-being. Against recent trends, I defend a qualified subjective account of well-being. From this perspective, I contend that disabilities are not *necessarily* injurious to an individual's overall well-being, but they typically impose disadvantages (even when social accommodations are abundant) that it is not unreasonable to want to avoid in one's offspring. PGD, I conclude, is a legitimate means of pursuing this parental aim.

The next major section takes up prenatal genetic therapy. It seems natural to think that, if a given PGT appears sufficiently safe and offers a better benefit-risk ratio than any alternative, it is justified. Several commentators, however, have worried that changing an individual's genome would change essential properties, thereby creating a numerically distinct individual—which would hardly be therapeutic to the original individual! Thus, these commentators question the legitimacy of PGT (and PGE). Partly in response to this line of reasoning, I defend a *Robustness Thesis*: Once we come into existence, our numerical identity is robust in the sense of being likely to survive any genetic interventions we might realistically expect in the name of therapy or enhancement. On my view, as explained in Chapter 2, we are essentially human animals or organisms so that the criteria for our continued existence over time are biological. But a human organism can undergo all sorts of genetic changes, whether intentionally produced or accidentally incurred, without going out of existence. If a genetic change had caused the prenatal being I once was to grow into a blond person, or someone with more musical talent, that would have changed my life and self-story in certain ways, but *I* would have been the one to live that life; these changes would not have killed or eliminated the organism. Since changes of narrative identity are not inherently problematic, intentional changes of a given individual's genome are not inherently problematic—at least for any reason related to identity. But the Robustness Thesis concerns identity after someone comes into being. Before someone comes into existence, changes to her precursor genetic materials may result in a numerically distinct individual's coming to be. I argue, however, that this metaphysical fact in no way casts doubt on the moral appropriateness of PGT performed on gametes or (if we come

into existence shortly after conception) on the early embryo. I also contend, against the bioethics mainstream, that germline PGT—whose effects are heritable by later generations—is, in general, no less justified than somatic-cell PGT, whose effects are limited to the recipient of therapy.

Prenatal genetic enhancement raises some unique issues, which are taken up in the final major section of Chapter 4. First, can PGE be in the best interests of the child-to-be? In answering affirmatively, I contend that we should understand the best-interests standard as protecting a child's *essential* interests, explain how PGE can be sufficiently safe to attempt responsibly, and argue that PGE need not violate a child's "right to an open future." Second, does a decision to use PGE express morally objectionable parental attitudes? Does such use display insufficient regard for the "giftedness" of children? I argue that it does not. Finally, I take up residual concerns about possible social effects of PGE. Some of these concerns are sufficiently serious that I recommend a few restrictions on PGE.

Chapter 5, "Bearing Children in Wrongful Life Cases," opens with descriptions of two devastating genetic conditions: Tay-Sachs disease and Lesch-Nyham syndrome. These conditions are plausibly regarded as making the lives of those who have them not worth living. It is commonly asserted that knowingly or negligently to bring a child into the world with such a condition wrongs the child—hence the concept of *wrongful life*. Standard analyses of wrongful life incorporate the idea that bearing a child in such a case *harms* her. Yet our ordinary understanding of harm is comparative: A harms B only if A makes B *worse off* than B (1) *was before* the intervention claimed to be harmful or (2) *would have been* had the intervention not occurred. But neither of these two types of comparison seems possible in the present sort of case: Before an individual is brought into existence, she *was not*; and had she not been brought into existence, she *would not have been*. So how can she have been made worse off by being brought into existence?

This puzzle motivates the chapter's first line of inquiry: Does it ever wrong someone to bring him into existence and, if so, how can we coherently explain the nature of the wrong? After briefly reviewing strategies for making sense of the charge of wrongful life, including some that hold that the child brought into being is wronged without being harmed, I argue that at least one of these strategies is successful. There are wrongful life cases: cases in which someone is wronged by being brought into existence.

Certain facts about procreation motivate a more radical question than the one just answered. All human life involves harms. So to bring someone into existence is to guarantee that she will be harmed. Of course, nearly all lives also include benefits, which might be thought to compensate for the harms in many or most cases. But no one who is brought into existence consents in advance to

the package of benefits and harms that her life will contain. And it seems plausible to judge that it is wrong to impose harm on someone, without her consent, in order to afford her “pure benefits” (benefits that do not involve the removal or prevention of harm). This motivates the radical question: Might every instance of procreation be wrong, and, if not, what can justify the unconsented imposition of harm? Because David Benatar and Seanna Shiffrin have presented the most developed arguments for a thoroughly anti-procreation position,<sup>5</sup> I examine and respond to their arguments in detail.

This discussion leads me to the following claims: (1) In paradigm wrongful life cases—in which the life would not be worth living—procreation is wrong; (2) In other cases involving the predictable imposition of a disability or life circumstance that is severe but not so bad as to make life not worth living, procreation is (strongly) *pro tanto* wrong; and (3) In those cases involving only exposure to the ordinary harms of human life, procreation is (weakly) *pro tanto* wrong. These claims provoke the question of what considerations might justify procreating in view of its (weak or strong) *pro tanto* wrongness. My reply invokes the value of procreative freedom as well as a consideration that I call the “undeluded gladness factor.” The latter is connected to the thesis that those who are glad to be alive are generally not to be second-guessed about their belief that their lives are worth living, a belief that underscores the point that life involves not only burdens but opportunities. The chapter closes by setting up Chapter 6 with this question: In deciding whether to have children, what criteria should prospective parents use? In short, what do all parents owe their children?

Chapter 6, “Bearing and Caring for Children with Disadvantage,” tackles this and other questions. The chapter focuses on procreation with the intention of *raising* the created child rather than giving her up for adoption (although some of the discussion also bears on the ethics of adoption). The disadvantages at issue include both substantial disabilities and predictable, obstacle-posing life circumstances such as entrenched poverty and slavery.

The first section examines our intuitive reactions to a wide variety of hypothetical cases as a method for identifying a defensible standard for “procreation plus parenting.” The analysis leads to a standard according to which parents owe their children the following: (1) lives worth living (2) in which their basic needs—essential interests—are reasonably expected to be met (some exceptions being tolerable where failure to meet basic needs is due to circumstances beyond the parents’ control), and (3) doing more for them where parents can without undue sacrifice. This standard is accompanied by a detailed list of children’s basic needs, but whether freedom from avoidable disability belongs on that list is left an open question. The remainder of the chapter addresses the ethics of procreating from the standpoint of different types of procreative choice.

It is argued in the next section that in *same-individual choices*—choices between having a child with a major disadvantage and having the same child without the disadvantage—the importance of procreative freedom is straightforwardly outweighed by the child’s interests. In the section that follows, I argue that procreative freedom carries greater weight with *different-number choices*: choices between having a child with disadvantage versus not having a child. Turning next to *same-number choices*—where parents can have a child with disadvantage or, by delaying conception or aborting and conceiving again, have a different child free of the disadvantage—we encounter the *nonidentity problem*, which generates several paradoxes about ethics and about which a massive literature has grown.<sup>6</sup> A variety of strategies for resolving the nonidentity problem are laid out—perhaps more lucidly and accessibly than one can find elsewhere in the literature—and appraised, and a solution is suggested. The chapter’s final section sketches a view of “wrongful disadvantage” and draws implications for the ethics of procreating in a variety of circumstances in which prospective parents may find or place themselves. The discussion takes up very young parents, single parents, gay or lesbian parents, elderly parents, indigent parents, uninvolved “yuppie” and/or narcissistic parents, and those who would use reproductive cloning as a means to becoming parents.

The book concludes with Chapter 7, “Obligations to Future Generations,” which opens with the question of what we, who are now contributing to global climate change, owe to future generations, who will inherit its harmful effects. This brings us to the central topic of the chapter. Collectively, the procreative acts of a given generation create a new generation; and, of course, the new generation will go on to create another generation, and so on for as long as humanity exists. Moreover, any given generation creates, or at least greatly affects, the conditions of the world that later generations will inherit. Because our choices so greatly affect the quality of life of future generations, it may seem obvious that we have moral obligations concerning our effects on the world that we leave our descendants. But our moral obligations apply most straightforwardly in dealings with contemporaries. Difficult philosophical issues confront the thesis that we have obligations to those who will exist only in the future.

The chapter is organized into sections that address distinct questions. First, do future persons have interests, moral status, and rights? Can we have obligations *to* them and not just *regarding* them? I answer the second question affirmatively on the basis of the fact that future persons *will* have interests, moral status, and rights. In doing so, I expose and rebut what I call *the temporally-bound correlativity thesis*, which holds that one can have obligations to particular individuals at a given time if and only if they have rights against one at that same time.

Second, are our obligations to future generations a matter of justice? A negative answer is supported by a classical view of the circumstances of justice. Rooted historically in the contract tradition of ethics, this view maintains that justice can obtain only among parties that are roughly equal in power and capable of reciprocity. I contest the classical view and argue that what we owe future generations is a matter of justice. I also show how the contract theories of Rawls and Scanlon can be plausibly extended in ways that support my claim.

Third, even if future persons have full moral status, and our obligations to them are a matter of justice, should their interests nevertheless count less than ours because of their temporal distance from us? Identifying and rebutting several leading arguments that favor the discounting of future persons' interests, I reject any type of systematic discounting.

Fourth, in view of nonidentity, how can we explain the wrong of irresponsible policy choices and individual decisions that leave a compromised world for future generations? The nonidentity problem arises in connection with future generations because different choices—say, addressing energy needs with solar power versus addressing them with nuclear power whose waste products cannot be safely disposed of for more than a few generations—will lead, eventually, to the existence of different individuals. A decision may predictably and irresponsibly result in a lower quality of life for individuals who exist several generations later but, unless their lives are not worth living, it is difficult to explain why the decision is wrong. My solution includes a novel suggestion for uniting the deontological approach of “what we owe to each other” and an impersonal, consequentialist approach to ethics.

If this book achieves its purpose, it will illuminate each of the topics connected with human reproduction and/or human genetics that are addressed herein: prenatal moral status and the ethics of abortion and embryo research; the ethics of genetic enhancement as it relates to human identity and human nature; the ethics of prenatal genetic diagnosis, therapy, and enhancement; wrongful life and the prerogative to have children; more broadly, the ethics of procreating with the intention of parenting; and obligations to future generations.

## NOTES

1. See David Heyd, *Genethics* (Berkeley: University of California Press, 1992); Bonnie Steinbock, *Life Before Birth* (New York: Oxford University Press, 1992); Frances Kamm, *Creation and Abortion* (New York: Oxford University Press, 1992); Lee Silver, *Remaking Eden* (New York: Avon, 1997); Jonathan Glover, *Choosing Children* (Oxford: Clarendon, 2006); Ronald Green, *Babies by Design* (New Haven, CT: Yale University Press, 2007); John Harris, *Enhancing Evolution* (Princeton: Princeton University Press, 2007); Allen Buchanan, *Beyond*

*Humanity?* (New York: Oxford University Press, 2011); Julian Savulescu and Nick Bostrom (eds.), *Human Enhancement* (Oxford: Oxford University Press, 2009); and Melinda Roberts and David Wasserman (eds.), *Harming Future Persons* (Dordrecht, Netherlands: Springer, 2009).

2. See my *Human Identity and Bioethics* (Cambridge: Cambridge University Press, 2005) and Eric Olson, *The Human Animal* (New York: Oxford University Press, 1997).
3. See Jeff McMahan, *The Ethics of Killing* (New York: Oxford University Press, 2002), chaps. 2 and 3.
4. A central thesis of *Human Identity and Bioethics* is that appreciating this distinction is crucial in addressing a wide variety of issues in bioethics.
5. See David Benatar, *Better Never to Have Been?* (Oxford: Oxford University Press, 2006) and Seanna Shiffrin, "Wrongful Life, Procreative Responsibility, and the Significance of Harm," *Legal Theory* 5 (1999): 117–48.
6. The classic discussion of this problem is Derek Parfit, *Reasons and Persons* (Oxford: Clarendon, 1984), chap. 16.

## Prenatal Moral Status and Ethics

Most human beings are created naturally through sexual reproduction. Some are created less naturally, with the assistance of reproductive technologies prior to implantation in a woman's uterus. And some are created in vitro for scientific purposes without any reproductive intent. Today, no ethical issue is more contentious than abortion, which involves the killing of an embryo or fetus. Not much less contentious are embryonic stem-cell research, research cloning, and other types of embryo research that involve the destruction of embryos. All of these issues provoke the question of how we should understand the moral status of prenatal human beings.

Let us use the term "prenatal human being" broadly to apply to any living but unborn member of our species. That would include the one-cell product of conception (fertilization)—the zygote—as well as what develops from the zygote, often referred to as the embryo in the early weeks after conception and later, when organs become apparent, as the fetus (although sometimes "fetus" is used to refer to the developing human organism throughout gestation). "Prenatal human beings" in our broad sense also includes living human organisms that are not expected to be born or even to enter a woman's uterus—in particular, embryos created artificially for research purposes.

How are we to understand the moral status of prenatal human beings? Do they matter morally in their own right, independently of their usefulness or their relations to people like you or me (postnatal human beings whose moral status and personhood are uncontested)? If they matter morally in their own

right, how much do they matter? Do they have a right to life such that it is impermissible to kill them? If they lack such a right to life, does their status nevertheless ground a moral obligation not to destroy them for trivial purposes? To answer these questions, we need to know what underlies moral status. Why do those who are uncontroversially persons enjoy moral status—or, if the latter admits of degrees, full moral status? The answer will permit us to determine whether some or all prenatal human beings share this status. If they do, and if it is wrong to kill anyone with such status, this would appear to vindicate a “pro-life” or conservative approach to the ethics of abortion and embryo research. If they do not, that would presumably open the door to liberal approaches to these issues.

It is worth noting early on that the ethical issues of abortion and embryo research involve moral dimensions in addition to prenatal moral status. Abortion, for starters, involves the termination of unwanted pregnancies, which occur in women’s bodies; and people have extensive rights to determine what happens to and within their bodies—at least as far as other people’s actions and social policies (as opposed to natural forces like diseases) are concerned. Indeed, according to one school of thought we will consider, a woman’s rights to bodily integrity and liberty are of such paramount importance that the fetus’s moral status proves largely irrelevant to the ethics of abortion. This issue may also be understood to involve broader social issues such as gender roles, patriarchy, and freedom of conscience in a secular, pluralistic society. Meanwhile, the ethics of embryo research implicates issues of how taxpayers’ money ought to be spent, embryo research being heavily dependent on public funding, as well as concerns about the possible commodification of prenatal human life and threats to traditional understandings of human procreation. The purpose here is not to provide an exhaustive catalogue of issues other than moral status that can and do come into play in discussions of abortion and ethical research. The purpose, rather, is to note some of them in order to avoid an oversimplified picture according to which prenatal moral status is all that matters in these discussions. At the same time, because it is widely believed that full moral status entails a right to life, and that the intentional destruction of an embryo or fetus would violate such a right (if it exists), it is no wonder that so many ethical discussions of these topics have centered on moral status. We will focus on prenatal moral status for much of the chapter before turning to other considerations that underlie some of the most powerful arguments in the ethical debates over abortion and embryo research.

The chapter’s first major section will defend a tripartite framework for understanding prenatal moral status. This framework consists of (1) a view about our numerical identity, essence, and origins; (2) an account of the relevance of sentience to moral status; and (3) a version of the “time-relative interests account”



of the harm of death. (All technical terms will be explained later.) As we will see, this framework supports relatively liberal views about abortion and embryo research. In the next section, I rebut what I take to be the three strongest arguments in favor of a pro-life approach. I also address what many consider the strongest argument for a liberal view of abortion—the Good Samaritan Argument—asking whether it clinches the case for a liberal position, and arguing that it does not. In the section that follows, I argue, perhaps surprisingly, that one might reasonably doubt the framework I have defended, that there are considerations that could lead a reasonable, well-informed person thinking entirely in secular terms to maintain a pro-life view. Thus, I argue for a sort of pluralism regarding prenatal moral status. In view of what I regard as a stalemate at the level of ontology (in particular, the issues of our essence and origins) and ethics, I redirect the discussion to the level of political philosophy and social policy. I argue that while a pro-life approach is reasonable, it rests on three assumptions: one about our essence and origins, another about the constancy of moral status throughout one's lifetime, and a third about the relationship between full moral status and the ethics of killing prenatal human beings. Because each of these assumptions is highly debatable, as demonstrated by the preceding discussion—and in view of women's interests in liberty and bodily integrity as well as biomedical researchers' interest in freedom of inquiry—I argue that ontological and ethical pluralism supports some sort of liberal approach to policy. In the final section, I sketch and defend such an approach to abortion and embryo research.

## A FRAMEWORK FOR UNDERSTANDING PRENATAL MORAL STATUS

Those who are indisputably persons have full moral status. This status incorporates a right to life—by which I mean a nearly absolute moral protection against being intentionally or negligently killed that generally resists appeals to utility as justifications for killing. If zygotes, embryos, and fetuses share this moral status, that is presumably because (1) they are beings of our kind from the time of conception, and (2) a being of our kind has moral status for the entire duration of its existence. Let us first consider the issue underlying claim (1). When do beings like you and me come into existence?

### Our Essence, Numerical Identity, and Origins

The question of when we come into being, or originate, is conceptually tied to the question of our essence: What are we human persons, most fundamentally? Which of our characteristics are so fundamental that their loss would entail that we literally go out of existence? Answering this question will tell us which