



Project
MUSE[®]
Scholarly journals online

Must We Have Full Moral Status Throughout Our Existence? A Reply to Alfonso Gómez-Lobo*

ABSTRACT. Those who are morally opposed to abortion generally make several pivotal assumptions. This paper focuses on the assumption that we have full moral status throughout our existence. Coupled with the assumption that we come into existence at conception, the assumption about moral status entails that all human fetuses have full moral status, including a right to life. Is the assumption about moral status correct? In addressing this question, I respond to several arguments advanced, in this journal and other venues, by Alfonso Gómez-Lobo. Gómez-Lobo's reasoning resolves into two basic arguments: (1) an appeal to the practical necessity of early moral protection and (2) an appeal to our kind membership and potentiality. I respond to these in turn before offering further reflections.

Those who hold that all, or nearly all, abortions are morally impermissible tend to make three pivotal assumptions. First is an assumption about *our origins*:

- (1) We human beings come into existence at conception.

Second is an assumption about *our possession of moral status*:

- (2) We have full moral status—including a right to life—throughout our existence.

From these two premises it follows that we have full moral status immediately upon coming into being, at conception, as one-cell zygotes and that all prenatal human organisms—zygotes, embryos, and fetuses—have full

*This paper was written with the support of a Visiting Scholar fellowship at the Department of Clinical Bioethics, National Institutes of Health in 2006-2007. The views expressed here are the author's own and do not necessarily reflect those of the NIH.

moral status, including a right to life. (Hereafter I use the term “fetus” conveniently, if somewhat inaccurately, to cover all stages of prenatal development.) The third pivotal assumption concerns *the relationship between prenatal moral status and the morality of abortion*:

(3) If fetuses have full moral status, then abortion is impermissible—with very few, if any, exceptions.

Because the first two assumptions entail the conclusion that the fetus has full moral status, that conclusion in combination with the conditional assumption (3) entails the impermissibility of abortion.

What are we to think of these three assumptions? The first one, about our origins, has been the target of both mild and radical challenges. Mild challenges have been advanced, for example, by those who hold that we come into existence about two weeks or so after conception when spontaneous twinning is no longer possible and when integration among embryonic cells is fully established.¹ More radical challenges come from those who claim that we are not essentially human organisms—or animals—but rather psychological beings of some sort. Jeff McMahan (2006, Ch. 1), for example, has argued that we are essentially beings with the embodied or neurologically enabled capacity for consciousness, which means we originate no earlier than 20 weeks gestational age. The mild challenges have marginal relevance to the morality of abortion inasmuch as abortions nearly always occur after the point at which, according to these challenges, one of us originates. But these challenges are highly relevant to the ethics of using methods of birth control that may prevent implantation of a fertilized ovum following conception—strictly speaking, a kind of abortion—and to the ethics of embryonic research, including embryonic stem-cell research, conducted within the first two weeks of embryonic development. (Indeed, the pro-life reasoning reconstructed here can be tailored to the research context by substituting the following for assumption (3): *(3a) If embryos have full moral status, then research that entails their death is impermissible.*) The radical challenge, meanwhile, profoundly affects the morality of abortion insofar as nearly all abortions occur before the time when, according to any responsible estimate, sentience or the capacity for consciousness emerges in fetal development. For the purposes of this paper, though, I will grant the assumption that we come into being at conception.²

The third assumption, that fetuses’ having full moral status would make abortion impermissible, may seem breathtakingly obvious. But

it is not obvious. For a fetus's right to life might not encompass a right to be provided assistance—or even a right not to be killed if a pregnant woman's declining to provide assistance and having the fetus removed from her body entails killing the fetus—as Judith Jarvis Thomson (1971) and David Boonin (2003, Ch. 4) have argued.

This paper focuses entirely on the second assumption, that we have full moral status throughout our existence. Coupled with the first assumption, which I have granted, the second entails that all human fetuses have full moral status, including a right to life. Is the second assumption correct? In addressing this question, I respond to several published arguments by Alfonso Gómez-Lobo, whom I find an exceptionally articulate and well-versed spokesperson for reasoning in support of the second assumption. Gómez-Lobo's reasoning resolves into two basic arguments: an appeal to the practical necessity of early moral protection and an appeal to our kind membership and potentiality. I respond to these in turn before offering some further reflections.

THE APPEAL TO THE PRACTICAL NECESSITY OF EARLY MORAL PROTECTION

This appeal makes its appearance in a paragraph that I will examine in parts. The paragraph begins as follows:

If the sameness, potentiality, and continuity arguments lead to the conclusion that I am the same human organism that began to live and develop when the drastic change from sperm and egg to zygote took place [what, in this paper, I have called the first assumption], and if I claim inviolability [full moral status] for myself now, it would be irrational not to claim it for previous stages of my existence, all the way back to my inception. (Gómez-Lobo 2004b, p. 79)³

This conditional statement has two antecedents or “if” clauses. The first I have granted. The second asserts that the author now has full moral status, which I naturally also grant. The consequent, or implicit “then” clause, of the conditional is that it is rationally necessary for the author—or, in principle, anyone thinking this through—to claim full moral status for all stages of his existence, all the way back to conception. This is the second assumption of the pro-life position, the assumption under consideration in this paper. How is it supposed to follow from the two antecedents?

Gómez-Lobo continues: “Inviolability now without inviolability at previous stages entails that I would risk not being alive now. It would have been morally permissible to destroy me in the past so that my later

inviolability would be worthless.” This is the crux of the appeal to the practical necessity of early moral protection. Before evaluating it, let us note the passage’s final sentence: “And if I am entitled to claim for myself inviolability throughout my existence, I should claim it for everybody else.” Here, in an inference reminiscent of Kant and such neo-Kantians as Alan Gewirth (1978), Gómez-Lobo universalizes the practical precept inferred in his own case, his inviolability throughout his existence, to all other beings who are relevantly similar, namely—in his view—other members of the species *Homo sapiens*.⁴ Although the appeal to universalizability is an essential step in establishing Gómez-Lobo’s moral position, it is not my present concern.⁵

My present concern is the thesis that it would be irrational for any person who now claims full moral status to deny having had such inviolability throughout her existence, including the prenatal stage of her existence. The idea is that the claim of present inviolability and the denial of earlier inviolability are somehow contradictory. But any such contradiction, surely, is not one of logic, for the conjunction of “I now have full moral status” and “There was a time earlier in my existence when I did not have full moral status” cannot be resolved into the form of “P and not P,” as any logical contradiction can. Rather, the alleged contradiction, or absurdity, is practical: It would be absurd from the standpoint of practical reasoning to advance this conjunction of claims. Why? It is absurd, allegedly, to say that it would, in the past, have been permissible to destroy a being who later, if permitted to live, would have a moral status that makes such destruction impermissible. Yet, when I focus on this supposedly absurd statement, I perceive no absurdity. It may help here to stress the distinction between what is impartially permissible and what is partially desirable.

Consider an analogy. Jon is glad to be alive, despite a rocky childhood. His childhood was rocky because his parents had a dreadful marriage and lacked any good sense about how to raise children. In fact, Jon can honestly say not only that his parents are fundamentally incompatible, but that each was far too immature to marry responsibly. They should not have gotten married and certainly should not have had children. Yet, if they had not done these things, Jon would not exist. So he judges that his parents did something they should not have done, namely got married and had children, yet he is glad—from a self-interested standpoint—that they did because he is glad that he is alive. Is that contradictory or absurd? Not at all. From an impartial, ethical standpoint, he judges that his parents did not meet reasonable criteria for when people ought to marry and have

children. From a partial, self-regarding standpoint, he values their actions as necessary means to his current existence, which he values. Although this may be a psychologically awkward position to be in, it is coherent.

Returning to the central issue, can I consider myself presently inviolable and deny that I was inviolable in the earliest stages of existence? Yes, I can. My present full moral status means that it would be wrong—extraordinary circumstances aside—for another to kill me. If I lacked this status as a fetus, then it would have been permissible for my mother to have had an abortion, which would have killed me. I am glad that she did not because, like Jon and most other people, I am glad to be alive. But I do not deny that it might have been permissible for me to have been aborted—say, if my mother had realistically judged that having another child would pose an overwhelming burden on her or the family. Partially and self-interestedly, I am glad that I was permitted to develop into a being with full moral status. But *gladness* does not entail *entitlement*: Impartially, I grant the possibility that this being could have been permissibly destroyed prior to acquiring full moral status. Moreover, *present entitlement* not to be killed does not entail *past entitlement* to conditions necessary for me to enjoy my present entitlement. Put another way, present entitlement not to be killed does not entail present entitlement *not to have been killed*. So there is no contradiction or absurdity. Perhaps any feeling of a practical contradiction here trades on a conflation of ethical and prudential standpoints, which are distinct practical perspectives whose appropriate criteria of evaluation sometimes diverge.

THE APPEAL TO KIND MEMBERSHIP AND POTENTIALITY

A distinct argument for the second assumption underlying standard pro-life reasoning—that we have full moral status throughout our existence—appeals to our membership in a kind that determines our essence, and the natural potentiality of members of this kind. This argument can be understood in response to the following challenge to the claim of fetal personhood: If a fetus is potentially a person, then it is not yet (actually) a person. Those who advance this challenge take *person* to be a *phase sortal*—a category or grouping that something may occupy for just a phase of its existence. A person, in this usage of the term, is (roughly) a being with the *already-developed* capacity for higher mental life: complex forms of consciousness such as self-awareness, moral thinking, and the consciousness associated with language use. Adulthood is another phase sortal. I am an adult, but I existed for a time when I was not an adult,

so I am not *essentially* an adult. Against those who argue that fetuses, as potential persons, cannot yet be persons, Gómez-Lobo suggests that *person* is a *substance sortal*, a category or grouping that necessarily characterizes something throughout its existence—in other words, a basic kind that determines the thing's essence. On this view, *person essentialism*, anything that is ever a person is a person throughout its existence. For the pro-life view, which assumes that we come into existence at conception, person essentialism implies that fetuses are persons.

Accordingly, for Gómez-Lobo (2004a, pp. 205–6), fetuses are entitled to the same respect to which all persons are entitled:

... if A is potentially B (a thinking and self-conscious being) it does not follow that A is not B. It follows that it is indeed B (a thinking and conscious being), but surely not a fully developed one. If we should respect B, then we should also respect A because it has the same properties that lead us to respect B, only at an earlier stage of development.

But rationality and self-awareness are not the only personhood-relevant properties: “A child (who was before that a baby, and before that a fetus, and before that a human embryo) has the remote potentiality to learn languages. This is part of what it means to be human” (Gómez-Lobo 2005, p. 109). For Gómez-Lobo, all human beings are persons, so linguistic capacity is another trait characteristic of persons. Importantly, on this view human persons *essentially* have these capacities for higher mental functioning: “A human being of any age has a host of remote and proximate potentialities. They are grounded in his or her essence” (Gómez-Lobo 2005, p. 109). Thus human fetuses are essentially rational, self-aware, linguistic beings and therefore have full moral status. This is true, moreover, of all members of our species. Let us reconstruct the reasoning, so we can examine it carefully:

- (1) All *Homo sapiens*—including all fetuses—have the natural potentiality for higher mental life.
- (2) Having this potentiality is the basis for full moral status.

Therefore (3) all *Homo sapiens*—including all fetuses—have full moral status.

Note that premise (1) is connected with what I have called the first assumption. That assumption states that we come into existence at conception, which is true if we are essentially human organisms and human organisms originate at conception. Here, though, there is an appeal to

higher mental life. The connecting idea is that human organisms, or human beings, are essentially beings with the (remote or proximate) capacity—that is, the natural potentiality—for higher mental life. Natural potentiality is understood as the potential encoded in, and expressive of, one's nature or kind. It is contrasted with extrinsic potential such as my potential to be Governor of Maryland or a rock's potential to be a paperweight.

In reply to this important line of reasoning, I contend that either (1) is false or (2) is false—probably both—blocking the inference to (3). Because (3) is intended to support the second assumption of standard pro-life reasoning, blocking (3) will undermine the appeal to kind membership and potentiality.

Claim (1) states that all members of our species have the potentiality for complex mental life. Is this true of all fetuses? It is true of those with a more or less normal genome. It seems doubtful, however, of those fetuses whose genetic endowment, whether due to inherited abnormality or early mutation, precludes the development of higher mental life. Very few fetuses have this misfortune, but some do. Their inability to reason and so on right now is not a matter of underdeveloped capacities, as in the case of most fetuses, for even full development in accordance with these nonparadigm fetuses' genetic endowment would fall short of such mental life. To take an extreme example, a fetus with anencephaly—a condition involving the absence of cerebral and cerebellar hemispheres in the brain—cannot develop into a being with the capacity for consciousness, much less rationality, self-awareness, and the like.⁶

One might reply that such genetic anomalies, despite precluding development of the relevant mental characteristics, are consistent with the thesis that human organisms are essentially beings with the relevant potentiality. The anomalous fetuses have genetic *defects*, as suggested by the word *mutation*, indicating that what is normal for all members of this kind is a genetic endowment encoding the potentiality for higher mental life. (*A fortiori*, the same could be said for nonparadigm fetuses whose abnormal constitutions result from environmental insults.) Indeed, the argument continues, there is a genuine sense in which even the nonparadigm fetuses have this potentiality.

But this reply wrongly takes mutations in a normative sense that does not square with contemporary biology. Mutations are spontaneous genetic changes that need not be bad or disadvantageous. All evolution, including all improvements in fitness, requires mutations. So to say that the nonparadigm fetuses are unable to develop higher mental life “only” due

to mutations or deviations from what is normal is not to justify treating what is normal, or usual, as reflecting a fixed essence that the nonparadigm fetuses somehow share. That would be like saying that the first blond hominid (probably a *Homo sapiens*)—whose hair color was the result of a mutation—was not really blond, or was essentially dark-haired, because the prevailing genetically determined features of his species did not include blond hair.⁷ That, I take it, would be absurd.

I therefore deny that all members of our species, including all human fetuses, have the natural potentiality for higher mental life. If I am right, then premise (1) above is false, undermining the present argument for the thesis that we have full moral status throughout our existence.

But maybe I am wrong. Maybe there is a responsible conception of potentiality according to which even the nonparadigm fetuses have the potentiality for higher mental life. Alternatively, even assuming I am right about the nonparadigm fetuses, some pro-life thinkers might grant that point while maintaining that all other fetuses, the vast majority, have the relevant potentiality; accordingly, “we” in the assumption that we have full moral status throughout our existence would simply exclude the nonparadigm fetuses. So let us turn our attention to premise (2), that such potentiality is the basis for full moral status. This premise, I will argue, is highly implausible in the case of nonparadigm fetuses and question-begging at best in the case of other fetuses.

If one insists that nonparadigm fetuses have the relevant potentiality despite the fact that their actual genomes preclude development of higher mental life, it is hard to see why such an expanded notion of potentiality should have moral weight. If rationality and other higher cognitive traits are important, one can easily understand—whether or not one accepts—the claim that being constituted in such a way that puts one on a natural trajectory to develop such traits is important. In contrast, the line connecting those who are not so constituted, and who are merely members of the same species as those who are, to the moral status enjoyed by those with the relevant sort of mental life seems gerrymandered and unpersuasive. For at least the nonparadigm fetuses, then, premise (2) is implausible. But I have noted the possibility of a modified pro-life view according to which all fetuses except the nonparadigm ones have full moral status in virtue of their potentiality. What is the basis for thinking the latter so morally important?

The answer, presumably, is that those with the relevant potentiality are *of the same kind* as those beings whose moral status is uncontroversial: paradigm persons such as you and I. Part of this reasoning is surely sound.

Our moral status must be based on something. Whatever that something is, others who have it are relevantly similar to those who undeniably possess moral status, and therefore share this status. All beings with full moral status must be of the same kind—call this our *moral kind*—determined by possession of a morally relevant property (or set of properties). The question is how to characterize our moral kind.

It is clear from passages already quoted that, for Gómez-Lobo, our moral kind is *Homo sapiens*. Why should species membership matter so much? Well, our species is, quite arguably, a *natural kind*—that is, roughly, a kind determined by nature.^{8,9} Moreover, whereas we are members of various natural kinds (e.g., hominid, primate, mammal, animal)—forming concentric circles, as it were—assuming we are members of any natural kind (*Homo sapiens*), our species is traditionally regarded as our most basic kind, which determines our essence, as in “We are essentially human beings.” Thus, on this view, our moral kind is precisely our most basic kind as determined by nature.

But the claim that our species is our moral kind assumes, first, that species are natural kinds—as opposed to classifications determined primarily or entirely by convention—and, second, that this alleged natural kind is the appropriate basis of moral status. Although there are very respectable grounds for doubting that species are natural kinds,¹⁰ here I will grant this assumption. I call into question the assumption tying moral status to our natural kind, whose members ordinarily have the potentiality for higher mental life.

First, it is by no means self-evident that our moral status is based on the capacity (remote or proximate) for self-awareness, rationality, and the like (see DeGrazia 1997). Perhaps our moral status is based on having interests, which is plausibly held to require sentience—the capacity to experience feelings—but not higher mental life. In any case, we may reasonably assume at least this connection: Personhood in the restrictive sense requiring an *already-developed* capacity for higher mental life is sufficient, whether or not also necessary, for full moral status.

There is a more fundamental problem: Although personhood in the restrictive sense is sufficient for moral status, it is impossible to infer, without begging major questions, either that (1) *potentiality* for personhood in this restrictive sense, or (2) *being of the same natural kind* as persons in the restrictive sense, suffices for moral status. Gómez-Lobo’s view holds that fetuses, despite their unactualized potential, are essentially persons (in his broad sense), are of the same natural kind as you and I:

rational, self-aware beings. But the sense of “rational” and “self-aware” *that is uncontroversially sufficient for moral status*—and personhood—is that of developed capacity. A child or adult is not employing the capacity while asleep or temporarily comatose, but the neural hardware is in place and functional, so she has the developed capacity. This is not the case with fetuses, so it begs the question to assume that their “rationality” and “self-awareness”—their natural potentiality to develop the relevant mental life—is sufficient for moral status. If there is a persuasive way to close this argumentative gap, I have not found it.

SOME REFLECTIONS ON OUR MORAL KIND—AND CONCLUSION

We have full moral status. But who are “we”? Equivalently, what is the kind, membership in which confers full moral status?

Western moral tradition tends to identify the human community as the set of beings who have inviolability, full moral status, and rights. Thus we often speak of *human* rights. And since one prominent understanding of the term *human* is biological, it may seem a natural step to include all and only members of our species, *Homo sapiens*, in this group (although other hominids—other species among the genera *Homo*, *Australopithecus*, and *Paranthropus*—might be counted as human). Human fetuses, it will then be pointed out, are members of our species, effectively motivating the assumptions about our origins and our moral status that typically underlie pro-life reasoning. For those such as Gómez-Lobo who are attracted to natural law as a framework for understanding morality (see Gómez-Lobo 2002), the idea that the kind that confers our inviolability is a kind determined by nature (rather than by social or linguistic convention)—a natural kind—is especially appealing.

What is it, though, about members of our species that makes us uniquely valuable? Tradition, again, has an answer. Or, rather, it has two. One answer is that our species is special, indeed so special that we may use anything on Earth except other people for our own purposes, *because God willed it so*. Many who believe this appreciate that morality cannot properly rest on assumptions, including religious dogmas, that one might responsibly doubt. So these traditional thinkers look for characteristics of human beings that distinguish us from other types of creature, trying thereby to preserve the prerogative to use the rest of nature, including animals, for our own purposes—without depending on religious assumptions. This secular strand of Western tradition focuses therefore on such traits as rationality, self-awareness, linguistic competence, autonomy, and moral agency—basically,

traits that are closely associated with the concept of personhood and, not coincidentally, are found in normal, relatively mature human beings.

As science is increasingly discovering, however, quite a few of these traits are neither all-or-nothing nor exclusively human.¹¹ In the face of this growing, potentially embarrassing evidence, traditional moralists tend either to ignore it or to modify their criteria for special moral status in an effort to exclude nonhuman animals. Tightening the criteria for inviolability, of course, runs the risk of leaving some human beings out. But, for those who believe human fetuses have full moral status, this threat exists even without any tightening of criteria insofar as fetuses clearly lack the (actualized) consciousness and cognitive abilities that, say, ordinary non-human mammals clearly have. Hence the appeal to natural potentiality for certain cognitive capacities as something humans have that even clever dogs and monkeys lack.

We have seen the difficulties, though, of trying to forge a link between our species, understood as a natural kind, and full moral status. Where nature carves herself at the joints is one thing; morally relevant distinctions, I suggest, are another. Sentience, in my view, is more fundamental than personhood in determining moral status (see, esp., DeGrazia 1996, Chs. 3, 9). Moreover, potentiality for sentience and for personhood does not confer full moral status. Of course, I have not shown this to be the case. My attempt in this paper to undermine two important pro-life arguments constitutes only part of the work required to accomplish that aim.¹²

A draft of this paper was presented to the Department of Clinical Bioethics, National Institutes of Health, on 4 December 2006. Many thanks to those in attendance for their feedback. Special thanks to Eric Chwang, David Heyd, Arnon Keren, Joe Millum, and Govind Persad for written comments. Thanks also to an anonymous reviewer.

NOTES

1. See, e.g., Ford (1988) and Smith and Brogaard (2003). For a reply to the latter article, see Damschen, Gómez-Lobo, and Schoenecker (2006).
2. In fact, I have my doubts. Elsewhere (DeGrazia 2005, pp. 245–54) I have argued that we originate somewhere between the 16-cell stage, when integration among embryonic cells begins—according to what I took to be standard embryology—and about two weeks after conception, when twinning of one embryo into two and the fusion of two embryos into one have been precluded. Since then I have become more agnostic about whether we might come into existence at conception (DeGrazia 2006, especially pp. 50–54). In any case, I agree with those who hold that we originate at conception that

we are essentially human organisms and therefore disagree with McMahan's view of our essence (see DeGrazia 2005, Ch. 2; 2003).

3. The remainder of the paragraph to be discussed comes from the same source.
4. Note that what is reminiscent of Kant and Gewirth here is the move of universalization, not the explicit inclusion of fetuses within the scope of the universalized principle.
5. For a formidable rebuttal to those such as R. M. Hare who appeal to universalizability in defending a pro-life position, see Boonin (2003, pp. 283–97).
6. I grant the theoretical possibility of interventions that could provide an anencephalic with the neural hardware needed for higher mental life. It would be possible, in principle, to transplant an intact cerebrum and cerebellum (taken fresh from a recently deceased individual), thereby enabling the recipient to acquire mental life. But the same is true of a nonhuman animal whose genome does not encode for the development of higher mental capacities; with a human cerebrum and cerebellum transplant (perhaps after a cranium enlargement), with the transplant of human neural stem cells, or with radical genetic interventions *in vitro* prior to implantation, we could in principle permit an animal normally incapable of certain mental capacities to have them. But this potential is extrinsic and therefore, for those who appeal to natural potentiality, trivial. *Mutatis mutandis*, I consider the human anencephalic fetus's "potential" for higher mental life via transplant trivial and irrelevant to the present discussion.
7. Just to be clear, I am not suggesting that being blond is advantageous.
8. For the work that brought renewed respectability to this concept in analytic philosophy, see Kripke (1972). For a somewhat different conception of natural kinds, one defining them in terms of their explanatory value, see Laporte (2004). Natural kinds as conceived by Kripke and many others have essential features. An alternative to the essentialist conception is the homeostatic property cluster theory of natural kinds (see, e.g., Millikan 1999). On this view, natural kinds do not, or at least need not, share essential properties. They comprise members sharing a stable cluster of similarities, which are brought about by "homeostatic causal mechanisms"—such as, in the case of species, common developmental programs and selective pressures. On this view, X—e.g., a fetus—might be a member of a natural kind—e.g., our species—despite lacking one of the properties—e.g., potentiality for rationality—among the cluster of similarities. This view is not open to Gómez-Lobo, however, because he, like Kripke, embraces essences for all natural kinds. For an overview of the theoretical options, see Ereshefsky (2006).

9. Another writing confirms my sense that, for Gómez-Lobo, our species is a natural kind: “As humans, they are members of a natural kind—the human species . . . ,” (George and Gómez-Lobo 2002, p. 260). This passage is quoted in Strong (2006, p. 438), an article whose critique of Gómez-Lobo’s reasoning about moral status I have encountered too late to discuss here.
10. Some who think species are not natural kinds conceptualize species as individuals (see, e.g., Hull 1978). Others abstain from this radical claim and allow that there are natural kinds—e.g., gold and other elements—but deny that species distinctions provide plausible demarcations for natural kinds. Of course, many philosophers, prominently including Locke and Wittgenstein, doubt the existence of natural kinds altogether, holding that the things of the world are divided and categorized only by our conventions, practices, and thought.
11. For discussions, see DeGrazia (1996, Chs. 5–7; 1997), which include citations to relevant studies. For more recent studies, see, for example, Reiss and Marino (2001); Marino (2002); Shields et al. (2005); Plotnik, de Waal, and Reiss (2006); Phillips (2006), which discusses key recent findings; and Hauser (2006), Part III, which cites many relevant studies.
12. I provide further argumentation in DeGrazia (2005, pp. 279–94; 2007).

REFERENCES

- Boonin, David. 2003. *A Defense of Abortion*. Cambridge University Press.
- Damschen, Gregor; Gómez-Lobo, Alfonso; and Schoenecker, Dieter. 2006. Sixteen Days? A Reply to B. Smith and B. Brogaard on the Beginnings of Human Individuals. *Journal of Medicine and Philosophy* 31: 165–75.
- DeGrazia, David. 1996. *Taking Animals Seriously: Mental Life and Moral Status*. Cambridge University Press.
- . 1997. Great Apes, Dolphins, and the Concept of Personhood. *Southern Journal of Philosophy* 35: 301–20.
- . 2003. Identity, Killing, and the Boundaries of Our Existence. *Philosophy and Public Affairs* 31: 413–42.
- . 2005. *Human Identity and Bioethics*. Cambridge University Press.
- . 2006. Moral Status, Human Identity, and Early Embryos: A Critique of the President’s Approach. *Journal of Law, Medicine, and Ethics* 34: 49–57.
- . 2007. The Harm of Death, Time-Relative Interests, and Abortion. *Philosophical Forum* 38: 57–80.
- Ereshefsky, Marc. 2006. Species. In *Stanford Encyclopedia of Philosophy*. Available at plato.stanford.edu/entries/species/, accessed 4 December 2007.
- Ford, Norman. 1988. *When Did I Begin?* Cambridge University Press.

- George, Robert, and Gómez-Lobo, Alfonso. 2002. Statement of Professor George (joined by Dr. Gómez-Lobo). In *Human Cloning and Human Dignity*, President's Council on Bioethics, pp. 258–66. Washington, DC: PCB.
- Gewirth, Alan. 1978. *Reason and Morality*. University of Chicago Press.
- Gómez-Lobo, Alfonso. 2002. *Morality and the Human Goods: An Introduction to Natural Law Ethics*. Georgetown University Press.
- . 2004a. Does Respect for Embryos Entail Respect for Gametes? *Theoretical Medicine* 25: 199–208.
- . 2004b. On the Ethical Evaluation of Stem Cell Research: Remarks on a Paper by N. Knoepffler. *Kennedy Institute of Ethics Journal* 14: 75–80.
- . 2005. On Potentiality and Respect for Embryos: A Reply to Mary Mahowald. *Theoretical Medicine and Bioethics* 26: 105–10.
- Hauser, Marc. 2006. *Moral Minds*. New York: HarperCollins.
- Hull, David. 1978. A Matter of Individuality. *Philosophy of Science* 45: 335–60.
- Kripke, Saul. 1972. *Naming and Necessity*. Harvard University Press.
- Laporte, Joseph. 2004. *Natural Kinds and Conceptual Change*. Cambridge University Press.
- Marino, Lori. 2002. Convergence of Complex Cognitive Abilities in Cetaceans and Primates. *Brain, Behavior, and Evolution* 59: 21–32.
- McMahan, Jeff. 2002. *The Ethics of Killing: Problems at the Margins of Life*. Oxford University Press.
- Millikan, Ruth. 1999. Historical Kinds and the “Special Sciences”. *Philosophical Studies* 95: 45–65.
- Phillips, Helen. 2006. Known Unknowns. *New Scientist* (16 December): 28–31.
- Plotnik, Joshua; de Waal, Frans; and Reiss, Diana. 2006. Self-Recognition in an Asian Elephant. *Proceedings of the National Academy of Sciences* 103: 17053–57.
- Reiss, Diana, and Marino, Lori. 2001. Mirror Self-Recognition in the Bottlenose Dolphin: A Case of Cognitive Convergence. *Proceedings of the National Academy of Sciences* 98: 5937–42.
- Shields, Wendy; Smith, David; Guttmanova, Katrina; and Washburn, David. 2005. Confidence Judgments by Humans and Rhesus Monkeys. *Journal of General Psychology* 132: 165–86.
- Smith, Barry, and Brogaard, Berit. 2003. Sixteen Days. *Journal of Medicine and Philosophy* 28: 45–78.
- Strong, Carson. 2006. Preembryo Personhood: An Assessment of the President's Council Arguments. *Theoretical Medicine and Bioethics* 27: 433–53.
- Thomson, Judith Jarvis. 1971. A Defense of Abortion. *Philosophy and Public Affairs* 1: 47–66.