

# Souls and the Beginning of Life (A Reply to Haldane and Lee)

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It is perhaps not too optimistic to think that human beings have been making some moral progress over the last few centuries. The most obvious examples concern racism and sexism, but one might also cite, among other things, reforms in education, labour law, and welfare. Over and over, we can trace a pattern of apathy, followed by controversy, followed by consensus. There is room for disagreement, of course, over just how much we have to congratulate ourselves about, and there are still plenty of cases where we are mired in apathy or controversy. The question of abortion is clearly an instance of the latter. Though there is now some amount of fatigue over the debate, it is showing few signs of resolution, and nothing like a consensus has developed even among the citizens of industrialized nations. All sides to this dispute can surely join in devoutly hoping that we may soon achieve the sort of enlightened consensus that we have achieved with respect to cases such as slavery or child labour.

The case of abortion is difficult because it raises complex questions concerning both ethics and metaphysics. In a recent book,<sup>1</sup> I attempted to use the metaphysics of Thomas Aquinas to defend a moderate view on the subject: that an abortion at any time during a pregnancy should be considered a grave loss, but that it should be considered murder only after roughly the middle of the second trimester. John Haldane and Patrick Lee contend<sup>2</sup> that I have misunderstood the implications of Aquinas's view, and that in fact his metaphysics supports the conclusion that a human being comes into existence at the moment of conception. Here I wish to make a brief reply.

Though Aquinas has very little to say about abortion, he has a great deal to say about the beginnings of human life. Despite dis-

<sup>1</sup> *Thomas Aquinas on Human Nature: A Philosophical Study of Summa theologiae 1a 75–89* (New York: Cambridge University Press, 2002), chapter 4.

<sup>2</sup> 'Aquinas on Human Ensoulment, Abortion, and the Value of Life,' *Philosophy* 78 (2003) 253–76.

## Discussion

agreeing with my conclusions, Haldane and Lee evidently agree that Aquinas's conception of human nature provides an important model for contemporary discussions of abortion. One reason his approach is valuable is that it focuses attention on the metaphysical question of when a human life begins. This is quite different from most contemporary discussions, which typically begin by accepting, if only for the sake of argument, that a fetus is a human being, and then focus on the ethical question of when it is immoral to take a human life.<sup>3</sup> To me, on the contrary, it seems quite implausible to think that an embryo in the early stages of pregnancy is a human being. Aquinas therefore seems to offer an opportunity to reply to the charge that abortion consists in the taking of an innocent human life—the claim that above all others motivates those that would make abortion illegal.

As Haldane and Lee note, my book goes rather out of its way to discuss the topic of abortion. This is so for two reasons, one political and the other personal. First, the work of Aquinas has a great deal of authority with just those who have most been most keen to attack the legality of abortion. It is, admittedly, not clear that *anything* could change the mind of either side in a debate so impassioned and entrenched. Still, appeals to authority can have an impact. Moreover, the details of Aquinas's argument turn on assumptions—such as that personal identity is constituted by the soul, and that this soul is infused by God—that are especially attractive to just this target audience. Judging from the fierceness of Haldane and Lee's reply, these assumptions about the significance of this material were not mistaken.

Second, as an Aquinas scholar, I am keenly aware of just how often his name has been invoked in support of causes that I find morally objectionable. Having spent much of my adult life championing Aquinas's philosophical ideas, I felt some sense of obligation to show how those ideas could be put to good use in this rather surprising arena. Haldane and Lee document the extent to which Aquinas's views on abortion are known among experts, and indeed I myself have learned much from that literature (and cite it extensively in my book). Still, it remains the case that very few realize Aquinas denied that human life begins at conception, and denied that abortion is always murder. Surely, these facts deserve a wider audience.

Of course, Aquinas's views will be of interest today only if they are not overturned by modern discoveries in biology. Neither I nor

<sup>3</sup> For an important recent work in this vein, see David Boonin, *A Defense of Abortion* (Cambridge: Cambridge University Press, 2002).

Haldane and Lee think that we can simply take on board Aquinas's views without some amount of revision. After all, Aquinas accepts Aristotle's claim that human life begins after forty days for males and ninety days for females. Quite apart from the absurd sexual dimorphism of that claim, it is founded on biological assumptions that are wrong in almost every respect. There is no reason to think that Aquinas would retain anything like this view were he to have our knowledge of embryology. What then would be his view? According to me, he would want to push back the origins of human life to the middle of the pregnancy, when the brain is well enough developed to support the operations of the rational soul. According to Haldane and Lee, he would push the origins of human life all the way up to the moment of conception, and so marvellously align himself with the preferred view of the Catholic Church today.

For readers unimpressed by arguments from authority—presumably including most readers of this journal—the thought that will probably cross their mind at this point is *Who cares?* That might well be the appropriate reaction if not for the fact that Aquinas's account rests on philosophical claims that are both plausible and neglected in contemporary discussions of the abortion controversy. Now I have already mentioned two claims that will not strike most professional philosophers as very plausible: that personal identity is constituted by the soul, and that this soul is infused by God. We can, however, set aside the second of these claims, because Aquinas's account of the beginnings of human life will retain whatever cogency it has regardless of how we choose to explain the soul's introduction into the body. The first claim, too, is not essential. What he needs, instead, is the related but much weaker claim that having a rational soul is a necessary condition for being a human being. Given that claim, Aquinas's account proceeds by establishing two claims:

1. What sort of body is required to serve as the matter for a rational soul?
2. When does the fetus come to have that sort of body?

Answers to these two questions—the first metaphysical, the second empirical—directly yield an answer to the question of when human life begins.

Obviously, this is not the place to defend an Aristotelian conception of human beings as a composite of soul and body, especially since Haldane and Lee are themselves quite content to work within that framework. Still, it ought to be stressed that there need be nothing unacceptable about an analysis of human nature in terms of

## Discussion

soul. All we need to insist on, initially, is that the soul of a thing is that which makes that thing be alive as the kind of thing it is. The human soul, then, will be that which is responsible for all the capacities that distinguish us as human beings, including our nutritive, sensory, and rational powers. To be sure, it is reasonable to wonder whether there is truly some one thing, *a soul*, that accounts for all of this. But there can be no objection to our simply defining the soul as whatever does all this, leaving open the question of what sort of thing the soul will turn out to be. And, once we stipulate that this is how we are using the term ‘soul,’ then it turns out to be trivially true that the human soul—which we can now call the *rational soul*—is necessary for being a human being. That much is built into the definition of ‘soul.’

There is, however, one respect that bears stressing in which Aquinas’s framework proves to be nontrivial. For though we can leave open to a considerable extent the question of what sort of thing the human soul is, Aquinas takes it to be non-negotiable that a rational soul must have the rational powers of intellect and will. It therefore follows, for Aquinas, that a fetus is not a human being until it has intellect and will (until it has, for short, *a mind*). Here is where, it seems to me, Aquinas’s account of the beginnings of life becomes highly relevant today. Although the point is hardly beyond dispute, it seems eminently plausible to think that having a mind is a necessary condition for being a human being. And even though Aquinas thinks that the mind is an immaterial power that operates without any corporeal organ, he nevertheless thinks that there are constraints on the sort of body that a human mind can inform. Hence the question of when human life begins can be settled by answering the two questions listed above.

Haldane and Lee accept this basic framework, so far as I can tell, and make no controversial assumptions about any of the empirical (that is, biological) facts. The critical issue therefore becomes how to answer the first, metaphysical question: *What sort of body is required to serve as the matter for a rational soul?* Clearly, Aquinas does not think that the rational soul can inform just any sort of body. The only kind of body a human soul can inform is one that is sufficiently human. This should be obvious from his conception of what the soul is. Since a soul is what makes a body be the kind of thing it is, a human soul can inform only the sort of body that can potentially be made human—not a goat or a puddle. Again, Haldane and Lee accept this much. Our disagreement lies over the question of when the developing fetus can be said to have the right sort of body.

One way of answering that question would be to say that it has the right sort of body *right away*, from the moment of conception, since that newly formed single cell certainly does have the *potential* to become a fully developed human being. We can call this the *first-potentiality standard*, since it seems closely analogous to the way that someone who has the potential to learn something but has not yet learned it is said to be in first potentiality for a thing.<sup>4</sup> It seems quite clear that this is not Aquinas's standard. If it were, then he too would have said that the rational soul can be infused at the moment of conception. In fact, he expressly denies this:

It cannot be said that the soul, in its complete essence, is in the semen from the beginning and that its operations do not appear because of the lack of organs. For since the soul is united to the body as its form, it is united only to a body of which it is appropriately the actuality. But the soul is the actuality of an organic body. Therefore the soul does not actually exist in the semen before the body's organization, but is there only potentially or virtually (*Summa contra gentiles* [=SCG] II.89.3/1737).

Aquinas knew nothing of the union of sperm and egg, and instead thought that the entire *virtus formativa* of a fetus comes from the semen. Accordingly, rather than focus on the semen's first hours within the womb, he wonders whether the semen might have had a rational soul 'from the beginning'—that is, presumably, from its initial production in the testes. Given this biological picture, the first-potentiality standard would seem to allow the human soul to inform the semen, since the semen would have the right sort of potential to become a human being. Aquinas, however, says explicitly that the soul 'cannot' be present that soon.

This passage is noteworthy not just because it rules out the first-potentiality standard, but also because it implicitly shows us what sort of standard Aquinas does accept. His positive claim is that the soul can inform the body only once the body is appropriately 'organized.' As just explained, the words 'organized' and 'organic body' cannot just mean *structured in such a way as eventually to produce a fully developed human being*. Rather, Aquinas must mean that the soul requires a body that actually has the relevant organs. He thinks

<sup>4</sup> See, e.g., Aquinas, *Sentencia de anima* II.2.107–12, where he remarks that 'an object is said to be something *potentially* in two ways: in one way when it does not possess the principle of its operation; in a second way when it does possess that principle but is not functioning in accord with it. But a body whose actuality is soul has life in potentiality in the second way, not the first.'

## Discussion

that the fetus acquires a nutritive soul when it acquires the organs for nutrition, a sensory soul when it acquires the organs for sensation, and a rational soul when it acquires the inner senses capable of producing the phantasms that are essential for rational thought. I will call this the *second-potentiality standard*, since what it requires is having the potentiality in hand to operate in certain sorts of ways. So far as I can see, there is no middle ground between these two standards. Either one will suppose that the soul can be present only when the body is sufficiently developed to support the actual possession of the capacities necessary for life (= second potentiality), or one will allow that the soul can be present in a body just so long as that body has the intrinsic potential to develop in such a way as to acquire the appropriate capacities (= first potentiality).

It is surprisingly unclear where Haldane and Lee stand on this issue. At first glance, it looks as if they do not try to ascribe to Aquinas the first-potentiality standard, but instead contend that the necessary organs are present from the start. But what they contend, more precisely, is that the ‘epigenetic primordia’ (266) of the organs are present. Despite the fact that so much of their argument rests on this phrase, it is not clear exactly what it means. One might suppose that this refers to the stage in fetal development where cell differentiation progresses far enough to distinguish between the clusters of cells that will become the stomach, eyes, ears, brain, etc. This might push the moment of ensoulment back to the third or fourth week after gestation. It is hard to see what could motivate this proposal, however. Either the fetus has the requisite organs and so the requisite capacities, or it does not, but instead simply has the potential to develop those capacities. There seems, once again, to be no basis for some middle ground between first and second potentiality. In any case, Haldane and Lee must have something different in mind, since they hold that ‘the human being is present from fertilization on’ (271). All there is at that point, of course, is a single cell. What their claim must amount to, then, is that the coding for future organs is present at the moment of conception, in the DNA. But this, quite plainly, just is the first-potentiality standard. They are contending that the rational soul is present at the moment of conception inasmuch as we have, at that point, a thing with the potential to become a fully developed human being.

How can Haldane and Lee be intent on defending this standard, when Aquinas seems so clearly to have rejected it in favour of something stronger? He willingly concedes, for instance, that ‘everything not exceeding corporeal power is virtually contained in the semen’ (SCG II.89.1754)—everything, that is to say, except for the mind.

To say these things are there ‘virtually’ just is to say that they are there potentially—all that awaits are the ordinary biological processes that will bring the fetus to the point where it *actually* has the requisite organs. As we have seen, though, Aquinas insists that a soul enters into a body only at that latter point. If he had held the first-potentiality standard then—at a minimum—he surely would not have maintained that a soul *cannot* be present any earlier.

So far as I can tell, Haldane and Lee’s argument at this juncture rests on a difference between Aquinas’s *virtus formativa* and DNA. Superficially, the two are alike. Just as the fetus’s future development is encoded in its DNA, so the *virtus formativa* directs the bodily developments that yield a sequence of substantial changes and a progression of substantial forms, all the way up to the point where the body is ready to receive the rational soul. Yet Haldane and Lee stress the following difference: whereas DNA is an *intrinsic* component of (each cell of) the fetus, the *virtus formativa* is an *external* agent that somehow guides the fetus to its full development and then goes out of existence. Correspondingly, whereas the fertilized egg contains the complex structure that will eventually yield a full-grown organism, the beginnings of Aquinas’s process are unformed menstrual blood, which ‘has only a very low degree of perfection or organization, not even possessing vegetative life.’ Haldane and Lee therefore conclude that it is understandable Aquinas needed to delay the introduction of soul, but that we should not understand the process this way today.

In crucial respects, however, Haldane and Lee misdescribe Aquinas’s account. First, he thinks that the initial step toward human life is not unformed menstrual blood but instead the semen itself: ‘first the thing being formed has the form of semen, then of blood, and so forth until it reaches its final completion’ (*SCG* II.89.1743). Second, as we have seen, he thinks that the semen virtually contains all the corporeal perfections that will come later. In this respect it seems quite on a par with a fertilized ovum: both meet the first-potentiality standard; neither meets the second-potentiality standard. Third, when the semen becomes something new, taking on the nature of blood, it in fact has quite a high degree of perfection. Contrary to what Haldane and Lee expressly assert, the union of semen and menstrual blood immediately yields something that has a vegetative soul:

The active power is in the semen of the male.... The fetus’s matter is supplied by the female. In this matter there is immediately from the start (*statim a principio*) a vegetative soul—not with

## Discussion

respect to second actuality, but with respect to first actuality, just as there is a sensory soul in someone asleep (*Summa theologiae* [=ST] 1a 118.1 ad 4).

There are no actual vegetative powers in the semen, and therefore no soul in the semen, but the semen's mixture with the menstrual blood immediately yields something that has life. At this point, the vegetative powers are present in the embryo—not in the sense that it is actually exercising those operations, but also not in the sense of having a mere first potentiality for acquiring them. Instead, it has the powers in 'first actuality,' which is equivalent to second potentiality. Far from having a 'very low degree of perfection' (as Haldane and Lee put it), the starting point of fetal development in Aquinas has quite a high degree of perfection—surely high enough that, were Aquinas to accept the first-potentiality standard, he would have to allow that the rational soul could be infused at that point.

So why doesn't Aquinas accept the first-potentiality standard? Why does he insist that a soul can be present only when the requisite organs are actually there? An answer begins with the observation that, for Aquinas, to be alive is to have certain sorts of capacities for self-motion. Plants are alive because they can nourish themselves, grow, and reproduce; more sophisticated living things can do all that and more. Generally, to be alive is to have at least some of the capacities associated with life. This conceptual connection is mediated by Aquinas's theory of soul, according to which (a) things with souls are alive, and (b) things with certain sorts of souls have certain sorts of capacities. It would be utterly alien to Aquinas's conception of soul to suppose that organisms take on a certain sort of soul before having the capacities associated with that soul. Hence he regularly associates the acquisition of a soul, in a fetus, with its carrying out the associated operations:

The vegetative soul, which is present first, when the embryo lives the life of a plant, is corrupted, and a more perfect soul follows, which is at once nutritive and sensory, and then the embryo lives the life of an animal. With its corruption, the rational soul follows, infused from without (*SCG* II.89.1745).

When the embryo has merely a vegetative soul, it 'lives the life of a plant'—that is, it functions in the way that a plant does—and likewise when the embryo takes on a sensory soul. He explicitly holds, in fact, that 'the embryo is found to nourish itself, and also to engage in sensation, before its final completion [by the rational soul]' (*SCG* II.89.1736).

At this point a difficulty for my account may seem inescapable. If having a soul of a certain sort requires having the actual powers associated with that soul, then it seems as if having a rational soul should entail that the fetus is rational. Thus Haldane and Lee remark, with respect to my second-potentiality standard:

Nowhere does Aquinas assert this stronger requirement; and it is quite unlikely that he held it. As was said, he maintained that the rational soul was present after 40 or 90 days, and it is difficult to think that he really believed that embryos at this early date are actually engaging in conceptual thought, or have the immediate exercisable capacity to do so (265).

Indeed, Haldane and Lee contend that the capacity for conceptual thought will not be present until well after birth (267-8), in which case the second-potentiality standard would yield the absurd result that even infants are not human beings. It seems to me very plausible, however, to suppose that the mind of a fetus is active before birth, and that Aquinas himself thought as much. We have seen, after all, that Aquinas thinks a fetus uses its senses before birth (and of course we now know that this is actually so). It seems reasonable to suppose that this sensory information will work its way throughout the (still developing) brain, and so lead to higher-level thoughts, albeit of an extremely crude and rudimentary sort. When Haldane and Lee say 'we now know with certainty that the brain is not sufficiently developed to support conceptual thought until some months after birth' (267-8), they are unhelpfully conflating the capacity to have any mental operations at all with the capacity to have full-fledged concepts, and then in addition to have 'thoughts' about those concepts. Rather than expecting the mind to jump into operation at full speed, we should expect it to take off very slowly, building up its abilities so gradually as to be undetectable from the outside (and quite possibly from the inside as well, inasmuch as the fetus may be thinking without having the capacity for conscious awareness). So far as I know, Aquinas never addresses this question. It seems reasonable to suppose, however, that when he remarks (as quoted earlier) that an embryo with a nutritive or sensory soul 'lives the life of a plant ... [or] an animal' (*SCG* II.89.1745), he would be willing to add that an embryo with a rational soul *lives the life of a human being*.<sup>5</sup>

<sup>5</sup> Such a view is not unprecedented in the history of philosophy. Descartes, in fact, takes the more extreme view that the mind continuously thinks from the very first moment it is infused into the body (see, e.g., *AT* III, 423-4). Aquinas, in contrast, needs only an occasional sputtering of mental life to justify the soul's infusion.

## Discussion

One of the most interesting features of Aquinas's argument is that it purports to establish the impossibility of human life beginning before the brain has sufficiently developed. We have seen Haldane and Lee question whether this position can be maintained today in light of the known biological facts, and I have tried to reply. Even if they were right, however, Aquinas has another argument intended to show that God *would not* infuse the human soul before that point (even if he *could* do so). Here is how the argument goes against those who think that the soul pre-exists the body entirely:

If it is natural to the soul to be united to the body, then existence without the body is contrary to its nature, and it does not have the perfection of its nature when existing without the body. But it was not suitable for God to begin his work with the imperfect and with what is outside of nature. For he did not make human beings without hands or feet, which are our natural parts. Much less, then, did he make soul without body (*ST* 1a 118.3c).

The argument applies to the moment-of-conception thesis just as much as it does to any sort of Platonic pre-existence. The rational soul needs a human body to function as best it can. Existing without a body is an inferior state for our souls to be in, and so is existing in a body that has not yet developed the requisite organs. So just as God does not make human beings without hands or feet, he likewise does not make us without brains—without which the mind cannot naturally function.

Of course, Haldane and Lee think that God does start human beings off without brains (and also without hands and feet, for that matter). They therefore need a reply to this argument. Since they are not interested in challenging the underlying assumption that God creates in whatever way is most fitting, they appeal once again to the known biological facts. Now it is easy to see where Aquinas's argument is most vulnerable. For if God does not create things in an imperfect state, it looks as if he should not create babies at all, and that instead human beings should come into the world fully developed and ready for action. Obviously, then, Aquinas needs to allow that some initial degree of immaturity is not an imperfection—or, perhaps, that it is a necessary imperfection. Haldane and Lee take this last route, arguing that 'human ensoulment at the time at which the formation of a specifically human body begins is not pointless but necessary' (267). Their argument depends again on the way Aquinas's *virtus formativa* is an external agent, guiding the successive stages of fetal development. Given this external cause, they allow that it would be plausible to treat the developing fetus as

Aquinas does, as a series of distinct substances coming into and then going out of existence. Yet since in fact the formative agent is intrinsic, the fetus should instead be conceived as a single, enduring substance, growing through successive stages of development:

If there is no extrinsic agent responsible for the regular, complex development, then the obvious conclusion is that the cause of the process is within, that it is the embryo itself. But in that case the process is not an extrinsic formation, but is an instance of *growth* or *maturation*, i.e., the active self-development of a whole, though immature organism which is already a member of the species, the mature stage of which it is developing toward (269).

I accept the first inference, deny the second: the fact that the cause of a process is internal does not show that it is a case of growth or maturation. Consider a dozen generations of fruit flies. There need be no extrinsic agent responsible for this reproductive cycle; instead, the cause can be wholly intrinsic. Obviously, however, this is a case not of growth, but of generation and corruption, a sequence of substantial changes over time. This shows that the problem of distinguishing between the growth of a single substance and the generation and corruption of successive substances cannot be settled by considering whether the governing forces are internal or external.

Aquinas analyses fetal development in terms of a sequence of substances undergoing generation and corruption, rather than as the maturation of a single organism. This may now seem like a counter-intuitive idea, which perhaps explains why discussions of abortion have tended to take for granted that the fetus, even in its early stages, is a human being. Yet Aquinas's account of this process—which was, after all, the standard account from Aristotle until well into the modern era—deserves to be taken seriously today. If we accept the idea that living things are defined in terms of their capacities to cognize and move about the world, then we ought likewise accept that being human is not a matter of having the right sort of DNA, but of having certain sorts of distinctively human capacities. This perspective has the potential to illuminate a great many hard ethical questions about the significance of human life and its boundaries at each end.

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