

## A CRITIQUE OF THE CONCEPTION THESIS

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**Introduction.** The notion that human life begins at conception has come to be considered by some to be an integral part of the view that human life has special value. Kant had held that humanity has a value to be designated “dignity” rather than “price”;<sup>1</sup> he also made a similar point by saying that humanity is an end in itself and has intrinsic value, rather than having only the instrumental value of a means to an end.<sup>2</sup> But, as far as I know, Kant never connected this idea with any specific view about our biological origins; rather his impulse, in keeping with his transcendental idealism, would be clearly to separate questions of existence from questions of value. It seems to me unfortunate that, for Catholics and Evangelicals in the U.S. and elsewhere, respect for human dignity is associated with the claim that human life begins at conception, and yet at the same time, because of this association, it seems problematic to deny that human life begins at conception. I shall attempt to show that those who value unborn human life ought to be careful about this association; in fact, they must be open to questioning it if they wish to maintain and advocate for a reasonable commitment to respect for human dignity.

In what follows, I first discuss the beginnings of human life, including the metaphysical foundation of the Conception Thesis, and the implications of several ways to think about how human beings begin to exist. I then examine the value of human life including implications that the Conception Thesis and the counter thesis of delayed hominization have for our understanding of human dignity.

**The Conception Thesis and its Supposed Metaphysical Foundation.** It is almost taken for granted in some philosophical and religious circles today that human life begins at conception.<sup>3</sup> Let us call this the Conception Thesis (C) and reformulate it somewhat.

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<sup>1</sup> Kant, *Grounding for the Metaphysics of Morals*, Trans. James W. Ellington (Indianapolis/Cambridge: Hackett Publishing Company, 1981) 40-41.

<sup>2</sup> Ibid., 35-37.

<sup>3</sup> See John Finnis, “Abortion and Health Care Ethics II, Ch. 48 in *Principles of Health Care Ethics*, Ed. Raanan Gillon (John Wiley & Sons Ltd., 1994); John Haldane and Patrick Lee, “Aquinas on Human Ensoulment, Abortion and the Value of Life,”

C: A human being comes to be at the moment of conception.

This way of expressing the idea has a couple of advantages in terms of clarity. First, reference is made to “a human being,” rather than to “human life.” Thus it is clear that what is at issue is the beginning of the existence of an individual human being, an individual of the human species, rather than the abstraction, human life in general. Second, reference is made to the *moment* of conception. Thus it is clear that what is at issue is a specific point in time, a boundary as it were which is either the last moment of a prior period of non-existence or the first moment of a subsequent period of existence.<sup>4</sup> This has been called the point of “substantial change,” because the sperm and the ovum no longer exist, rather the zygote which has its own unique DNA has come into being. Among other things, C entails that a fertilized human ovum, or zygote, is a human being.<sup>5</sup>

Many have found cause to object to the Conception Thesis,<sup>6</sup> and many have defended it.<sup>7</sup> For instance, Peter Singer holds that there is no *moment* of conception, because syngamy, or the actual joining of the genetic material of sperm and egg, is a process that takes time.<sup>8</sup> Philosophical defenders of the proposition that human life

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*Philosophy*, Vol. 78, no. 304 (April 2003) 255-278; Patrick Lee and Robert P. George, *Body-Self Dualism in Contemporary Ethics and Politics* (Cambridge: Cambridge University Press, 2008). These are only a few of the many sources one could consult; the literature is vast and dense, and I make no attempt to cover it all.

<sup>4</sup> I owe this way of thinking about a temporal boundary to Roderick M. Chisholm. See, for instance, *A Realistic Theory of Categories* (Cambridge: Cambridge University Press, 1996), 55-64.

<sup>5</sup> Lee and George, *Body-Self Dualism*, 140 and elsewhere.

<sup>6</sup> See for instance Peter Singer, *Rethinking Life and Death: The Collapse of our Traditional Ethics* (New York, NY: St. Martin's Press, 1994), pp. 93-100. See also Norman M. Ford, *When Did I Begin? Conception of the human individual in history, philosophy and science* (Cambridge: Cambridge University Press, 1988).

<sup>7</sup> See Patrick Lee, *Abortion and Unborn Human Life*, Second Edition (Washington D.C., The Catholic University of America Press, 2010), 71-107. See also John J. Conley, S.J., “Delayed Animation: An Ambiguity and Its Abuses,” in Joseph W. Koterski, S.J., Ed., *Life and Learning XII: Proceedings of the Twelfth University Faculty for Life Conference* (Washington, D.C.: University Faculty for Life, 2002), 159-68.

<sup>8</sup> However, Singer's position on this topic leaves him vulnerable to a “moment of syngamy,” that is, the moment when syngamy is complete, so that his implicit view concerning the gradual coming to be of humans is not supported by arguments against a moment, as such, of conception.

begins at conception, such as Patrick Lee, John Haldane, and John Finnis, work within the Roman Catholic tradition and hold that the medieval thesis of “delayed animation,” or more precisely “delayed hominization,” has actually been rendered implausible by modern embryology and genetic science. Thus they defend “immediate animation,” or “immediate hominization,” the thesis that the human soul is infused at conception,<sup>9</sup> and again, they assert that a human zygote is a human being.

Part of the philosophical justification for **C** is often the broader, and widely accepted, metaphysical proposition that there is no gray area between being and non-being. I have in mind, for instance, Roderick M. Chisholm, who writes, “I am certain that this much is true: if I’m a real thing and not just a *façon de parler*, then neither my coming into being nor my passing away is a gradual process—however gradual may be my entrance into and my exit from the class of human beings.” Chisholm argues that whatever I may be, as a “real thing” – and not a mere figure of speech as, for instance, a legal or literary fiction would be – I cannot be the sort of thing that comes into existence gradually.<sup>10</sup> This distinction between “my coming into being,” and “my entrance into the class of human beings,” clearly indicates a distinction between the person and the person’s body. Alexander Pruss’s argument to the effect that one is rather identical with the zygote from which one grew because the zygote never died is an interesting development of a different idea based on Chisholm’s principle that there is no gray area between being and non-being. Though Pruss does not explicitly articulate the proposition that there is no gray area between being and non-being, it does seem to me to be a clear presupposition of his argument, as it is of other arguments for immediate hominization.<sup>11</sup>

In order to clarify it, let us also reformulate the anti-gray area proposition somewhat, so that its apparent usefulness in supporting **C** is clear.

**M:** A thing of a given kind either exists OR it does not, at any given time.<sup>12</sup>

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<sup>9</sup> See Haldane and Lee, *Aquinas on Human Ensoulment*, 273-274, n.26.

<sup>10</sup> Roderick M. Chisholm, *On Metaphysics* (Minneapolis, MN: University of Minnesota Press, 1989), ch. 6, “Coming into Being and Passing Away: Can the Metaphysician Help?” 59.

<sup>11</sup> See Alexander R. Pruss, “I Was Once a Fetus: That is Why Abortion is Wrong,” in Koterski, *Life and Learning*, 169-82.

<sup>12</sup> Exclusive ‘or.’ The disjuncts are mutually exclusive and collectively exhaustive.

In what follows, I shall attempt to show that even if we accept **M**, we should not necessarily accept **C**. The problem is that we have no way of knowing when the first moment of a human being's existence is, a point that I shall explain further on. Thus the metaphysical proposition (**M**) may be true, but it is not possible to apply it to human coming to be. In what follows, I presuppose a substance metaphysics throughout and shall try to show that human coming to be is a gradual process. But I shall not claim that human beings themselves are processes. I shall make general reference to the attributes that human beings have, but I do not mean to identify human beings with their attributes.

***Some Possibilities Concerning Human Coming to Be.*** There are several ways to conceive of the coming to be of humans and other kinds of animals. Let us consider four of these, confining our considerations to the case of what Aristotle called, "rational animals."

*The **assembly of parts** criterion.* It is possible, in the spirit of Epicurus, Lucretius, and some versions of scientific materialism, that human beings begin to exist when they acquire their constitutive physical parts, the limbs and organs and so forth that give them their distinctive human appearance. This criterion accords easily with common sense and identifies the coming to be of a human being with the assembly or recognizable growth of its parts, not with their function. On this view, as an eighteenth-century physician is said to have opined, the only sure evidence of death would be putrefaction, i.e., the clear "disassembly" of parts.<sup>13</sup>

*The **brain function** criterion.* A second possibility is that human beings begin to exist when they acquire a certain level of brain function (and that they cease to exist when they lose this function).<sup>14</sup> Acquisition of brain function, then, would be the criterion of membership in the human species, and the function specified would be that of

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<sup>13</sup> See John D. Arras and Bonnie Steinbock, Eds., *Ethical Issues in Modern Medicine* (Mountainview, CA: Mayfield Press, 1999), 143-69.

<sup>14</sup> This accords with the Lockean definition of person in terms of attributes sometimes possessed. See *An Essay Concerning Human Understanding*, ed. A.D. Woozley (Clinton, MA: New American Library, 1974), Book One, Ch. 27, section 9, 206-220. It is also harmonious with so-called dual aspect theory. See Thomas Nagel, *The View From Nowhere* (Oxford, UK: Oxford University Press, 1986), 28-53.

the “higher brain” or cerebral cortex, because this is the function that is distinctively human.<sup>15</sup> This criterion is a bit more sophisticated and also in some ways more modern than the first. Notice that acquisition (or loss) of function is possible only for an organism that already has sufficient and appropriate organization and complexity. In other words, when the body of the individual possesses a brain of the right type, then onset of brain function may occur. Sometimes part of this general view is captured by the proposition that mind is an emergent or supervenient property of matter.<sup>16</sup>

*The rational soul criterion.* A third possibility, in the spirit of Aristotle, is that human beings begin to exist when they acquire their “form,” i.e., their specifically human soul.<sup>17</sup> This criterion has features in common with both the first and the second criteria, yet it is also distinct. If ensoulment is the beginning of human existence, then clearly this brings function with it; that is to say, it is in virtue of ensoulment that a human being has what we now think of as higher brain function. But the soul is not simply the function; rather it is what produces the function. This reverses the priority of possibility according to the brain function criterion, in which rational functions are caused by, or emerge from, brain structure of a given type. Also, if ensoulment is the beginning of human existence, then the assembly or growth of the appropriate parts is crucial (a non-human physical object cannot have a human soul), but again, the assembly or growth is the effect and not the cause of the appropriate form, i.e., the human soul. So this third possibility is not identical with the assembly of parts criterion. The acquisition of form, unlike the acquisition of function, or the assemblage of parts, is not empirically verifiable except indirectly, through its effects. (These effects *are* empirically verifiable, a point that will be important later in our discussion.) Aristotle held that a non-living human being is not

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<sup>15</sup> This is the view advocated by Harold J. Morowitz and James S. Trefil in *The Facts of Life: Science and the Abortion Controversy* (New York and Oxford: Oxford University Press, 1992).

<sup>16</sup> See Dale Jacquette, *Philosophy of Mind* (Englewood Cliffs, NJ: Prentice-Hall, 1994), 19, and 129-34. See also Morowitz and Trefil, *The Facts of Life*, 100.

<sup>17</sup> For a recent extended defense of “soul talk,” see Stewart Goetz and Charles Taliaferro, *A Brief History of the Soul* (Chichester, UK: Wiley-Blackwell, 2011). Chapters 6, 7, and 8 in particular provide a defense of the immaterial soul in response to contemporary objections from scientific physicalism and linguistic philosophy, among others, as well as indicating a sense of where research into the soul might go in the future.

really a human being in the strict sense, since for him human life was an activity, and primarily a rational activity.<sup>18</sup>

*The detachable soul criterion.* A fourth possibility, in the spirit of Plato, is that human beings come to be as we know them when their eternal souls acquire temporal bodies.<sup>19</sup> This criterion is more abstract than the others in that it posits the existence of an eternal object, the human soul, and asserts that what comes-to-be is a physical body that cannot really exist, or not for long, without the soul, although the soul can exist without it. The coming to be of this body might be something like the assembly or growth of parts and acquisition of function discussed above, but that would not strictly-speaking be the coming to be of a complete human being. In fact, the interesting thing about this fourth possibility is that it almost dispenses with human coming to be and passing away. Thus Socrates famously exhorted his friends, before he drank the hemlock, to bury him any way they liked, *if they could catch him*.<sup>20</sup>

I deliberately omit questions about when a human being becomes a person. The term ‘person’ is a contentious one, but important for discussions about the ethical permissibility of abortion, physician assisted suicide, euthanasia, stem cell research, and so forth. However, the metaphysical issues concerning the coming to be of a human being and the coming to be of a human person are for my purposes the same. So for the sake of simplicity, I have not distinguished the two. It is worth noting, though, that two main definitions of ‘person’ are in common usage. One, taken from Boethius, is that a person is “an individual substance of a rational nature.” The other, in the spirit of John Locke according to Peter Singer, is that a person is an individual who is self-aware and future-oriented, i.e., capable of thinking of him- or herself as persisting in time and thus as having social and political interests. Singer implicitly rejects a definition of ‘person’

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<sup>18</sup> For a recent treatment of the Aristotelian and Thomistic account of the nature of a human being, see Jason T. Eberl, “Aquinas on the Nature of Human Beings,” *The Review of Metaphysics*, Vol. LVIII, No. 2, 333-365. Eberl responds to Joseph Owens, Robert Pasnau, Eleanor Stump, and others, as well as providing a modernized account of Aquinas’s view.

<sup>19</sup> See Plato, *Phaedo* (as well as discussions in the *Meno*, *Phaedrus*, *Republic*, and *Symposium*) in *Plato: The Collected Dialogues*, eds. Edith Hamilton and Huntington Cairns (Princeton: Princeton University Press, 1969), 40-98.

<sup>20</sup> Plato, *Phaedo*, 115c-d, in *The Collected Dialogues*, 95.

based on the inherent nature of an entity (Boethius) in favor of a definition of ‘person’ based on attributes sometimes possessed by an entity (Locke). But I think that the Boethian definition is preferable both for ‘person’ and for ‘human being.’<sup>21</sup>

***Gradual vs. Instantaneous Coming to Be.*** It has been claimed that gradual coming to be is conceptually incoherent, so let us begin with the instantaneous variety. What kinds of things come to be all at once? Ideas “pop into our heads,” sounds and other perceptual qualities can appear to us seemingly “out of nowhere,” the appearances of objects (as distinct from the objects themselves) often arise spontaneously and disappear in the same way. These are all in some sense psychological objects, however. Physical objects that come to be instantaneously, or appear to do so, include things like clouds and sea foam, and possibly mineral crystals, which are relatively simple, homogeneous objects, certainly by comparison with organisms. Objects approaching from the distance appear instantaneously, but we do not think that they come into being instantaneously. The upshot seems to be that among things that come to be instantaneously there are to be included only psychological objects and perhaps simple, homogeneous physical objects, but not complex physical objects like organisms.

Concerning organisms, common sense seems to tell us that they come to be gradually; flora and fauna come into existence by stages, such that there is a period of time during which you could not say for sure whether the oak tree, or the lamb, or the human infant existed or not. Part of the reason why we think of these things as coming into existence gradually is that they are composed of heterogeneous parts. When the parts are all assembled, or all grown, or when they have taken the appropriate shapes and positions relative to one another, then we say that the thing in question exists. Thus, when the seed is germinating, when the fertilized egg is implanting, when the embryo is developing into a recognizable human fetus (but has not done so yet), common sense

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<sup>21</sup> Singer, *Rethinking Life and Death*, 162. Boethius’ definition is to be found in the “Treatise Against Eutyches and Nestorius,” in Boethius, *Theological Tractates*, tr. H.F. Stewart, E.K. Rand, S.J. Tester (Cambridge: Harvard University Press, 1973) 72-129, in particular 85. Locke’s definition is to be found in *An Essay Concerning Human Understanding*, 211: “. . . a thinking intelligent being, that has reason and reflection, and can consider itself as itself, the same thinking thing, in different times and places.”

might refuse to answer—affirmatively or negatively—the question whether the oak tree, or the lamb, or the human infant exists. The seed is hidden in the ground; the zygote is hidden in the womb; the embryo’s mother is pregnant. In other words, as far as existence goes, reference is made to some other entity as actually existing—the ground, the womb, the mother—while the entity in question is *coming to be*.

This common-sense account is held to be conceptually unintelligible, however, on the grounds of **M**, that anything at all that we refer to must either exist or not exist at any given time.<sup>22</sup> Forced to choose, then, people will say that a human being exists as soon as an ovum is fertilized, rather than countenance an apparent limbo between being and non-being. Thus the late U.S. Congressman, Henry Hyde, once declared himself to be a “992-month-old embryo.” It takes a certain degree of mental agility to see an eighty-two-year-old man as an embryo, or for that matter, to see a minimally differentiated cluster of cells as a human being. Why is it ever thought to be acceptable to see things this way?

The answer seems to be, to paraphrase Aristotle, that perceptual improbabilities are thought preferable to conceptual impossibilities.<sup>23</sup> This preference is hardly a new phenomenon. Beginning with Parmenides, who declared motion and change to be impossible on the grounds that they are unintelligible, Western thought has repeatedly taken the attitude, “these are my theories, so much the worse for your facts!”

*In Defense of the Gray Area.* When it comes to metaphysics, it seems to me that the healthy attitude is rather, “these are the facts, so much the worse for our theories.” If the gray area between existence and non-existence is conceptually incoherent, and it may well be, but at the same time the gradual development of organisms over time is an obvious fact, then we ought to bite the bullet and make room for the gray area. This means that we will have to admit there is a period of time during which any organism coming to be is indeterminate as to its existence or non-existence, not as an entity *per se* but as an individual member of a given species. In other words, though there may be no

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<sup>22</sup> Contemporary philosophical discussion about whether non-existent entities can have properties may be found in Derek Parfit, *Reasons and Persons* (Oxford: Clarendon Press, 1984), especially Appendix G, “Whether Causing Someone to Exist Can Benefit This Person,” 487-490.

<sup>23</sup> See *Poetics*, chapter 24, 1460a25-30, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1970), 1482.



doubt as to whether a zygote, blastocyst, embryo, or fetus exists, i.e., some *human thing* exists,<sup>24</sup> yet there will be no determinable and very early first moment such as conception or syngamy at which it is true that the *human being* begins to exist. Why not? Because for some period of time the entity, which becomes the human being, cannot be said to exhibit that feature, namely a functioning cerebral cortex, which distinguishes human beings from all other animals, defining the species; hence it cannot be said to *be* one. And when it has begun to exhibit that feature this is because its recent, but not most recent, previous stages were such that they would in the near future, but did not yet, exhibit that feature. Hence the period of indeterminacy, the gray area.<sup>25</sup> Yet also notice that the indeterminacy is a function of two factors: 1) our inability to know; and 2) the fact that “human life” is really an abstraction. As to 1), the indeterminacy is in the object, the gradually developing fetus, but knowledge presupposes determinacy. As to 2), what exists is primarily an individual, in this case, an individual human being; thus in the abstract sense, human life may be said to begin at conception, but that is not helpful because at issue is when this or that living thing becomes an individual human being.<sup>26</sup> A

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<sup>24</sup> I deliberately avoid the expression, “human tissue,” because of its connotations in the abortion debate. Presumably, though one may doubt this, human tissue is not something that we need be morally concerned about. But as I understand the expression “human thing,” it is neutral as to whether it involves moral standing of any kind, in other words, it may indeed have moral standing, or, like fingernail clippings, it may not.

<sup>25</sup> See Morowitz and Trefil, *The Facts of Life*, 10-11, 19-20, 75, 155. See also Charles C. Camosy, “The Moral Status of Anencephalic *Homo sapiens*,” in *Contemporary Controversies in Catholic Bioethics*, Vol. 127 of *Philosophy and Medicine*, Ed. Jason T. Eberl (Springer: 2017), 56-58. He notes that it is, “important to acknowledge that there is no single ‘moment’ where the entity in question instantly becomes a person with a rational nature.”

<sup>26</sup> It is quite interesting in this connection to notice that textbooks in embryology devote a great deal of attention to teratology and teratogens, the study of congenital abnormalities and their causes. Embryos (so-called until after the eighth week of gestation) and fetuses (so-called from the beginning of the ninth week until birth) sometimes do not look like human beings at all, except to the trained eye, and what that eye is trained to see is precisely the developmental stages in which the embryo or fetus has no ordinarily discernable human bodily features, as well as those developmental failures and abnormalities that have been called “fetal monsters.” Embryology seems to me to be an exquisite study in indeterminacy. See Bruce M. Carlson, *Human Embryology and Developmental Biology*, Third Edition (Philadelphia, PA: Mosby, Inc., 2004), especially 151-169. Photographs throughout are not for the faint of heart.

four-week-old embryo that still has a tail, but is not yet capable even of reflex action, is not yet a human being, I would say, though it is a human thing. Possibly an eight-month-old anencephalic fetus might never become a human being, though it, too, is human.

A common objection to my view is that even the zygote exhibits the feature of having the complete DNA code of the adult organism, and so it constitutes—from the moment of conception, or the moment of syngamy—the complete organism in miniature. The implausibility of this claim is evident, however, when we consider why it is made, i.e., to avoid the admission of gradual coming to be, and especially when we consider the vast array of entities which it would apply to and which would thereby count as human beings. For if every cell of the body has a complete DNA code for a unique individual, and every gamete—sperm or egg—has the capacity under the right circumstances to produce an entity with a complete DNA code, then every human cell is either actually or potentially a human being on this view.<sup>27</sup> But this is entirely unlikely, not so much on conceptual grounds, but rather on perceptual grounds. Despite popular views about cloning, there is no way I can regard a single cell, or an undifferentiated or even insufficiently differentiated cluster of cells, as a human being without completely ignoring the evidence of my senses. But that is what this view bids us do. For conceptual—not to say ideological—reasons we are encouraged to take leave of our senses and accept a proposition on what amounts to blind faith. True, the zygote may be the *first* of a series of cells to contain a unique, complete DNA code. But again, whether this first cell is to become twins or more individuals, or part of an individual, or a fetal monster, or an anencephalic baby is not known at the outset. Thus the zygote cannot be said to be an individual human being, unless, perhaps, one thinks that DNA *is* the soul (or souls). But the prevalence of chimeras, individuals having more than one complete set of DNA in their bodies due to fusion of zygotes or other causes, poses insuperable problems

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<sup>27</sup> See Lee and George, *Body-Self Dualism*, 129-130; they do distinguish carefully between somatic cells (which may be used in cloning), and the totipotent zygote. See also J.R. Meyer, "The Ontological Status of Pre-implantation Embryos," in Eberl, ed., *Contemporary Controversies*, 17-24. Meyer holds that the objection from cloning is irrelevant. (22) He also notes that "totipotency is a hypothetical possibility, not a real potentiality." (18)

for this notion.<sup>28</sup> A similar problem is posed by sesquizygotic twins, which result from an ovum that has been fertilized by two sperm such that when it splits the result is twins who have just half their DNA in common.<sup>29</sup>

Why not, instead, accept the evidence of our senses and admit that human beings come into being gradually, over time? Let us take a look at the conceptual adjustments this admission would require.

*Human Coming to Be as a Physical Process.* If we return now to the four possible criteria of human coming to be noted above, we may recognize a further difference among them. Criteria **1** and **2** assume that human beings are essentially physical beings, criterion **3** assumes that human beings are essentially both physical and spiritual beings, while criterion **4** assumes that human beings are essentially just spiritual beings. For criterion **4**, the gradual coming to be of the material conditions for a human being is non-problematic because the human being him- or herself does not come to be at all, or cease to be; rather he or she exists eternally in a spiritual realm. Thus if I adopt criterion **4** as being the truth, then there is no need to accept **C**, that a human being comes to be at the moment of conception, because strictly speaking, a human being does not *begin* to exist at all. Even if we depart from Plato and assume that the human soul is created or pops into existence at a given moment, it would still not be true that its entrance into a human body (zygote, blastocyst, embryo, or fetus) constitutes the beginning of its existence according to criterion **4**.

So, it is only if I adopt criterion **1** or **2** or **3** that I may be inclined to assert the Conception Thesis, because I want to be able to say that a single individual, physical thing, throughout its existence, is identical with the human being in question. This way I

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<sup>28</sup> Tim Flannery, "Our Twisted DNA," review of Carl Zimmer, *She Has Her Mother's Laugh: The Powers, Perversions, and Potential of Heredity* (New York: Dutton, 2018) in *The New York Review of Books*, March 7, 2019, Vol. LXVI, Number 4, 38-39. "Recent advances in genetic analysis have revealed that chimerism is common. In fact, chimeric individuals may be the rule, rather than the exception, among mammals."

<sup>29</sup> Newsweek, "Extremely Rare Set of Semi-identical Twins Born," 2/28/2019: <https://www.msn.com/en-us/health/health-news/extremely-rare-set-of-semi-identical-twins-born/ar-BBUaK17?ocid=spartandhp>

do not have to say that there is a period of time when the human being's existence is indeterminate (in a gray area), or perhaps that an individual human being is not identical with itself over time. But oddly enough, if I adopt criterion **1** or **2** or **3**, it also becomes wildly improbable for me that a zygote, or a blastocyst, or an early embryo is a human being. For none of these has the parts (**1**) nor the functions (**2**) nor the form (**3**) of a human being.

Many a reader may be thinking at this point, that Aristotle's concept of potentiality would solve the problems that I pose here, but I doubt that. For one thing, it is not clear, during the course of very early embryonic development, whether the organism in question is potentially a human being, or several human beings,<sup>30</sup> or a chimeric fusion of two zygotes,<sup>31</sup> or sadly, a stillborn "monster." The only ways to assure that it potentially had the functions or the parts or the form of a human being are either to wait and see or else to define human nature normatively, i.e., to stipulate that a human being exists in every case in which we determine that it "ought" to exist. But this would beg our question.<sup>32</sup>

Thus we are left with the following alternative: either human beings are essentially spiritual beings, and their coming to be, if any, is not a physical, and hence not a gradual process (it may be like the coming to be of an idea), yet the zygote *may* actually embody a human being; or else human beings are essentially physical organisms, and their coming to be is a physical, hence gradual process, the very early stages of which are *not* possibly already an individual human being.

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<sup>30</sup> Lee and George, *Body-Self Dualism*, 123-125; they respond to this objection by saying that fission is common in nature, e.g., in the case of flatworms.

<sup>31</sup> See Carl Zimmer, *She Has Her Mother's Laugh*, 370-391.

<sup>32</sup> However, for a very complete and scholarly discussion of these issues as they arise in the philosophy of Aristotle, see Mary Louise Gill, *Aristotle on Substance: The Paradox of Unity* (Princeton, NJ: Princeton University Press, 1989). In an extended discussion focused primarily on *Metaphysics 7 (Zeta)*, ch.3, she discusses form, the status of matter, horizontal and vertical unity of organisms, and two models of the potentiality/actuality relationship. She also mentions the status of the *katamēnia*, i.e., the uterine blood of the female that was thought to provide matter for the efficient factor or semen. 92, 162.

If human zygotes are human beings, though, they exhibit no empirically observable signs even of being sensate or aware. An embryo first exhibits *reflex activity* in the sixth week of development,

. . . when touching the perioral skin with a fine bristle is followed by contralateral flexion of the neck. Over the next 6 to 8 weeks, the region of skin sensitive to tactile stimulation spreads from the face to the palms of the hands and the upper chest; by 12 weeks, the entire surface of the body except for the back and top of the head is sensitive.<sup>33</sup>

This fascinating bit of information lends support, I think, to the idea that early human development is a gradual process in all its aspects. For the “skin sensitive to tactile stimulation” is not at all sensitive in the way that an individual human being would be; rather it exhibits an automatic response without consciousness. Thus even the human embryo at six weeks gestation is not yet an individual human being.<sup>34</sup>

Though this argument may appear to prove too much, because it would also support the idea that a human being in a vegetative state is not really a human being, the cases are not parallel. It seems natural for a zygote or blastocyst or embryo to be in a vegetative state,<sup>35</sup> and no more cause for alarm than if a cabbage were to be found in a vegetative state. By contrast, a child or adult human being in a vegetative state is a clear indication that something has gone wrong or at least that some function has been suspended. Thus we should distinguish between entities inherently incapable of conscious functions and those that have lost this capacity. A sleeping baby is potentially conscious; a sick or injured human being in a vegetative state once was conscious and may be conscious again; but a human zygote or blastocyst or embryo, as such, is not

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<sup>33</sup> Carlson *Human Embryology*, 267-71 and 274.

<sup>34</sup> But see D. Hershenov and R. Hershenov, “The Potential of Potentiality Arguments,” in Eberl, ed. *Contemporary Controversies*, 35-51. “The future good must be in the mindless being’s interest when it is mindless.” (40) The Hershenovs hold that a human zygote or blastula or embryo is a mindless human being, but an individual human being nonetheless, such that, “the wrongness of abortion is roughly the same as that of infanticide, and the latter is very wrong.” (50)

<sup>35</sup> We might be tempted to say, in the spirit of Aristotle, that the human zygote has a human vegetative soul. Then later, the human embryo has a human sensitive soul, and later still, the human fetus has a human rational soul. However, only the rational soul is distinctively human. See Aristotle, *De Anima*, in *The Basic Works of Aristotle*, 535-603.

possibly conscious. Or we could say, in the latter cases the potentiality for consciousness, if any, is remote, while in the case of the sleeping baby the potentiality is proximate.

This point has been contested, of course, by Lee and George among others. Lee and George claim, without citing a source, that a fetus at 8-10 weeks gestation can feel pain, for instance.<sup>36</sup> But there seems to be no scientific evidence for this claim, or for any claim that the fetus has any kind of consciousness before about 24 or 25 weeks gestation. Consciousness in humans is always accompanied by physical organs and processes which take time to develop.

By contrast, if human beings were essentially spiritual beings, rather than physical ones, with the consequences noted above, then they would also be complete in any of their forms. Thus I would not need to worry, if I believed this, about what happened to “extra” fertilized eggs that are the by-products of *in vitro* fertilization, or about cloned cells, or about the embryos used in stem-cell research. I could be happy (or Plato might point out, unhappy)<sup>37</sup> for the so-called “snowflake children” (that is, children born after abandoned frozen embryos have been adopted, gestated, and given birth to by somebody other than their original parent), without having had any concern for their antecedents. It is only if I consider human beings to be essentially physical beings that these matters

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<sup>36</sup> Lee and George, *Body-Self Dualism*, 120. “For example, as early as eight or ten weeks of gestation, the fetus has a fully formed beating heart, a complete brain (though not all of its synaptic connections are complete – nor will they be until some time *after* the child is born), a recognizably human form, feels pain, cries, and even sucks his or her thumb.” Yet, Morowitz and Trefil speculate that apparent evidence of electrical activity in the fetal brain is traceable to a 1963 Finnish study of aborted but still living fetuses which were found to have some electrical activity in the brain as early as eight-and-a-half weeks’ gestation. However, this was not “the kind of organized activity we associate with the EEG”, rather it was the same as any cell, even a paramecium, would exhibit. Morowitz and Trefil, *The Facts of Life*, 122-125. Moreover, it is impossible for the fetus to feel pain before about the 25<sup>th</sup> week (Morowitz and Trefil, 157-159). See also this source from the National Institutes of Health: Stuart W.G. Derbyshire, “Can fetuses feel pain?”, *BMJ*, April 15, 2006, 332(7546) 909-912 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1440624/>

<sup>37</sup> See Plato, *Gorgias*, the discussion of the helmsman’s modesty at 511d-512c, in *The Collected Dialogues*, 293-294. The helmsman can bring his passengers safely into port, but does not know which of them he has benefited and which he has harmed thereby.

concern me and I need to have a coherent understanding of the metaphysical and moral status of the zygote, the blastocyst, the early embryo.

Therefore, it must be on the assumption that human beings are physical beings that philosophers assert the Conception Thesis. The detached soul criterion, as we have seen, altogether dispenses with conception as the beginning of the existence of a human being. The other three criteria we have discussed – assembly of parts, brain function, and rational soul (as form of the body) – all do assume that human beings are physical beings. But none of them is such that the conception thesis could be true. Human acquisition of brain function, or of the proper assembly of parts, or of a rational soul, all take place gradually. Therefore, only if human beings are physical beings, and not detached souls, could the Conception Thesis be true. But on this assumption the Conception Thesis could not be true.

*Taking physical development seriously.* Aristotle taught that man is a rational animal, and Thomas Aquinas agreed that the intellectual soul is the form of the body, i.e., that the body thus formed is man.<sup>38</sup> To this extent at least, then, there is in philosophical tradition an impulse to see human beings as conscious physical beings. There is also a strong tradition of reverence for the human soul, respect for human dignity,<sup>39</sup> and a belief in the sanctity of life. In recent decades, these latter ideas have been wed by many to the Conception Thesis, but it is my contention that if we take seriously the physical dimension of being human, we ought to back away from that thesis. No doubt there is a first moment of existence for each of us, at some time well after the possibilities of

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<sup>38</sup> See Thomas Aquinas, *Summa Theologiae*, I, Q.76, a.4, in *Basic Writings of Saint Thomas Aquinas*, Vol.1, ed. Anton C. Pegis (New York: Random House), 707-710.

<sup>39</sup> For a very thoughtful and helpful discussion of the demands made upon us by our respect for human dignity, see Ted Peters, “Embryonic Stem Cells and the Theology of Dignity,” in Suzanne Holland, Karen Lebacqz, and Laurie Zoloth, Eds., *The Human Embryonic and Stem Cell Debate: Science, Ethics, and Public Policy* (Cambridge, MA: The MIT Press, 2001), 127-39. Peters points out that the proponents, and not only the opponents, of human embryonic stem cell research are properly motivated by a concern for respecting human dignity, but also insists that, “Becoming a human being requires more than a genome; it requires an intentional, nurturing, relational community.” (128) See also Ernlé W. D. Young, “Ethical Issues: A Secular Perspective,” in Holland *et al*, 163-74. Young rightly notes that the principle of respect for life does not entail the granting of human rights to zygotes and blastocysts, yet it does “require that preembryonic human tissue be treated respectfully.” (173)

fission (twinning) and fusion (chimerism) have passed and some time shortly before or early in the third trimester of pregnancy. Morowitz and Trefil designate the period from 25 to 32 weeks gestation.<sup>40</sup> But the exact moment could never be designated, for not only can it vary somewhat from one individual to another, but it is also necessarily hidden in the mystery and complexity of the neurological wiring and activation of the cerebral cortex. At a certain interval either side of this moment, the question concerning existence of a human being is indeed clear: a human embryo at 8 weeks gestation is not yet a human being, but a human fetus at eight months' gestation is. The unclear interval in the life of the fetus, while the cerebral cortex is being "wired" and integrated with the rest of the brain and the body, ought to be acknowledged for what it is—the gradual physical process of the coming to be of a human being. This does not violate the metaphysical principle that "there is no gray area between being and non-being." Rather it simply refuses to make inappropriate use of this principle, as formulated (M), for the case of human coming to be.

***Implications for Human Dignity.*** Of course, there are important ethical reasons to insist that some identifiable period, such as 24 to 28 weeks gestation, be *regarded as* the beginning of a human being's existence. But we should not expect to find a more precise moment applicable to every single case, nor more narrowly specifiable. We ought to admit that our justification for choosing this period, though it is based on science, is also based on ethical concerns and that it is reasonable to "err" on the early side, considering the fetus to be an individual human being at less than 24 weeks gestation, but ethically risky to extend the period on the later side, denying the fetus the moral status of an individual human being at more than 24 weeks gestation. In a word, caution about the beginning of a human individual's life is to be based not only on facts but also on a distinctly *ethical* principle.

Ethical principles can be known. They can be rationally ascertained and applied in specific circumstances; but they cannot be determined by circumstances. In what follows, I shall assume a teleological ethics, that is to say, in the spirit of Aristotle and

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<sup>40</sup> Morowitz and Trefil, *The Facts of Life*, 119.



Thomas Aquinas, purposes and consequences do matter but, in the spirit of Kant and John Rawls, ethical principles and certain ethical absolutes matter more.

*Intrinsic Value and Instrumental Value in Relation to Human Life.* I take it as a fundamental moral principle that human beings have intrinsic value, that they are ends in themselves, that they have, as Kant says, *dignity* which cannot be reduced to price. They are not the only things that have intrinsic value, of course. Perception, knowledge, truth, maybe every living thing as well, have intrinsic value. Many things that have intrinsic value also have instrumental value, and human beings may be included here; what *cannot* be said of human beings, however, is that they have *merely* instrumental value. As Kant recommended with his Practical Imperative, “Act in such a way that you treat humanity, whether in your own person or in the person of another, always at the same time as an end and never simply as a means.”<sup>41</sup>

Consider the issue of the intrinsic value of human beings as it can arise in wartime. Suppose a rifle squad in urban warfare encounters insurgents firing from the second floor of a five-storey apartment building.<sup>42</sup> Residents unfortunate enough to be inside their apartments at the time might be considered collateral damage if action by the rifle squad to eliminate the threat from the insurgents also takes their innocent lives. It seems evident that “collateral damage,” as applied to human beings, is a prime example of treating human beings as means merely. In other words, it ought to be absolutely prohibited from an ethical standpoint. The ethical principle operative here also applies to questions involving the beginning of a human being’s life: It is wrong to kill an innocent human being as a means of pursuing other ends.

*The Transcendent Value of a Human Being.* Human beings have intrinsic value of a special kind which I call “transcendent” in order to indicate that it is unique to human beings and that it is, so to speak, a higher kind of intrinsic value than that possessed by any other kind of existent. The exceptional status of human beings has been called into question in our day, for instance, by Peter Singer who holds that the interests

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<sup>41</sup> Kant, *Grounding*, 36.

<sup>42</sup> Example and analysis taken from Richard A. Gabriel, *The Warrior’s Way: A Treatise on Military Ethics* (Kingston, ON: Canadian Defense Academy Press, 2007), 61-63.

of all sensate creatures are to be weighed the same,<sup>43</sup> and by People for the Ethical Treatment of Animals (PETA) as well as other animal rights activists.<sup>44</sup> Without going into the details of this dispute, let me simply say that I take the side of human exceptionalism because I think that it is reasonable to do so. The very question whether human beings have transcendent intrinsic value is one that no other creature known to us is equipped to entertain. From a human standpoint, as Kant has explained at some length, human beings are, in fact, at the center of all ethical considerations.<sup>45</sup> True, many other animals communicate (bees, ants, whales, and so on), many other animals deliberate in some fashion that we can discern (dogs, pigs, cats), and some animals are able to make change and to deceive (“human” capacities also found in the “higher” apes). Peter Singer’s Lockean definition of ‘person’ leads him to conclude that many non-human animals are persons and that many human beings are non-persons. However, the Boethian definition of ‘person’ which I prefer, as mentioned above, namely, that a person is an “individual substance of a rational nature,” was devised to apply strictly to human beings among animals on Earth.<sup>46</sup>

Biologically, what distinguishes human beings from all other animals on Earth is their cerebral cortex. This is what makes us human, capable of conceptual thought and speech, of imagination and consciously purposeful behavior.

To put the same point in philosophical or theological language, what distinguishes a human being is that he or she has a human soul, which is a rational soul,<sup>47</sup> in other

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<sup>43</sup> Peter Singer, *Practical Ethics*, Second Edition (Cambridge: Cambridge University Press, 1993), 55-62.

<sup>44</sup> For information on PETA see <https://www.peta.org/about-peta/why-peta/why-animal-rights/> where the organization explains their debt to Peter Singer and quotes their founder, Ingrid Newkirk, who famously claimed “a rat is a pig is a dog is a boy.” Other animal rights organizations include the Wildlife Conservation Society and United Animal Nations.

<sup>45</sup> See Kant, *Critique of Judgment*, Trans. J.H. Bernard (New York: Hafner Press, 1951), 304-305. See also Susan F. Krantz, “Humility and Teleology in Kant’s Third Critique,” *American Catholic Philosophical Quarterly*, Volume LXVI, 1992, 85-98.

<sup>46</sup> It is designed also to apply to supernatural persons such as angels, and the three persons of the Trinity, thus making an implicit claim about human dignity.

<sup>47</sup> The tradition is to define man as *animal rationale* in Latin, *zoē logikē* in Greek. Both expressions have the connotation “an animal that can speak.” Perhaps we could modify

words, an immaterial soul with an immaterial function, namely knowing, understanding. It is the dignity of the human soul which lends dignity to the human body, to the whole human being; this is the source of the transcendent intrinsic value of a human being.

Returning now to the four criteria of the beginning of the life of a human being, let us examine them with reference to this human soul. According to the **assembly of parts criterion**, in the spirit of the ancient Epicurean philosopher Lucretius, and in the spirit also of today's scientific materialism, a human being begins to exist when he or she begins to possess all of his or her constitutive physical parts. Is there room for a human rational soul on this view? Yes, if we regard the soul as a physical part of the body – for Lucretius, something like a thin vapor inhabiting the whole organism, for modern science, the brain. But no, if we regard the soul as an immaterial entity, as Boethius did.

According to the **brain function criterion**, that a human being begins to exist when the cerebral cortex begins to function, we had said that this can lead to the view that the mind is an emergent or supervenient property of matter. Is there room for a human rational soul on this view? Yes, if we regard the soul as likewise an emergent property of matter, an effect like brain waves. But no, if we regard the soul as the causal actuator of the human being.

According to the **rational soul criterion**, in the spirit of Aristotle, a human being begins to exist when he or she acquires his or her specifically human form, the rational soul, which can be said to inform the body only when the body is sufficiently differentiated and organized. Likewise, a vegetative soul, capable of nutrition and growth, is present in a sufficiently complex cell; a sensitive soul, capable of sensation, pleasure, and pain, is present in a sufficiently complex and organized group of cells, an organism. Human development that has not reached the necessary level of organization is not animated by a rational soul; thus a fetus without a properly functioning cerebral cortex will not have this distinctively human soul until sometime near or in the third trimester,<sup>48</sup> nor on that account will it have transcendent intrinsic value, though it should

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this: “an animal that can think.” But it would be absurd to think that human beings are rational in the sense of always being reasonable by nature.

<sup>48</sup> Morowitz and Trefil, *The Facts of Life*, 146. They also observe that the point of viability coincides with the time when, “significant numbers of synapses in the cerebral cortex start to connect.” See also Stuart Derbyshire, “Can Fetuses Feel Pain?”

be regarded as having value and moral standing. In other words, the complexity of the DNA code in the zygote, though biologically necessary, is not, in Aristotelian terms, sufficient for attribution of a human rational soul. What is required is actual organic complexity and organization, not merely the “plan” for that. Moreover, not only can a fetus have more than one distinct, complete DNA code, but adult humans’ bodies comprise approximately 37 trillion cells and perhaps as many bacteria which have their own DNA. “This microbiome, as this [latter] collective is known, blurs any simple notion of what it means to be an individual organism.”<sup>49</sup> Thus the unifying power of the rational soul ranges over a multitude, and without sufficient structural diversity, a human being lacks the unity of function proper to its nature. But whatever that point is when the developing fetus does become capable of consciousness, of being a center of consciousness, from thence forward the rational soul will be what makes it an individual and an individual human being. Unlike an emergent property, or a physical brain as such, the soul thus construed is capable of mental deliberation and free actuation of the body.

According to the **detachable soul criterion**, in the spirit of Plato, there is no question but that the human rational soul exists, both before birth and after death of the body. In a very real sense, the human rational soul *is* the human being. Thus there is no reason at all why the zygote cannot have an rational soul. In other words, on this view, the zygote may well have a human mind with all its capacities intact, just not exercised yet as far as we can tell. Is there room, on this view, for the transcendent intrinsic value of a human being? Yes, provided we mean that the human *soul* has transcendent intrinsic value, not the body per se. But no, if we mean that the entire human being, body and soul unified, has transcendent intrinsic value, because the body and its development are in a way incidental to the identity of a human being, something we do not find proposed by the other three criteria.

*The Conception Thesis and the Value of a Human Being.* As noted above, the dignity of the human soul is what lends dignity to the human body, such that the whole human being composed of body and soul has dignity (not price), transcendent intrinsic value. Also, as noted in the first section, concerning the beginning of human life, the

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<sup>49</sup> Zimmer, *She Has Her Mother's Laugh*, 407. These bacteria synthesize vitamins, counter pathogens, and boost immunity, among other services.

Conception Thesis is not compatible with the view that the soul is a part of the body (assembly of parts criterion), nor with the view that what we call the soul is an emergent property (brain function criterion), nor with the view that the soul is the form of the body (rational soul criterion). The only one of the four views we considered that is compatible with the Conception Thesis is the Platonic view (detachable soul criterion). Setting aside Plato's belief that the human soul exists before it has a human body, let us suppose in the spirit of Christian Platonism, that the soul is infused or somehow imparted to the zygote, as the Conception Thesis requires. What are the implications of this view?

What is produced at the moment of conception (or at the moment of syngamy) is a single cell with the complete DNA code of a unique human individual, or part of a human individual, or two or more individuals. We know this thanks to the modern science of genetics and the discovery in the last century of the double helix, the chemical form of DNA. Is a human being's DNA his or her soul? It would at least appear to be, in some significant sense, the "form of the body" since together with indispensable environmental factors it determines every physical trait a human being will have and possibly many mental traits as well. It is at least odd, however, to identify the human soul, intellect and will, with a self-replicating set of chemicals. And it would be especially odd if the Platonic view (detachable soul criterion) turned out to cast the soul as something physical, such that the detachable soul criterion really reduces to the assembly of parts criterion, in other words, to a form of materialism.

If the human soul is not a material thing, like DNA or a brain or even an emergent property of a material thing, then it must be an immaterial thing. Advocates of the Conception Thesis, then, must be telling us that a complete human soul, an intellectual soul, is imparted to or infused in the human zygote. But I think there are insurmountable conceptual problems with this. First of all, in the case of twinning, the immaterial, intellectual soul would have to be split in two, while in the case of chimerism two human souls would have to be merged into one. These events are possible for material things but not for immaterial things generally and certainly not for minds or souls.<sup>50</sup> Secondly,

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<sup>50</sup> Lee and George, *Body-Self Dualism*, 123-124, propose an answer to the problem of twinning. Flatworms, they say, are capable of splitting in two; nevertheless the original flatworm was an individual. To my mind this plays fast and loose with the term,

the human zygote exhibits none of the conscious activity that is the effect of and caused by the human soul. If fetuses have been observed sucking their thumbs in utero, then there is evidence that they have reflexes, but the zygote and the blastula do not do this sort of thing and are not capable of doing it. Finally, there is no reason at all to think that the human zygote possesses a center of consciousness; indeed, although it is alive it is not sufficiently differentiated to have any sort of awareness at all either of itself or of anything in its environment.<sup>51</sup>

The only way the Conception Thesis could be true, then, is under the Platonic conception of a detachable soul. And the only way this view can be accepted is if we allow that a thing – the human zygote – may be said to have a human rational soul that contains in itself all the capacities and characteristics attributable to the human soul including transcendent intrinsic value, regardless of the sort of body it is “attached” to, provided only that that body have the right DNA.

However, the underlying and disturbing reality is that the detachable soul view denigrates the value of the human body. Rather than lending transcendent intrinsic value to the whole human being, this kind of immaterial soul perches in a human body for a time, perhaps peering out through its eyes, once they develop. It is like the captain of a ship, as Plato says, that could captain a different ship just as easily. But human beings are not like that. Their souls and bodies are intimately connected, so much so as to constitute one substance.<sup>52</sup>

The only one of our four metaphysical possibilities for the beginning of human life that maintains human dignity, I believe, is the rational soul criterion, the Aristotelian

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‘individual,’ which means a single, indivisible thing. Yes, flatworms, are splitable. If the human blastula is splitable, then I think it has approximately the nature of a flatworm at that point. Ford, *When Did I Begin?* 170-177, notes that once the primitive streak is formed the blastula/early embryo is no longer vulnerable to twinning hence, with good reason, he traces the beginning of the life of an individual human being to this stage rather than to conception. Certainly, a human being is at least a chordate.

<sup>51</sup> See Morowitz and Trefil, *The Facts of Life*, 113-121.

<sup>52</sup> Descartes makes this point forcefully in his Sixth Meditation, notwithstanding that many accuse him of substance dualism based on their reading of the first two meditations, I would say, and neglect of the sixth. See René Descartes, *Discourse on Method and Meditations on First Philosophy*, third edition, tr. Donald A. Cress (Indianapolis: Hackett Publishing Company), 93-105.

view. As we have seen, however, it is not compatible with the Conception Thesis. The conclusion, therefore, seems to be that in order to maintain respect for human life, in particular the transcendent intrinsic value of any human being, we ought to deny the Conception Thesis on the grounds that it fails to support the value of a whole human being, body and soul. But in rejecting the Conception Thesis do we run the danger of devaluing human life in its earliest stages?

This has been the claim of those who insist on the Conception Thesis and who reject the earlier Aristotelian/Thomistic view known as “delayed hominization.” Part of their argument is that in ancient times and especially in the middle ages when these speculations became important, little was understood about the generation of animals, in particular of human beings.<sup>53</sup> It was thought, for instance, that the semen provided form while the menstrual blood provided matter; nobody knew that mother and father each supply half of a baby’s genetic code. Not knowing what else could be there in the earliest developmental stages besides semen and blood, it was natural to assume that acquisition of human nature (hominization) happened at some later time during gestation, perhaps at several weeks into a pregnancy, perhaps at different times for male and female. What made sense in former times, Conception Thesis defenders argue, no longer makes sense now that we know the zygote immediately contains all the information needed, the whole genetic code, to produce a unique human individual. Thus they argue for immediate hominization.<sup>54</sup>

However, there are other reasons besides scientific ignorance to think that hominization is delayed, that is, that it occurs some time after conception. Many of these reasons I have already explained. It remains to address the most important of them in greater detail.

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<sup>53</sup> Haldane and Lee, “Aquinas on Human Ensoulment,” 264-267.

<sup>54</sup> Ibid., 268-273. In *Abortion and Unborn Human Life*, Lee presents two modern versions of the hylomorphic Aristotelian/Thomistic view: one proposed in 1970 by Joseph Donceel, “Immediate Animation and Delayed Hominization,” *Theological Studies* 31); and another proposed in 1990 by Thomas Shannon and Allan Wolter, “Reflections on the Moral Status of the Pre-Embryo,” *Theological Studies* 51. See Lee *Abortion and Unborn Human Life*, 83-93.

*The Delayed Hominization Thesis and Human Dignity.* First, and most important from a rhetorical perspective, the notion that a human zygote is a full-fledged human being, albeit at its earliest stage in life, is wildly implausible to most people. That the zygote, the blastula, even the very early embryo, have human rights, or should be granted human rights, is also not widely acceptable. On the other hand, when a baby is lost due to miscarriage at 12 or 13 weeks' gestation, many a mother and her family will mourn, and when a woman eight months pregnant is killed by a drunk driver most people will think in terms of a double homicide. Granted, the opinions of most people do not necessarily determine right and wrong. But I mean only to make a rhetorical point which is this: in defending human dignity, it is not wise to rest this defense on an implausible claim, namely, that a human zygote is a human being. The impression left is that some ideological purpose is being served rather than the truth. Worse, the implication is ready to hand that the value of a mature human being is no greater than that of a human zygote, on the assumption that their value is the same. At a minimum, then, I think it unwise to defend human dignity by refusing to accept gradual human development, including delayed hominization, the fact that the human being is not complete in the early stages of development in utero.

Second, there are other, better ways to think about why the vast majority of people actually do not take even the early termination of a pregnancy lightly. Everyone knows the zygote and blastula are alive. Everyone knows that the zygote and blastula are necessary conditions of the subsequent development of a human being. Even though the future course of the zygote or blastula cannot be known with certainty, the possibility that a fetus of twenty-four weeks gestation or more is such that it could shortly be or already is a human individual can be known. This means that after a certain point the decision to abort a pregnancy involves the risk that one is killing a human being, even when it does not involve the certainty. Ethically speaking, it is wrong to take that risk, unless there are overriding considerations such as a real threat to the mother's life. This sort of case is exactly parallel to situations in warfare when a soldier takes the risk of killing a non-combatant; it is wrong to take that risk, unless there are overriding considerations such as a real threat to the soldier's life. In both cases, there may be reasonable regret and remorse, whether or not one is certain of having done wrong.



Third, setting rhetorical and plausibility considerations aside, there is a fundamental truth about human nature which I think is disregarded by those who hold that the human zygote is already a human being. Like the **assembly of parts** criterion and the **brain function** criterion, the Conception Thesis sees human beings in purely physical terms. A human zygote, we are told, has a complete and unique DNA code which will unfold over time to reveal the human being that the zygote really is. But DNA is a chemical recipe, a set of amino acids; it is not an Aristotelian form, it is not even like a blueprint. DNA, deoxyribonucleic acid, *is* amino acids arranged in such a way as to be able to replicate themselves, while forming proteins, more or less perfectly over time.<sup>55</sup>

Perhaps realizing that it would be a mistake to reduce human individuality to DNA, advocates of the Conception Thesis, opposing delayed hominization, hold that the human zygote already has a human soul. In this, as I have indicated earlier, their view is rather like that of the **detachable soul criterion** because it appears that a whole human soul – will, intellect, passion – can reside in a single cell. Similarly, Roderick Chisholm has speculated that “I might be a part of my body,” i.e., that one’s self, the person, might in fact be a sub-atomic particle like a quark.<sup>56</sup> The thinking is, I know I am not strictly-speaking identical with my whole body, and I know that I am not identical with my brain, because I can perceive different things at once, I can compare things, and I can entertain complexity, all of which could not be done by a physically divisible entity. Like Plato and Descartes before him, Chisholm takes seriously what he terms “the primacy of the intentional.” And as a 20<sup>th</sup> century thinker, he avoids using the term ‘soul.’ Maybe advocates of the Conception Thesis could hold, then, that the soul is a quark (or some such) contained within the zygote (and later within the brain, as Chisholm speculates). What they cannot say, in my opinion, is that an immaterial human soul is infused in the zygote, because the zygote does not provide an adequate home for the human soul. Only

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<sup>55</sup> Zimmer raises objections to what he calls “genetic essentialism,” the view that a human being’s DNA fully determines their characteristics. Zimmer, *She Has Her Mother’s Laugh*, 316-319. People are fascinated with this idea in, as he puts it, “a society that practically worships DNA.”

<sup>56</sup> See Chisholm, *On Metaphysics*, 124-127. “If I am a physical thing, then the most plausible hypothesis would seem to be that I am a proper part of this gross macroscopic body, even if there is no way of telling from the ‘outside’ which proper part I happen to be.” This proper part would necessarily be such that it, itself, has no parts.

a sufficiently differentiated organism can be said to be formed by a human soul, and while this differentiation and organization is undoubtedly achieved before birth—any mother will tell you that newborn babies have their own individuality and personality—it is not achieved yet by the zygote or the blastula or the early embryo. The fact that human development certainly continues after birth does not entail that development of the human zygote into a blastula and early embryo is development of the same sort, development of the rationally ensouled body.<sup>57</sup>

Some will say that to think of human beings as made up of body and soul is dualistic, and that dualism is obviously wrong. True enough, a human individual is not two substances, a physical substance (body) and a mental substance (mind or soul). But substance dualism is not the only model of a human being's being composed of body and mind. Colloquially, for instance, we speak of earning a living “to keep body and soul together,” thus indicating that in this life, at least, body and soul comprise a unified whole. Recognizing both aspects of the human individual is essential to maintaining respect for the dignity of a human individual; in treating human individuals with respect we have to be mindful of the effects of our actions on both their bodies and their minds. I think, however, that physical monism and mental monism with regard to human beings are both mistaken and that they may have bad ethical implications. Further, the Conception Thesis leads to one or the other monism, since the only way that a human zygote could already be a complete human being is either 1) if a complete human being is a purely physical being albeit with a (supposedly) unique DNA code, or else 2) if a complete human being is simply an immaterial human soul, planted by God or nature in the human zygote and remaining as time goes by with the blastula, the embryo, the fetus, the infant, and so on until death of its then current body, whereupon the immaterial soul leaves the body, perhaps to enter another body, or else to persist on its own.

But a human zygote is not a complete human being. Though it is a necessary condition for the coming to be of a human being, it is not a sufficient condition.<sup>58</sup> Thus it simply does not have the same moral standing as does a human being.

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<sup>57</sup> Morowitz and Trefil, *The Facts of Life*, 152-153.

<sup>58</sup> Lee and George, *Body-Self Dualism*, 122, refer to the needs of a zygote for “. . . a suitable environment, and sufficient nutrition . . .” as though these were extraneous

However, this does not mean that we can do whatever we want with human zygotes, or that they have no moral standing at all. In fact, even many non-human things have moral standing to some degree or other: pets (animal cruelty is wrong); crops (napalming fields is *prima facie* wrong); soil (salting the earth is *prima facie* wrong). These things have moral standing due at least in part to their places within a network of humans' relationships to each other and to the environment. Likewise, zygotes, blastulae, and embryos cannot be considered apart from their relationships to the human world. Permissibility of methods of birth control that prevent implantation has to be considered from this standpoint, as does any decision concerning the future of the early embryo, not to mention the fetus. By the time a woman knows she is pregnant, the stage of early embryo has already been reached, and so a decision to abort a pregnancy always concerns an entity besides the mother which has moral standing at least to some degree. I shall not argue that all abortion should be illegal, as some contend, because I think, as Augustine suggests, that if we make illegal everything that is morally questionable we run the risk of making society worse than it would otherwise be.<sup>59</sup> On the other hand, I reject the proposition that aborting the early embryo is murder, because murder applies to the killing of an innocent *human being*, which the early embryo is not. Abortion is a serious matter, and complicated beyond what any facile treatment can adequately address.

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circumstances. Yes, a sufficiently mature human being can survive even in the absence of these for quite some time. Not so the human zygote (blastula, embryo, or pre-viable fetus) which lacks a complete body of its own. I detect a distinct tendency in Lee's and George's discussion to overlook the contribution of the mother's body to pregnancy, yet this contribution is decisive, indeed, it makes all the difference. For instance, "Normally a pregnant mother's thyroid hormones travel into the brain of her fetus, where they help neurons crawl to their proper location in the brain." (Zimmer, 306). Further, anencephaly and other neural tube defects can be caused by maternal diabetes, maternal obesity, hypothermia, and a number of other factors having to do with the mother's diet as well as environmental toxins. See Charles C. Camosy, "The Moral Status of Anencephalic," 59. Camosy quotes in this connection Robert G. Best, "Anencephaly," *Medscape*, November 7, 2015.

<sup>59</sup> Augustine, *On Free Choice of the Will*, Trans. Thomas Williams (Indianapolis/Cambridge: Hackett Publishing Company, 1993) 10: "You think that the law that is established to rule cities allows considerable leeway, leaving many things unpunished that divine providence avenges; and rightly so. And just because that law doesn't do everything, it doesn't follow that we should disapprove of what it does do."

**Conclusion: Taking the ensouled body seriously.** In a very real sense, human beings are natural products of the Earth, like lentils. We have our roots in the earth in that everything we are physically comes from the Earth, the Sun, water, and air. And this has been true of all our ancestors going right back to the first single-celled organisms, even the organic compounds and inorganic compounds which preceded them. At the same time, we have a spiritual dimension that transcends what we can discern in other animals and that in a very real way makes us who we are, bodies enlivened by rational souls. We are *homo sapiens sapiens*, knowing that we know. Knowing the truth is, in our case, an immaterial function of a material entity;<sup>60</sup> soul and body in this life are that intimately, interpenetratingly united.

This unity is, and I think will remain, a mystery. Yet we can know a couple of things about it. First, physical, complex organization is required for human thought; not just the properly functioning human cerebral cortex, although that is crucial, but in fact the whole human organism is involved through sense perception and mobility.<sup>61</sup> Second, however, Chisholm is right to hold that what thinks in us must be simple and indivisible, otherwise there would be “nobody home,” no capacity for comprehending complexity, for making comparisons, for unity of consciousness, even for finishing a sentence let alone a whole argument. The human rational soul, as form of the organized human body, provides this capacity, exercises these activities, none of which can be wholly delegated to brain or body parts.

Knowing what we are sheds light on what we ought to do, especially so in the case of life issues such as abortion, therapeutic cloning, use and withdrawal of life support, genetic testing, in vitro fertilization, reproductive cloning. There is a complexity in these issues, as well as in the fundamental facts about our nature and development, that ought not be over simplified in the interest of avoiding the moral anguish involved in resolving these issues in particular cases. The Conception Thesis, in my opinion, is just

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<sup>60</sup> See Aquinas, *Summa Theologica*, I, Q.75 a.2, in *Basic Writings*, 684-686.

<sup>61</sup> See Camosy, “The Moral Status of Anencephalic,” 61-62. “Human persons are not brains that inhabit a body or a vat; we are not information that could be downloaded into a computer; we are not even a ghost-like soul in a machine.”

such a short-cut, an over-simplification of the matter, which would make our decisions easier at the expense of their not being carefully thought out in light of the facts.

## References:

Aristotle, *De Anima*, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1970).

Aristotle, *Poetics*, in *The Basic Works of Aristotle*, ed. Richard McKeon (New York: Random House, 1970).

Arras, John D. and Bonnie Steinbock, Eds., *Ethical Issues in Modern Medicine* (Mountainview, CA: Mayfield Press, 1999).

Augustine, *On Free Choice of the Will*, trans. Thomas Williams (Indianapolis/Cambridge: Hackett Publishing Company, 1993).

Boethius, "Treatise Against Eutyches and Nestorius," in *Theological Tractates*, tr. H.F. Stewart, E.K. Rand, S.J. Tester (Cambridge: Harvard University Press, 1973) 72-129.

Camosy, Charles C., "The Moral Status of Anencephalic *Homo sapiens*," in *Contemporary Controversies in Catholic Bioethics*, Vol. 127 of *Philosophy and Medicine*, Ed. Jason T. Eberl (Springer: 2017), 56-58.

Carlson, Bruce M., *Human Embryology and Developmental Biology*, Third Edition (Philadelphia, PA: Mosby, Inc., 2004).

Chisholm, Roderick M., *A Realistic Theory of Categories* (Cambridge: Cambridge University Press, 1996).

Chisholm, Roderick M., *On Metaphysics* (Minneapolis, MN: University of Minnesota Press, 1989).

Conley, John J., S.J., "Delayed Animation: An Ambiguity and Its Abuses," in Koterski, *Life and Learning*, 159-168.

Derbyshire, Stuart W.G., "Can fetuses feel pain?" National Institutes of Health, BMJ, April 15, 2006, 332(7546) 909-912,  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1440624/>

Descartes, René, *Discourse on Method and Meditations on First Philosophy*, third edition, tr. Donald A. Cress (Indianapolis: Hackett Publishing Company, 1993).

Donceel, Joseph, "Immediate Animation and Delayed Hominization," *Theological Studies* 31, 1970, in Lee, *Abortion and Unborn Human Life*, 83-93.

Eberl, Jason T., "Aquinas on the Nature of Human Beings," *The Review of Metaphysics*, Vol. LVIII, No. 2, 333-365.

Eberl, Jason T., ed., *Contemporary Controversies in Catholic Bioethics*, Vol. 127 of *Philosophy and Medicine*, (Springer: 2017).

Finnis, John, "Abortion and Health Care Ethics II, Ch. 48 in *Principles of Health Care Ethics*, Ed. Raanan Gillon (John Wiley & Sons Ltd., 1994).

Flannery, Tim, "Our Twisted DNA," review of Carl Zimmer, *She Has Her Mother's Laugh: The Powers, Perversions, and Potential of Heredity* (New York: Dutton, 2018) in *The New York Review of Books*, March 7, 2019, Vol. LXVI, Number 4, 38-39.

Ford, Norman M., *When Did I Begin? Conception of the human individual in history, philosophy and science* (Cambridge: Cambridge University Press, 1988).

Gabriel, Richard A., *The Warrior's Way: A Treatise on Military Ethics* (Kingston, ON: Canadian Defense Academy Press, 2007).

Gill, Mary Louise, *Aristotle on Substance: The Paradox of Unity* (Princeton, NJ: Princeton University Press, 1989).

Goetz, Stewart, and Charles Taliaferro, *A Brief History of the Soul* (Chichester, UK: Wiley-Blackwell, 2011).

Haldane, John and Patrick Lee, "Aquinas on Human Ensoulment, Abortion and the Value of Life," *Philosophy*, Vol. 78, no. 304 (April 2003) 255-278.

Hershenov, D., and R. Hershenov, "The Potential of Potentiality Arguments," in Eberl, ed. *Contemporary Controversies*, 35-51.

Holland, Suzanne, Karen Lebacqz, and Laurie Zoloth, eds., *The Human Embryonic and Stem Cell Debate: Science, Ethics, and Public Policy* (Cambridge, MA: The MIT Press, 2001).

Jacquette, Dale, *Philosophy of Mind* (Englewood Cliffs, NJ: Prentice-Hall, 1994).

Kant, Immanuel, *Critique of Judgment*, Trans. J.H. Bernard (New York: Hafner Press, 1951).

Kant, Immanuel, *Grounding for the Metaphysics of Morals*, Trans. James W. Ellington (Indianapolis/Cambridge: Hackett Publishing Company, 1981).

Koterski, Joseph W., S.J., Ed., *Life and Learning XII: Proceedings of the Twelfth University Faculty for Life Conference* (Washington, D.C.: University Faculty for Life, 2002).

Krantz, Susan F., "Humility and Teleology in Kant's Third Critique," *American Catholic Philosophical Quarterly*, Volume LXVI, 1992, 85-98.

Lee, Patrick, *Abortion and Unborn Human Life*, Second Edition (Washington D.C., The Catholic University of America Press, 2010).

Lee, Patrick and Robert P. George, *Body-Self Dualism in Contemporary Ethics and Politics* (Cambridge: Cambridge University Press, 2008).

Locke, John, *An Essay Concerning Human Understanding*, ed. A.D. Woozley (Clinton, MA: New American Library, 1974).

Meyer, J.R., "The Ontological Status of Pre-implantation Embryos," in Eberl, *Contemporary Controversies*, 17-24.

Morowitz, Harold J., and James S. Trefil in *The Facts of Life: Science and the Abortion Controversy* (New York and Oxford: Oxford University Press, 1992).

Nagel, Thomas, *The View From Nowhere* (Oxford, UK: Oxford University Press, 1986).

Newsweek, "Extremely Rare Set of Semi-identical Twins Born," 2/28/2019: <https://www.msn.com/en-us/health/health-news/extremely-rare-set-of-semi-identical-twins-born/ar-BBUaK17?ocid=spartandhp>

Parfit, Derek, *Reasons and Persons* (Oxford: Clarendon Press, 1984).

Peters, Ted, "Embryonic Stem Cells and the Theology of Dignity," Holland et al, eds., *The Human Embryonic and Stem Cell Debate: Science, Ethics, and Public Policy* (Cambridge, MA: The MIT Press, 2001), 127-39.

Plato, *Gorgias*, in *Plato: The Collected Dialogues*, eds. Edith Hamilton and Huntington Cairns (Princeton: Princeton University Press, 1969), 293-294.

Plato, *Phaedo*, in *Plato: The Collected Dialogues*, eds. Edith Hamilton and Huntington Cairns (Princeton: Princeton University Press, 1969), 40-98.

Pruss, Alexander R., "I Was Once a Fetus: That is Why Abortion is Wrong," in Koterski, *Life and Learning*, 169-82.

Shannon, Thomas, and Allan Wolter, "Reflections on the Moral Status of the Pre-Embryo," *Theological Studies* 51, 1990, in Lee, *Abortion and Unborn Human Life*, 83-93.

Singer, Peter, *Rethinking Life and Death: The Collapse of our Traditional Ethics* (New York, NY: St. Martin's Press, 1994).

Thomas Aquinas, *Summa Theologica*, I, Q.75 a.2, in *Basic Writings of Saint Thomas Aquinas*, Vol.1, ed. Anton C. Pegis (New York: Random House, 1945), 684-686.

Thomas Aquinas, *Summa Theologica*, I, Q.76, a.4, in *Basic Writings of Saint Thomas Aquinas*, Vol.1, ed. Anton C. Pegis (New York: Random House, 1945), 707-710.

Young, Ernlé W. D., “Ethical Issues: A Secular Perspective,” in Holland *et al*, eds., *The Human Embryonic and Stem Cell Debate: Science, Ethics, and Public Policy* (Cambridge, MA: The MIT Press, 2001), 163-74.

Zimmer, Carl, *She Has Her Mother’s Laugh: The Powers, Perversions, and Potential of Heredity* (New York: Dutton, 2018).