

# Jacques Maritain and the Embryo: A Master's Muddles

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ABSTRACT: Jacques Maritain champions both faith and reason. But Homer nods, and Maritain is sometimes muddled. Indeed, Maritain stoutly denies (1) that the embryo has a rational soul and (2) that the early fetus is a human being. Maritain, of course, would oppose both abortion and embryonic stem cell research. Still, he badly undermines the best reasons for doing so. In this essay I identify and criticize Maritain's "argument from complexity" and his "argument from virtual presence." Together, these arguments lead him to claim that the embryo is not *formally* a human. In addition, I assess Maritain's explicit efforts to link his inadequate embryology with what he presents as the core of a Thomist theory of evolution. Embryology, he insists, models evolution. To support his case, however, Maritain introduces a category of *transformational* change, the use of which proves incompatible with numerical identity over time. In the end, to our dismay, a series of unsound arguments finds Maritain putting at risk the unity of the human being.

**I**N *FIDES ET RATIO*, Pope John Paul II names Jacques Maritain as a champion of both faith and reason.<sup>1</sup> Despite this much deserved praise, for Maritain has surely taught us well, his account of the human embryo is badly flawed. In this particular regard, we had best recall Aristotle's remark that while Plato is a great friend, a greater friend is truth.

Jacques Maritain, it turns out, stoutly denies that the embryo has a rational soul. He claims that "[t]o admit that the human fetus, from the instant of its conception, receives the intellective soul, while the matter is still in no way disposed with respect to it, is in my view a philosophical absurdity."<sup>2</sup> Thus he denies that the embryo or

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<sup>1</sup> *Fides et Ratio* §74.

<sup>2</sup> Jacques Maritain, *Untrammelled Approaches*, translated by Bernard Doering, preface by Ernst R. Korn (Notre Dame IN: Univ. of Notre Dame Press, 1997), p. 93. Maritain's discussion of the embryo first appeared as "Toward a Thomist Idea of Evolution" in *Nova et Vetera* 2 (1967): 87-136. He reviewed his 1967 text in 1972; see *Untrammelled Approaches*, p. 129 n36.

early fetus is a human being.<sup>3</sup> Already there is an irony to note, for Maritain would defend neither abortion nor embryonic stem cell research. In recent years, however, defenders of abortion often admit the humanity, but not the personhood, of the unborn. For Maritain, any human being is a person. Present-day defenders of embryonic stem cell research often deny the very humanity of the early embryo.

In any case, the core of what we might term Maritain's "argument from complexity," which is itself short and straightforward, is as follows:

1. A human being, *formally* understood, is a unity of a body and a rational soul.
2. A rational soul can only inform a suitably complex body.
3. But the human embryo is not a suitably complex body.
4. So the human embryo is not a unity of a body and a rational soul.
5. Therefore the human embryo is not *formally* a human being.

Maritain is entirely ready to specify the requisite complexity: "[T]he ultimate disposition which the intellective soul requires supposes a brain, a nervous system, and an already highly developed motor-sensitive psychism," one more advanced than in any animal.<sup>4</sup> This complex disposition is present only from the later stages of fetal development.<sup>5</sup>

#### A CRITICAL ISSUE

Jacques Maritain's thesis on rational ensoulment, to use the technical expression, is initially critical for three reasons. *First*, how we come to be is critical to who we are. *Second*, to argue that the embryo or early fetus is not formally human but that abortion is always wrong invites confusion. *Third*, such a thesis, however metaphysically shorn, undermines the dignity of the pre-born.

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<sup>3</sup> Ibid.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid., pp. 96, 103.

John J. Conley, S.J., and Kevin D. O'Rourke, O.P., have already brought the ensoulment debate to the attention of this association.<sup>6</sup> But those of another mind have put a different view before a wider audience. Hans Kung has recently claimed that “[b]ecause the human person, says St. Thomas Aquinas, presupposes an *anima intellectualis*, an intellect, what distinguishes humans from animals, it is clear that at the beginning there is not a human person.”<sup>7</sup> Thus, he concludes, “the problem of abortion is considerably reduced.”<sup>8</sup> Even more recently, Lisa Jardine, chair of the United Kingdom’s Human Fertilisation and Embryology Authority, opined that “[w]e have this one fatal impediment, which is the late 20th-century Catholic Church’s commitment to fertilisation of the egg as being the moment of humanity.”<sup>9</sup>

In making his case, Maritain-like Kung, on this occasion—also follows Aquinas. But Thomas worked from a sharply limited biological understanding, and it is because of this that he mistakenly thinks that the embryo lacks suitable complexity. We cannot, of course, fault him for not anticipating today’s genetics. He did not know, nor could he know, that both a sperm cell and an ovum display organized life, albeit as *parts* of independent human beings, male and female. Nor could he know that the embryo is structurally, functionally, and systemically self-directing. So understood, the embryo is already an individual and distinct, though immature, human being. Given today’s embryology, we dismiss Thomas’s view that a power “acting by virtue of the generative soul of the father” (*Summa Contra Gentiles* II.89.8) directs the merely passive potency of embryonic development.<sup>10</sup> Such a view, plausible in light of

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<sup>6</sup> John J. Conley, S.J., “Delayed Animation: An Ambiguity and Its Abuses,” *Life and Learning* XI, pp. 159-68, and Kevin D. O’Rourke, O.P., “The Embryo as a Human Person,” *Life and Learning* XVI, pp. 281-96.

<sup>7</sup> “Hans Kung Joins Abortion Debate in Mexico,” *California Catholic Daily* (April 6, 2007).

<sup>8</sup> *Ibid.*

<sup>9</sup> See Sarah Boseley’s interview of Jardine in *The Guardian* (May 28, 2008), p. 5, News & Features.

<sup>10</sup> For an analysis of what today’s genetics bring to our knowledge of embryology, see P. Ide, “Is the Human Embryo a Person?” as presented to the Twelfth General Assembly of the Pontifical Academy for Life. For a thorough and accessible account

medieval embryology, is now of only historical interest. The bearing of today's embryology for Maritain's argument from complexity is apparent. Because its third premise is false, the argument fails.<sup>11</sup>

But Maritain, despite mistakenly accepting the argument from complexity, is not an apologist for early abortion. Nor, of course, was St. Thomas. Rather, Maritain appeals to the moral weight of the *virtual* humanity of the preborn. From conception, human nature is "virtually present" and "will pass through the embryo all during its evolutive development, until it attains its goal: a formally human being, a body informed by a rational soul."<sup>12</sup> The core of what we might term his "argument from virtual presence," simply stated, is as follows:

1. The human embryo is materially ordered to a complexity suitable for a rational soul and thus to formal humanity.
2. What is materially ordered to an ontological reality, such as formal humanity, is *virtually* such a reality.
3. So the human embryo is *virtually* a human being.

This "argument from virtual presence," I will contend, is not sound. But showing this will involve a close look at what "the virtual" means for Maritain.

#### A SPECIAL QUESTION

But there is a further reason, both surprising and far-reaching, to examine Maritain's theory of rational ensoulment. He insists that it is critical to a Thomist view of evolution. To abandon delayed hominization would undercut Thomas's "rough outline of an anticipated

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of the relevant findings of embryology, see Robert P. George and Christopher Tollefsen, *Embryo: A Defense of Human Life* (New York NY: Doubleday, 2008), pp. 27-56. Throughout their study, they deliberately refrain from any appeal to ensoulment.

<sup>11</sup> To be sure, the complexity of body is critical to ensoulment. Poetry, not philosophy, allows W. B. Yeats to fantasize, in his *Sailing to Byzantium*, that "once out of nature I shall never take / My bodily form from any natural thing / But such a form as Grecian goldsmiths make / of hammered god and gold enamelling / To keep a drowsy Emperor awake...."

<sup>12</sup> *Untrammelled Approaches*, p. 99.

philosophy of Evolution.”<sup>13</sup> Embryology is a key to Thomas’s evolutionary prospectus, which Maritain presents us by appealing to a few pivotal texts. Thus he draws our attention to Thomas’s remarks on the tendency of “what is moved,” that is, creation, toward the divine likeness. He outlines this tendency in his *Summa Contra Gentiles* III.22.7-8:

[I]n regard to the last and most perfect act that matter can attain, the inclination of matter whereby it desires form must be inclined as toward the ultimate end of generation. Now, among the acts pertaining to forms, certain gradations are found. Thus, prime matter is in potency, first of all, to the forms of an element. When it is existing under the form of an element, it is in potency to the form of a mixed body; that is why the elements are matter for the mixed body. Considered under the form of a mixed body, it is in potency to a vegetative soul, for this sort of soul is the act of a body. In turn, the vegetative soul is in potency to a sensitive soul, and a sensitive one to an intellectual one.

Given this “transcategorical hierarchy,” as Maritain calls it,<sup>14</sup> Thomas turns next to the coming to be of the human being:

[A]t the start of generation there is the embryo living with plant life, later with animal life, and finally with human life. After this last type of form, no later and more noble form is found in the order of generable and corruptible things.

But Thomas’s outline ranges beyond the embryo, an illuminating example, to the full trajectory of creation. Thus he continues:

So, elements exist for the sake of mixed bodies; these latter exist for the sake of living bodies, among which plants exist for animals, and animals for men. Therefore, man is the end of the whole order of generation.

Indeed, what is true in the generation of things is true in their preservation: “[S]ince a thing is generated and preserved in being by the same reality, there is also an order in the preservation of things, which parallels the foregoing order of generation.” Made in the image of God,

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<sup>13</sup> Ibid., p. 92.

<sup>14</sup> Ibid., p. 89.

we share in this dynamic of generation and preservation. It is Providence that guides the overarching transition from the potential to the actual and sustains it in service to the order of being.

Just how, then, are we to link this trajectory with the embryo? Maritain finds an analogous “*evolutive movement*,”<sup>15</sup> common to both evolution and embryology. But he notes that only in the embryo does a soul, that is, a formal intrinsic principle, guide the development; we find nothing like this in the grand sweep of evolution. Yet Maritain still goes wrong, and he does so in three ways.<sup>16</sup> The first is in how he links a mistaken embryology to a metaphysics of evolution. The second is his account of the virtual. The third is his mishandling of the unity of the person.

#### ON THE EMBRYO AND EVOLUTION

Let’s first explore the linking of the embryo with evolution. Maritain supposes that there is a structural similarity, an evolutive dynamic that embryological and evolutionary development share, and that this dynamic has explanatory merit for both. But his hypothesis is dubious. For he asks us to explain the increasingly clear—that is, genetically directed embryological development—by locating it within the speculative theory of a vast evolutionary development. Embryological structures and their development are empirically observable; they are exquisitely plotted. In contrast, the structures of the evolution of species, or any specific species, are empirically perplexing. No community of scientists can have ongoing empirical access to such structures. Nor is such an evolution repeatable. Partly because of this empirical elusiveness theorists of evolution are often at odds with one another.<sup>17</sup> (*A fortiori* it is the case among contemporary cosmologists.)

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<sup>15</sup> *Ibid.*, p. 93.

<sup>16</sup> *Ibid.*, p. 115.

<sup>17</sup> Stephen J. Gould, for example, has raised the ire of John Maynard Smith, Richard Dawkins, and Daniel Dennett. See John Maynard Smith, *Did Darwin Get It Right?* (New York NY: Chapman and Hall, 1989), pp. 148-56; Richard Dawkins, *The Blind Watchmaker* (New York NY: W.W. Norton, 1996; 2nd ed.), ch. 9; Daniel C. Dennett, *Darwin’s Dangerous Idea* (New York NY: Simon & Schuster, 1995), ch. 10.

Ernst Haeckel, an embryologist and early Darwinist, notoriously proposed an evolutionary reading of embryology. The embryo, he asserts, recapitulates the evolution of the human species. (Stephen Jay Gould has recently put in context Haeckel's falsified embryological drawings and their continuing use.<sup>18</sup>) But it is disconcerting that Maritain so uncritically links embryology with evolution. He even enlists, albeit gingerly, Karl Rahner: "[H]e looks with favor on the Thomist theory of the development of the human embryo; and [Rahner] notes very pointedly: 'Having accepted this, it can very well be said that the ontogenesis thus understood corresponds to human phylogenesis....'"<sup>19</sup> Here Haeckel's mantra of "ontogeny recapitulates phylogeny" comes to mind. (For the record, Stephen Jay Gould also points out that Darwinists have long abandoned this view.<sup>20</sup>)

But if Maritain finds a theological ally in Rahner, he is also ready to dispute a pair of "hasty" theological conclusions. He claims that theologians have misled philosophers about the embryo by wrongly extrapolating from two points of doctrine. The first point is that abortion is a moral wrong at any point of gestation. Because of this, theologians suppose that the embryo is a human person. The second point, the Immaculate Conception, is that Mary was conceived without sin. Because of this, theologians suppose that she must have been human in nature from conception.

But Maritain argues that theologians mistakenly infer from the wrongness of abortion that rational ensoulment occurs at conception. We can avoid this mistake by noting that from conception, the embryo is virtually, but not formally, a human being. Maritain also argues that theologians misread the ontological import of the Immaculate Conception. From conception Mary was free from original sin as it exists virtually, but she was only formally free of it from the time of

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<sup>18</sup> Stephen Jay Gould, "*Abscheulich!* – Atrocious! – the precursor to the theory of natural selection," *Natural History* 109/2 (2000): 42-50.

<sup>19</sup> *Untrammelled Approaches*, p. 95 n9.

<sup>20</sup> Stephen Jay Gould, *loc. cit.*

rational ensoulment.<sup>21</sup> For now, I will put *this* assertion aside.

#### THE QUESTION OF THE VIRTUAL

Given Jacques Maritain's strategic appeal to the virtual, it is time now to explore his account of the virtual. We might begin with his claim that since the virtual, though somehow real, is not entitative, it follows that only the formal has decisive ontological significance. Yet this supposed reality of the virtual is problematic. For a start, "virtual reality," in ordinary language, is not "the real thing." (It is realistic, but so too are nightmares.) Now, if by "virtual" we mean "potential," we still have problems. We might speak about the potential of, say, a scholar's pro-life contribution. But the "pro-lifer" must first be a real scholar. Ordinarily, if something is a virtual or a potential *Y*, it is already an actual, that is, real *X*. (Only a real nightmare portends a nightmarish reality.) To be sure, ordinary language can play fast and loose with the virtual and the potential. Maritain seeks a greater precision. Thus, in his discussion of the embryo he presents the virtual as a form of movement by which an efficient cause controls the instrumentality, throughout the causal process, which leads to the final effect.<sup>22</sup> Elsewhere he claims that "[v]irtually means much more than 'potentially'" and that it also "means 'implicitly,' but with the added idea of tendency."<sup>23</sup> As an example, he writes that "[a] grain of wheat is virtually a whole stalk of wheat."<sup>24</sup> But if a grain of wheat is germinated, it is as much a wheat plant as is a whole stalk of wheat, though obviously not so mature. Similarly, a "fertilized ovum," more properly, an embryo is as much a human being *in kind* as is an adult human being. The embryo is an individual and complete human being, though obviously not so mature. (To be sure, unlike a grain of wheat, an embryo does not have a period of dormancy, unless frozen.) So again Maritain's account of the virtual is problematic.

In any case, there is a good argument that helps correct ordinary

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<sup>21</sup> *Untrammelled Approaches*, pp. 93-94.

<sup>22</sup> *Ibid.*, p. 99.

<sup>23</sup> *Ibid.*, p. 217 n26.

<sup>24</sup> *Ibid.*

language sloppiness and philosophical overreaching alike. This argument revisits the place of material development with regard to the virtual and the potential. Its core is simply put.

#### VIRTUAL (AND POTENTIAL) PRESENCE, REVISITED

1. That which is materially ordered to an ontological reality has some elements required for that ontological reality.
2. But a thing's having some elements required for an ontological reality does not itself make that thing either virtually or potentially such a reality.
3. So, a thing that is materially ordered to a formal ontological reality is not thereby virtually or potentially such a reality.

A sperm cell, for the topical example, brings a genetic contribution to a particular human being. Its specific contribution is a material and requisite element for a particular human being. But a sperm cell is neither virtually nor potentially a human being. Calling it such is wrongheaded. Consider, for example, the collegian with the potential for both scholarship and solidarity with "the least little ones." That student is not a virtual pro-life scholar, despite perhaps a tendency to become one in favorable circumstances. And if here we speak of a potential to become a pro-life scholar, it is not because of any material ordination to the modifications of mind and will that, say, a Thomist would see as marks of the ontological character of pro-life scholarship.

Maritain only weakens his case when, appealing to Thomas, he nonetheless claims that human nature is *virtually* present in a sperm cell.<sup>25</sup> To do so invites the following embarrassment.<sup>26</sup>

#### AGAINST MARITAIN: SPERMICIDE NOT HOMICIDE

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<sup>25</sup> Ibid., p. 93.

<sup>26</sup> Peter Singer claims that potentiality arguments against abortion have to extend to the potentiality of an ordered pair of sperm and ovum to become a person. But he conflates possibility with active potentiality. See his "Animal Liberation" in *The Moral Life*, ed. Louis B. Pojman and Lewis Vaughn, 3rd ed. (New York NY: Oxford Univ. Press, 2007), p. 888.

1. It is always wrong intentionally to kill an embryo, a virtual human being.
2. A sperm cell is also a virtual human being. (assumption)
3. Thus it is always wrong intentionally to kill a sperm cell, a virtual human being.
4. But a technician might licitly and intentionally kill a sperm cell secured in a fertility test, even if the test is morally wrong.
5. So, either (a) it is not always wrong intentionally to kill a sperm cell, a virtual human being, or (b) a sperm cell is not a virtual human being.
6. If (a), then it is not always wrong intentionally to kill an embryo.
7. If (b), then neither is an embryo is a virtual human being.
8. But Maritain claims that it is always wrong intentionally to kill an embryo and that an embryo is a virtual human being.

Here we might also point out that if the embryo is, in fact, an actual human being, then he or she is not merely a virtual or potential human being.

Let's briefly return now, as a postscript to the vicissitudes of virtuality, to Maritain's second theological point of reference. It has been put aside but not forgotten. What about the Immaculate Conception and its import for the embryo? Is it not odd to say, with Maritain, that Mary was free from original sin in that while for us original sin exists *virtually* in the embryo but for Mary it was not so?<sup>27</sup> After all, is not Mary's then virtual freedom, that of a not yet existing human being, a pale substitute for the real freedom of an actual human being? But suppose we return to our own case. It hardly seems plausible to say that we were conceived without real original sin!

#### ON THE UNITY OF THE HUMAN BEING

We can next consider just how Maritain's thesis of delayed hominization mishandles the unity of the human person. It is in this context, too, that we again see how his misdirected link between the embryo and evolution comes into play. On the one hand, he does not want to appeal

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<sup>27</sup> *Untrammelled Approaches*, pp. 93-94.

to the dynamic and sustained ordering of potency to act in a way that jeopardizes the unity of things, that is, of a thing's being what it is and not another thing. Yet, on the other hand, he thinks (with St. Thomas) that our development from (1) merely living, to (2) living with sensation, to (3) living with reason gives evidence to three distinct and corresponding souls: vegetative, animal, and rational.<sup>28</sup> Whatever the pedigree of this claim, we cannot but rightly wonder how this succession of souls can avoid undercutting the unity of the human being.

Maritain attempts to answer this pressing question by carefully qualifying the distinctive changes in the embryo's development. To this end, he notes that the embryo's remarkable transformation does not jeopardize its numerical identity. For this transformation rests on

a corporeal substance *numerically one* (one and the same suppositum) which is transformed from one stage to another (as a mere seed at first, developing and then *evolving* according to the vegetative life characteristic of the vegetable kingdom, then as a more perfect organism, developing and then *evolving* according to the sensitive life characteristic of the animal kingdom).<sup>29</sup>

It is just here, Maritain continues, that there is a striking parallel with evolutionary development:

In order that at the end of this process it may become *formally something else*, substantially something else, that is, informed by a different soul—we would say today that it recapitulates in itself in the intra-uterine development of that being which is the head of material creation, *the evolution of life* which after centuries has attained its final end in man.<sup>30</sup>

So, we have an interpretative key to an extraordinary phenomenon: embryology models evolution.

This passage serves Maritain's project in that it introduces a new

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<sup>28</sup> Lee Silver has recently suggested that since the embryo has a vegetative but not a sentient life, he or she is not yet a human being. For how this proposal conflicts with the unity of the human being, see George and Tollefsen, *Embryo*, pp. 166-73.

<sup>29</sup> *Untrammelled Approaches*, pp. 94-95.

<sup>30</sup> *Ibid.*

distinction to supplement the familiar *accidental change* and *substantial change*. For example, if one toasts a slice of bread, it undergoes an accidental change. If one eats the toast, it becomes a part of one's body. Becoming something else, the toast undergoes a substantial change.

There is a loss of numerical identity. Enter now Maritain's distinctive and evolutive change that somehow preserves the numerical identity of that which undergoes change. We can term this *transformational change*. In change of this sort, one thing becomes another without the loss of its numerical identity, despite the change's being far more basic than an accidental change. In the case of the embryo, moreover, the initial powers of the vegetative and the sensitive souls are taken up by the rational soul that, we recall, can only inform a body of adequate complexity.

Yet Maritain's distinctive transformational change, though at first reading it might seem resourceful, leads to needless complexity. Consider the following argument:

#### ARGUMENT AGAINST EMBRYONIC TRANSFORMATIONAL CHANGE

1. Ordinarily, a succession of forms causes a substantial change.
2. We ought not to introduce a distinct transformational change without an empirical or conceptual reason to do so.
3. The development of the embryo does not indicate an empirical reason to do so.
4. Nor does the development of the embryo indicate a conceptual reason to do so.
5. So we ought not to claim that the embryo undergoes transformational change.

Each of us is *numerically* the same living being from conception to death, as Maritain recognizes. But what he fails to recognize, in effect, is that each of us has but a single life and a single body. Our "to be" is to live this life. The soul, the form of the human being who lives but a single life, is one soul. This precludes transformational change as the vehicle for a succession of souls that could only obscure the unity of the

human being.<sup>31</sup> No doubt, Maritain's inability to grasp the implications of contemporary genetics tempted him to introduce transformational change as a device by which to hold on to the numerical identity of the human being during *in utero* development.

#### A LAST OBJECTION, A LAST REPLY

But perhaps my case against Maritain's delayed hominization is too hasty. John Conley, S.J. and Kevin O'Rourke, O.P. argue that it is too soon for the Catholic Church to teach definitively on the time of rational ensoulment. Questions remain about the import of early cellular totipotency and twinning.<sup>32</sup> Micro-metaphysics is a work in progress.

Yet Maritain's position seems untenable, though it is seldom noted or challenged.<sup>33</sup> But something like it, a generic gradualism *sans* metaphysics is common. Let this gradualism be a last objection to my case. It is the most rhetorically persuasive objection to the thesis that the embryo is a human being.

The gradualism objection is as follows. Most change is incremental. Often, the more we know about a major change, the more we recognize how just gradual it is. Breaking news: An ice shelf in Antarctica comes detached! Yet the changes that led to it were gradual. Happy Birthday: One turns 64! But the changes that led to it were gradual—all 63 plus years of them. And doesn't this gradual pattern of change, with examples ready at hand, also point to the holistic character of nature? Consider the coming to be of the human being. How could it transpire

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<sup>31</sup> Maritain, of course, does not want to undermine the unity of the human being despite introducing an argument that does so. He fares better in maintaining the unity of the human species in his account of evolutionary development. See *Untrammelled Approaches*, pp. 129-30.

<sup>32</sup> John Conley, S.J., "Delayed Animation: An Ambiguity and Its Abuses," *Life and Learning XI*, pp. 166-67, and Kenneth O'Rourke, O.P., "The Embryo as a Human Person," *Life and Learning XVI*, p. 294.

<sup>33</sup> In "Is the Human Embryo a Person?" P. Ide briefly notes Maritain's "mediatist" position; see n9. James Arraj summarizes it in his *Can Christians Still Believe?* (2004); see ch. 2, "Evolution and Human Origins." Nicholas F. Gier gives it favorable notice. See his *God, Reason, and the Evangelicals: The Case Against Evangelical Rationalism* (Lanham MD: Univ. Press of America, 1987), p. 220. Gier cites Maritain against evangelical "rationalism" in opposing abortion.

in the brief process of conception? Surely humanity is a gradual and holistic development.

But the gradualism objection fails to do justice to the richness of change. Specifically, it denies substantial change. Of course, most changes are not substantial. Neither the shifting nor the melting of an ice shelf is metaphysically substantial. Why, even turning 64 isn't a metaphysically substantial change. We remain numerically the same people we were at 21—and *in utero*. Yet other changes, even if common, are substantial. Hydrogen and oxygen, suitably conjoined, give us water. Bread and wine, if digested, give us nourishment. And what about the substance, as it were, and thus the significance of a human act? Only when intention, as its form, shapes mere physical behavior can we identify a human action and grasp its meaning—and intention can do all this with immediacy.

But suppose that we deny substantial change. Suppose that, while thinking that every thing is what it is, we assume that whatever changes does so in degree but not in kind. If so, we will pay a steep price. For in denying substantial change, we deny that there is anything brand new under the sun. But there is so much that is brand new, including the water that a chemistry experiment produces, the nourishment a meal provides, and the conference paper that we write. Indeed, our species is relatively new species, however creation and evolution gave rise to it by way of substantial changes.

To deny substantial change is, indirectly, to deny unity. Hydrogen is what it is, oxygen is what it is, and neither is water. Bread is what it is, wine is what it is, and neither are enriched cells in our bodies. A physical behavior is what it is, an intention is what it is, and there's many a slip twixt the cup and the lip. Unity is, indeed, the transcendental in virtue of which everything is what it is and not another thing. So, to abandon substantial change is to forfeit the individuality and intelligibility of *what is*. But once these are forfeit, we forfeit the referential intelligibility of language. In the question before us, the nature of the embryo, we thus frustrate our understanding of the nature of the human person in coming to be.