

“Evolution, Emergence, and the Divine Creation of Human Souls”

Abstract: In a series of publications spanning over two decades, William Hasker has argued both that (1) human beings have souls and (2) these souls are not directly created by God but instead are produced by (or “emergent from”) a physical process of some sort or other. By contrast, an alternative view of the human person, endorsed by the contemporary Catholic Church, maintains that (1) human beings have souls but that (2*) each human soul *is* directly created by God rather than produced by any kind of physical process. Hasker argues that given what we know from evolutionary biology, (2*) is a much less plausible position for believers in souls to take than (2) is. If Hasker is right, then there is a serious tension between the Church’s teaching about the human person and evolutionary biology. In this article, I challenge Hasker’s reasoning. I argue that those who hold the Catholic view that each human soul is directly created by God face no more difficulty reconciling their view with evolutionary biology than those who maintain, as Hasker does, that human souls are instead produced by some kind of physical process.

§1. How Do Human Souls Originate? Catholic Doctrine vs. Hasker’s Contention

Materialists (as I will use the term in this article) claim that human persons are entirely composed of material parts; in other words, human persons neither are nor have immaterial souls in addition to the material parts that compose their bodies. By contrast, *Substance Dualists* (as I will use the term in this article) claim that human persons are *not* entirely composed of material parts; human persons either just are immaterial souls (connected in an intimate way with certain bodies) or are substances which have, in addition to their material parts, immaterial souls.¹ If Substance Dualists are right, then we must confront the question of how the souls of human persons are produced. What causes or brings about the existence of a new human soul?

There are two main kinds of position that have been taken in response to this question. *Emergentist* Substance Dualists claim that the souls of human persons are *not* directly created by God but instead are directly causally produced by (or “emerge from”) some kind of physical process. By contrast, *Creationist* Substance Dualists claim that the souls of human persons *are* directly created by God; the direct cause of each human soul’s coming to be is God (or God’s action), not any kind of physical process.²

Creationist Substance Dualism, in addition to being endorsed by various historically prominent Christian thinkers and some contemporary philosophers, is explicitly endorsed in the teachings of the contemporary Catholic magisterium.^{3,4} Indeed, in its treatment of the nature, composition, and origin of human persons, the contemporary *Catechism of the Catholic Church* claims the following:

The human person, created in the image of God, is a being at once corporeal and spiritual... “soul” signifies the spiritual principle in man... The human body shares in the dignity of “the image of God”: it is a human body precisely because it is animated by a spiritual soul... The Church teaches that every spiritual soul is created immediately by God – it is not “produced” by the parents – and also that it is immortal: it does not perish when it separates from the body at death, and it will be reunited with the body at the final Resurrection.⁵

The idea that “every spiritual soul is created immediately by God” is also affirmed in other authoritative Catholic documents, including Pope Pius XII’s 1950 encyclical, *Humani Generis*, which states concerning evolution and the origin of human souls,

the Church does not forbid that, in conformity with the present state of human sciences and sacred theology, research and discussions, on the part of men experienced in both fields, take place with regard to the doctrine of evolution, in as far as it inquires into the origin of the human body as coming from pre-existent and living matter – for the Catholic faith obliges us to hold that [human] souls are immediately created by God.⁶

Together, these two texts provide strong and clear evidence that the contemporary Catholic Church teaches a Creationist account of the origins of human souls.

Though the contemporary Catholic Church is thus clearly committed to the view that each human person has an immaterial soul which is directly created by God rather than directly produced by (or “emergent from”) some kind of physical process, this view is not accepted by some of the most prominent contemporary philosophical defenders of Substance Dualism. William Hasker, for example, goes to great lengths to articulate and defend an Emergentist position concerning the origins of souls rather than a Creationist position.⁷ Similarly, Charles Taliaferro and Dean Zimmerman, two other prominent contemporary philosophical defenders of Substance Dualism, likewise favor an Emergentist position over a Creationist one.⁸

Of these three authors, Hasker offers the most extensive discussion of alleged reasons to favor an Emergentist Substance Dualist position over a Creationist one. Indeed, in his many publications on the topic, Hasker has offered multiple arguments meant to support this contention. One of the most prominent of these arguments alleges that the Creationist account of the origins of human souls is at odds with the science of biological evolution in a way that the rival Emergentist position is not. Thus, for example, in his 2012 article “The Emergence of Persons,” Hasker writes,

[The Creationist position] confronts an awkward situation in dealing with biological evolution. More complex and highly evolved organisms presumably require more complex souls, endowed with correspondingly enhanced powers. (Descartes’s attempt to limit souls to human beings entails the unacceptable consequence that only humans have conscious experiences, the rest of the animal realm consisting of cleverly constructed automata.) But what is the relationship between the increasing biological complexity and the gradually (or perhaps stepwise) increasing powers of the divinely created souls? Are we to suppose that God waits until natural evolutionary processes have produced a more complex organism, and then supplies the more sophisticated soul? (But then, how would the requisite modifications in the organism be selected for, if they are as yet unable to function because the soul is inadequate to support the functions in question?) Or do the more advanced souls come first and somehow guide the process of evolutionary development? Or, finally, does each major evolutionary advance require a simultaneous “double nudge,” which at the same time impels the physical modifications and supplies a more advanced soul? Perhaps each of these alternatives is logically possible, but I doubt that any of them will commend itself as plausible in the light of reflection.⁹

This argument, the essential details of which Hasker has repeated for over 20 years across many publications, offers what Hasker takes to be one of the main reasons for rejecting a Creationist

position on the soul in favor of an Emergentist one. Thus, for example, in a recent 2018 article, Hasker sums up his discussion of this evolution-based objection to the Creationist position by claiming, “The truth is that creationism concerning the soul just does not fit at all comfortably with an evolutionary account of life. This fact creates a significant burden for creationism, though one of which its proponents have often seemed to be unaware.”¹⁰ Indeed, no proponent of the Creationist position has taken on the challenge of responding to Hasker’s contention that their position is at odds with evolutionary science.

In what follows, I do take on this challenge. I argue that Hasker fails to show that Creationist Substance Dualism is less plausibly combined with contemporary evolutionary science than either Emergentist Substance Dualism or Materialism is. More precisely, I argue that at the heart of Hasker’s evolution-based objection is a puzzle that confronts us regardless of whether we are Creationist Substance Dualists, Emergentist Substance Dualists, or Materialists. Moreover, I show that any solution that an Emergentist Substance Dualist or Materialist might offer to solve this puzzle is one that Creationist Substance Dualists can equally accept as well. Given this, I conclude that, contrary to what Hasker alleges, evolutionary biology poses no serious challenge to Creationist Substance Dualism.

§2. Hasker’s Evolution-Based Argument Against the Divine Creation of Souls

Hasker’s argument can seem simple at first glance, but in fact the argument relies on several tacit assumptions which ought to be made explicit. Doing so will allow me to make clear what propositions Creationist Substance Dualists can grant or remain neutral about while still rejecting the conclusion of Hasker’s argument. Here are four such propositions in particular:

1. Hasker’s 1st Assumption: Consciousness/Mentality Requires A Soul

In the context of giving this argument, Hasker assumes that Substance Dualists should maintain that any creature, human or non-human, which can engage in any kind of (conscious) mental operation (e.g., sense, perceive, feel, think, form and act on intentions, etc.) has or just is an immaterial soul. In other words, no wholly material thing can think, sense, feel, or engage in any other (conscious) mental activity since having (or being) an immaterial soul is required for something to engage in such activity.

For purposes of this article, whether Hasker is right about this first assumption does not matter much. I will proceed as if this assumption is true, though I note that one could attempt to motivate the idea that only the mental powers unique to “rational animals” or persons (e.g., the traditional rational powers of intellect and will) require an immaterial soul and in this way renounce the idea that *any* kind of consciousness or mentality requires an immaterial soul.

2. Hasker’s 2nd Assumption: If Human Souls Are Directly Created, Then All Souls Are

Hasker also takes it for granted that if one holds that God directly creates the immaterial souls of human persons, then one should also think that God directly creates the immaterial souls of any other creatures that have them.

For simplicity, I will grant this claim too, though I note again that it’s not clear that all Creationist Substance Dualists would or ought to accept it. In fact, it seems to be the (implicit) position of the Catholic Church to deny this claim, holding instead that, even if non-human animals have souls, only the distinctively “rational” souls of human

persons are directly created by God. Of course, further work would be needed to motivate a view that combines an Emergentist account of the origins of non-human souls with a Creationist account of the origins of the distinctive kind of souls (“rational souls”) that humans have. Since I make no effort to motivate such a hybrid view here, I will instead grant Hasker this assumption and show that, even if this assumption is granted, his argument still fails.

3. Hasker’s 3rd Assumption: Different Mental Abilities Imply Different Kinds of Souls

Hasker is also supposing that different kinds of creatures have different kinds of mental abilities and that these differences in their mental abilities at least partially involves their having different kinds of immaterial souls. Many people would agree that there are some mental abilities that human beings have but other, non-human animals lack. For example, human beings have the ability to engage in certain kinds of conceptual thought (whether mathematical, moral, scientific, and/or etc.) that no other, non-human animals appear to be capable of. Moreover, many of us also think that, unlike non-human animals, humans alone can make reasons-responsive free choices and engage in intentional behavior for which one can appropriately be held morally responsible. Furthermore, many would also accept that there are also mental abilities that some kinds of non-human animals have but which other kinds of non-human animals lack (e.g., cats and dogs can hear sounds, but ants apparently cannot). So far, there is not much here that is deeply controversial. What *is* more controversial is Hasker’s implied claim that Substance Dualists should think that these differences in mental abilities are not wholly the result of physical differences between the creatures in question (i.e., differences in the sorts of brains, bodies, organs, etc. that they have) but should instead think that these differences are at least partly due to these animals having different kinds of souls.

Again, for the sake of identifying a more fundamental problem in Hasker’s argument against the Creationist position, I will grant this third assumption. But before proceeding, it is worth noting that Creationist Substance Dualists could dispense with this third assumption and attempt to motivate one of several alternative positions. For example, one might claim that all non-human animals actually have the same kind of (non-rational) soul and that the mental differences exhibited by different kinds of animals are entirely due to physical differences between them (e.g., their having different sorts of brains and/or sense-organs) rather than due to their having different kinds of souls.

4. Hasker’s 4th Assumption: Common Ancestry and the Gradual Emergence of Mind

Last of all, Hasker takes it for granted that evolutionary science has established, or at least given us good grounds to believe, that all the organisms that exist now, human and animal alike, ultimately share a common ancestry. More carefully, Hasker is taking it for granted that evolutionary science has established, or at least given us good grounds to believe, that contemporary humans are the descendants of ancestor organisms that possessed some but not all of the mental abilities that we have now, and that those ancestor organisms were in turn descendants of yet more distant ancestor organisms that had some but not all of the same mental powers as the more recent group of ancestor organisms, and so forth, all the way back to very distant ancestor organisms that had no minds, mental abilities, or immaterial souls of any kind.

I agree with Hasker that evolutionary science has indeed given us good grounds for believing this, and so I am happy to grant this last assumption as well.

Having made these assumptions explicit, we are now in a position to better understand Hasker’s argument against the Creationist Substance Dualist’s position. If we accept these four assumptions *and the Creationist Substance Dualist’s claim that each human being’s soul is directly created by God*, then there must have been cases of reproduction within evolutionary history where God gave a newly generated organism a different kind of soul than the kind of soul had by its parents. Concerning such cases, Hasker poses the following trilemma:

But what is the relationship between the increasing biological complexity and the gradually (or perhaps stepwise) increasing powers of the divinely created souls? [Option 1] Are we to suppose that God waits until natural evolutionary processes have produced a more complex organism, and then supplies the more sophisticated soul? (But then, how would the requisite modifications in the organism be selected for, if they are as yet unable to function because the soul is inadequate to support the functions in question?) Or [Option 2] do the more advanced souls come first and somehow guide the process of evolutionary development? Or, finally, [Option 3] does each major evolutionary advance require a simultaneous “double nudge,” which at the same time impels the physical modifications and supplies a more advanced soul? Perhaps each of these alternatives is logically possible, but I doubt that any of them will commend itself as plausible in the light of reflection.¹¹

Let’s unpack Hasker’s reasoning. First, consider any mental ability that has emerged in the history of life on our planet (e.g., the ability to sense in general, the ability to hear in particular, the ability to engage in the kinds of conceptual thinking that human beings are capable of, or whatever). Whatever the mental ability, we must accept that from ancestor organisms that *lacked* the mental ability in question there have eventually come about descendants that *have* the mental ability in question. Next, note that the evident dependence of mental functioning on body/brain-functioning has given us very good reason to believe that all of the mental abilities exhibited by the creatures on Earth are such that they cannot be (non-miraculously) exercised by an organism without that organism’s having some corresponding physical organ or organs (e.g., a brain of the right sort, sensory organs of the right sort, etc.), the (minimal) proper functioning of which is required for the mental activity in question to occur. So, for any such mental ability M, let us call ‘M-organs’ the organs that are required for an organism to (non-miraculously) exercise that mental ability.

Given this schematic terminology, we can now understand Hasker as arguing that, for any mental ability M which emerges in the history of life on earth, Creationist Substance Dualists must claim that either

Option 1 (God Waits): God waits until natural evolutionary processes bring about an organism which is genetically such that it will naturally develop M-organs. When such an organism is produced, at some point (perhaps at the very beginning of its life, or perhaps only at some later point in its natural development, such as when its M-organs first form), God creates for it a soul that differs from the kind of soul had by its parents

insofar as the new soul is one that grants the mental ability M. Since the organism has or will naturally develop M-organs, it will be able make use of M within its lifetime.

Option 2 (God Anticipates): God does not wait but instead infuses some organisms with “M-souls” (i.e., souls that grant the mental ability M) even though these organisms are *not* genetically such that they will naturally develop the sorts of organs (M-organs) required for them to exercise M. Hence, there will be generations of such organisms which have M (because they have M-souls) but which cannot exercise this mental ability since they lack the physical organs necessary for them to do so. However, natural evolutionary processes will eventually result in this lineage of M-souled organisms having descendants which *are* genetically such as to naturally develop M-organs and hence become capable of exercising the mental ability M bestowed by their M-souls.

Option 3 (God Does It All At Once): At some point when a new organism is produced from parents lacking M, God intervenes to produce two effects. First, he directly brings it about (e.g., by causing one or more genetic mutations) that the offspring is genetically different from its parents in whatever way is needed for it to be such that it will naturally develop into a mature organism with M-organs. Second, God also creates and gives to the offspring a new kind of soul that differs from the kind of soul had by its parents insofar as it grants M whereas its parents’ souls do not grant M. Since God has not only created for the organism an M-soul but also directly intervened to make it genetically such that it will naturally develop M-organs, it will be able to make use of M within its lifetime once it develops its M-organs.

Hasker asserts that none of these three options is a plausible thing for a Substance Dualist to uphold; as he puts it at the end of the passage quoted above, “Perhaps each of these alternatives is logically possible, but I doubt that any of them will commend itself as plausible in the light of reflection.” In what follows, I’ll set aside Options 2 and 3 in order to focus on challenging Hasker’s claim that Option 1 (God Waits) is an implausible position for Creationists to take.

§3. Why Hasker’s Argument Fails to Seriously Threaten Creationist Substance Dualism

Why does Hasker think Option 1 (God Waits) is an implausible position for Creationist Substance Dualists to take? He thinks this because he believes that natural evolutionary processes are unlikely to produce an organism with the requisite genetic features (i.e., features that make it naturally develop M-organs). As he himself puts it, “how would the requisite modifications in the organism be selected for, if they are as yet unable to function because the soul is inadequate to support the functions in question?”¹² Elsewhere, Hasker explains the concern this way: “We cannot suppose that God waits until the brains have evolved through natural selection, and then supplies the requisite soul with its advanced capabilities: lacking the right sort of soul, the advanced brain would be nonfunctional and would not be conserved through evolutionary selection.”¹³

The problem with this argument is that the thing that is puzzling Hasker is a puzzle for anyone – Emergentist, Creationist, or Materialist – who accepts that natural evolutionary processes can produce physically-complex biological organs (e.g., wings, hearts, eyes, brains, etc.). It has nothing to do with the debate between Creationist Substance Dualists and

Emergentist Substance Dualists, and in fact does not concern *mental* abilities in particular but rather concerns *any* kind of ability, mental or non-mental, the exercise of which requires a complex physical organ.

To see this, let's consider a specific organ as an example, say, an eye (an organ required for vision). If organisms come to have eyes as a result of natural evolutionary processes, then there is some sequence of genetic modifications that resulted in a descendant of an organism without eyes having (or, rather, being genetically such as to develop in the right environment) an eye or eyes. Now, parodying Hasker, one might object that it is deeply implausible that any such sequence of genetic modifications would occur: without eyes, the descendant organism's ancestors could not see and hence the sequence of genetic modifications in question (modifications yielding at first only the rudiments of an eye and then, finally, in the case of the descendant in question, an eye that is actually functional) would not have contributed to the functioning of these organisms and hence would not have enhanced their reproductive fitness and hence would not have been “conserved through evolutionary selection,” as Hasker puts it.

Now, there is, to be sure, a puzzle here that needs to be solved, but it's not one that arises because of any distinctive claim made by Creationist Substance Dualists. It is just as much a puzzle for Emergentist Substance Dualists and Materialists, and the ways one might solve the problem are equally available to proponents of all three views. To see this, let's consider some possible ways an evolutionary biologist might solve the puzzle:

- (1) They might determine that the genetic modifications in question did not in fact increase reproductive fitness. This isn't the problem that Hasker thinks it is, since in order to for genetic mutations to be conserved through reproduction, they need only have not significantly decreased the reproductive fitness of the organisms that underwent them. Not all genetic mutations need to be fitness-enhancing to be passed on to descendants.
- (2) Alternatively, they might determine that the genetic modifications in question contributed to the reproductive fitness of the ancestor organisms in other ways, not by facilitating the mental function (e.g., conscious vision) they will eventually help facilitate but instead by contributing to some other fitness-enhancing function or functions of the organisms in question.
- (3) Alternatively, they might discover that the genetic modifications in questions were spandrels (i.e., consequences of other factors that were fitness enhancing, even though they themselves were not directly fitness enhancing).
- (4) Or... (I don't pretend to have exhausted the options here).

For my purposes, it doesn't matter what the specific correct evolutionary explanation is of the origins of our eyes, ears, brains, or any other complex physical organ that now facilitates one or more of the mental activities that we are capable of engaging in. Instead, the crucial point simply that *whatever the correct evolutionary account of the origins of such organs turns out to be, it will be one that doesn't appeal to the idea that the genetic modifications in question facilitated the exercise of the mental ability in question and thereby contributed to the reproductive fitness of the organisms involved.* This is something that Creationists, Emergentists, and Materialists alike should agree on, as it is a constraint that any evolutionary

explanation of the origins of the organs in question will have to satisfy, regardless of what one thinks about the existence/non-existence of souls or how such souls (if they exist) originate. For this reason, whatever the correct evolutionary explanation turns out to be, it will be one that Creationist Substance Dualists can endorse just as easily as Emergentist Substance Dualists and Materialists can. Hence, Hasker is wrong to claim that Creationist Substance Dualists face any kind of “awkwardness” here that Emergentist Substance Dualists or Materialists don’t face. On the contrary, all three views are on equal footing vis-à-vis the puzzle of identifying the evolutionary explanations of how such complex physical organs have come about.

§4. A Concluding Summary

To be successful, any theory of biological evolution will need to be able to explain how organisms have come to have various bodily organs that now facilitate various kinds of mental activities *without appealing to the reproductive fitness conferred by an organism’s being able to engage in whatever mental activities are now facilitated by those organs*. For this reason, whatever particular evolutionary explanation we arrive at to explain how these organs came about will be one that can be equally accepted by Creationist Substance Dualists, Emergentist Substance Dualists, and Materialists alike. Consequently, Hasker is wrong to suggest that the Creationist Substance Dualist “confronts an awkward situation in dealing with biological evolution” that is somehow different (and more awkward) than the situation confronting their rivals. Since proponents of all three views can give the same evolutionary explanations of how such organs originate, Creationist Substance Dualists are not in fact worse off than their rivals vis-à-vis this issue.

What divides Materialists and Substance Dualists is not the question of how such organs originate but rather the question of whether the functioning of those organs alone is sufficient to explain the occurrence of (conscious) mental activities associated with them. If one thinks (as Substance Dualists do) that one must invoke not just the organs in question but also the presence of a soul to explain the occurrence of these (conscious) mental activities, then one must confront an additional question about where these souls come from: are they directly produced by (or “emergent from”) physical processes of some sort or another, or are they directly created by God? The point I have made here is that, however one answers this question, it has no effect on what evolutionary explanation one can give of how the corresponding organs came about. For that reason, evolutionary biology does not in fact make the Catholic/Creationist view that human beings have souls directly created by God a less plausible position than an Emergentist one.

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¹ I note that standard Thomistic views of the composition of human persons count as versions of “Substance Dualism” on this definition of Substance Dualism. Thomists hold that human persons are not entirely composed of material parts but instead have immaterial souls, which are understood to be “forms” of a certain kind, in addition to the material parts that compose their bodies. I note also that the position I am calling “Substance Dualism” says nothing about non-human animals and hence is consistent both with the view that non-human animals lack souls and the view that non-human animals have souls. A more precise name for the position I have in mind would be “Substance Dualism About Human Persons,” but such a name is cumbersome. For this reason, I stick to the label “Substance Dualism,” with the caveat that readers keep in mind that the position I have in mind is compatible with different views concerning the existence/non-existence of souls for non-human animals.

² These definitions say nothing about what produces the souls of non-human animals (if non-human animals have souls). This is intentional, as what I wish to defend in this essay does not depend on my taking any particular position on what brings about the existence of the souls of non-human animals (if indeed they have souls).

³ Some key historical proponents of the Creationist position include St. Ambrose of Milan, St. Hilary of Poitiers, St. John Chrysostom, Peter Lombard, and St. Thomas Aquinas. For Aquinas’s discussion of this issue, see *SCG*, bk.2, para. 86-89; *ST I*, q.118, a.2; and *QDP* q.3, a.9. For some discussion of the history of Christian thinking about how human souls originate, see Charles Dubray, “Traducianism,” in *The Catholic Encyclopedia*, vol. 15 (New York: Robert Appleton Company, 1912), <http://www.newadvent.org/cathen/15014a.htm>; Francis Siegfried, “Creationism,” in *The Catholic Encyclopedia*, vol. 4 (New York: Robert Appleton Company, 1908), <http://www.newadvent.org/cathen/04475a.htm>; and Ralph Hennings, “*Disputatio de origine animae* (CPL 623,37) – or the victory of creationism in the fifth century,” in *Studia Patristica*, Vol. 29, ed. Elizabeth A. Livingstone (Leuven: Peeters, 1997), 260-268.

⁴ For some contemporary philosophical defenses of the Creationist position, see John Foster, “A Brief Defense of the Cartesian View,” in *Soul, Body, and Survival: Essays on the Metaphysics of Human Persons*, ed. Kevin Corcoran (Ithaca, NY: Cornell University Press, 2011), 15-29, at 28-29; Joshua Farris, “Emergent creationism: another option in the origin of the soul debate,” *Religious Studies* 50 (2014): 321-329; Joshua Farris, *The Soul of Theology Anthropology: A Cartesian Exploration* (London: Routledge, 2017); Joshua Farris, “Souls, Emergent and Created: Why Mere Emergent Dualism Is Insufficient,” *Philosophia Christi* 20 (2018): 83-92; and Richard Swinburne, “Response to Essays on *Are We Bodies or Souls?*,” *Roczniki Filozoficzne* 69 (2021): 119-38, at 136-8. For criticism of Farris’s and Swinburne’s views, see William Hasker, “Emergent Dualism and Emergent Creationism: A Response to Joshua Farris,” *Philosophia Christi* 20 (2018): 93-97 and Hasker, “Swinburne’s *Are We Bodies or Souls?*,” *Roczniki Filozoficzne* 69 (2021): 67-82.

⁵ *The Catechism of the Catholic Church* (Vatican City: Libreria Editrice Vaticana, 1993), paras. 362, 363, 364, & 366.

⁶ *Humani Generis*, para. 36.

⁷ See, e.g., William Hasker, *The Emergent Self* (Ithaca, NY: Cornell University Press, 1999); William Hasker, “On Behalf of Emergent Dualism,” in *In Search of the Soul*, eds. Joel B. Green and Stuart L. Palmer (Downers Grove, IL: Intervarsity Press, 2005), 75-100; William Hasker, “The Emergence of Persons,” in *The Blackwell Companion to Science and Christianity*, eds. by J.B. Stump and Alan G. Padgett (Oxford: Blackwell Publishing, 2012), 481-90; William Hasker, “The Case For Emergent Dualism,” in *The Blackwell Companion to Substance Dualism*, eds. Angus J. L. Menuge, Jonathan J. Loose, and J. P. Moreland (Oxford: Blackwell Publishing, 2018), 99-112; and William Hasker, “Creation, bugs, and emergence,” *Journal of Philosophical Theological Research* 23 (2021): 93-112. Hasker’s publications on this topic are too numerous to provide a complete list here; the above examples merely provide a representative sample of his work.

⁸ See Charles Taliaferro, “Emergentism and Consciousness: Going Beyond Property Dualism,” in *Soul, Body, and Survival: Essays on the Metaphysics of Human Persons* (Ithaca: Cornell University Press, 2001), 59-72, at 70; Dean Zimmerman, “Should A Christian Be A Mind-Body Dualist?” in *Contemporary Debates in Philosophy of Religion*, 1st ed. (Oxford: Blackwell, 2004), 315-26, at 317; Dean Zimmerman, “From Property Dualism to Substance Dualism,” *Proceedings of the Aristotelian Society* 84 (2010): 119-50, at 135-6; and Dean Zimmerman, “From Experience to Experienter,” in *The Soul Hypothesis: Investigations in the Existence of the Soul*, eds. Mark C. Baker and Stewart Goetz (New York: Continuum, 2011), 168-201, at 175-6.

⁹ Hasker, “The Emergence of Persons,” 481. For other places where Hasker offers the same kind of evolution-based argument against Creationist Substance Dualism, see his *The Emergent Self*, 153; “On Behalf of Emergent Dualism,” 96; “The Case For Emergent Dualism,” 101-2; and “Creation, bugs, and emergence,” 101.

¹⁰ Hasker, “The Case for Emergent Dualism,” 102.

¹¹ Hasker, “The Emergence of Persons,” 481. See also the other Hasker publications cited in n.9 above.

¹² Hasker, “The Emergence of Persons,” 481.

¹³ Hasker, “The Case for Emergent Dualism,” 102.