

Do souls exist?

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‘The soul hypothesis’ (the belief that souls exist and humans have them) enjoys near unanimous support in the general population. Among philosophers and scientists however, belief in the soul is far less common. The purpose of this essay to explain why many philosophers and scientists reject the soul hypothesis and to consider what the non-existence of the soul would entail.

What is the soul?

Although the word ‘soul’ is ambiguous, the notion that humans possess souls employs a specific concept. Classically, souls are nonphysical entities that are separable from our physical bodies. Consequently, ‘soul belief’ entails ‘substance dualism,’ the existence of two substances: one material (the matter that makes up the universe) and one non-material (of which the soul is made). Consequently, the soul has no mass, no extension (it does not take up space) and no location.

What is the soul for? What does it do? Most importantly, souls are where mental activity takes place—where emotions are felt, decisions are made, sensations are experienced (e.g., where our visual field is laid out), memories and one’s personality are housed and reasoning occurs. For example, when you are thirsty and look for your water bottle, see that it is empty and thus decide to get a drink of water, remember where the water fountain is and then figure out how to use it, all of this takes place within the soul. On the soul hypothesis, certain mental events cause physical ones—for example, your thirst (a mental event that occurred in your soul) caused you to turn your head to look for your water bottle (a physical event that happened in the world). But mental events also cause other mental events. Your visual experience of an empty bottle

brought about a decision to go get a drink of water, which then triggered your memory of the water fountain's location. All three are mental events that happen within the soul alone.

Today, soul believers don't deny that the brain influences the soul (e.g., your brain's visual system brings about visual experiences in your soul). But, they say, the soul can and does carry out its own processes without any help from the brain. In fact, the soul is separable from the brain. When one dies, the soul 'floats away' and its continued existence guarantees that one's mental life continues uninterrupted. After death you can, for example, still feel joy upon being reunited with loved ones in heaven, all while your brain remains decaying and inactive in your coffin.¹

Philosophic Reasons to Doubt the Existence of Souls

Belief in the soul has a long history but no clear historical origin. Of course only a fallacious appeal to tradition would tout the belief's longevity as evidence in its favor; my point is simply that it is difficult to pin down a causal explanation for soul belief. But one can point to philosophical defenses of the soul hypothesis; the most famous belong to Plato and Descartes. Unfortunately for the soul believer, however, their arguments are deeply flawed.

The failure of arguments for the existence of the soul

One might wonder why philosophers bothered presenting arguments for the existence of the soul. After all, introspection seems to confirm that the soul exists. But, alas, introspection does not reveal the existence of the soul. Introspection may (arguably) reveal the existence of one's mind, but introspection does not reveal that mental activity occurs in a substance that is separable from the body or that mental events can occur without one's brain after death. Such

claims need a philosophic defense—which they received most famously from Plato and René Descartes.

Plato's arguments are rooted in his ancient metaphysic theory. Plato believed in 'the Realm of Forms'—a collection of perfect abstract objects, in which physical objects 'participate' to be the objects that they are. (Chairs participate in the Form of Chair.) According to Plato's 'theory of recollection,' when one learns something new, one is not acquiring new knowledge but recalling something that one knew before birth while living among the Forms. Since one must have existed before one's body in order for this to be true, Plato concluded there must be a soul.² But, since no one takes the theory of recollection seriously anymore (we know that learning is not merely recollection), and since that theory assumes an even more outdated theory (Plato's Theory of Forms), Plato provides us with no good reason conclude that souls exist.

René Descartes is an advocate of substance dualism and thus also of the soul hypothesis. Descartes presented three arguments that the mind and body must be different and separable entities, and thus that the mind is in fact a soul: the argument from doubt, from conceivability, and from divisibility. Descartes famously began his *Meditations* by doubting the existence of the physical world (including his body) but concluded that his mind could not be doubted. If the mind can't be doubted but the body can, Descartes thought, then they must be different and separable things. Further, Descartes argued, since he can conceive of his mind existing without his body, and thus it is logically possible that his mind exists without his body, they must be separate things. Lastly, since the brain can be divided into separate parts but the mind cannot be divided, Descartes concluded, they must be separate things.³ And if they are separate things, the mind must be a soul.

All three arguments fail. The argument from doubt fails because ‘doubtability’ is not the kind of property that can distinguish objects. Does, for example, Lois Lane doubt that Superman is a genuine hero? Of course not. Does she doubt that Clark Kent is a hero? Of course she does. Yet Superman and Clark Kent are one in the same person, the latter being the alias of the former. I suppose that Lois could, like Descartes, wonder if Superman is even real—perhaps it is all a dream. But that would not alter the point; the doubtability of one object cannot be used to distinguish it from another. Besides, the mind can be doubted; eliminativism—the philosophical view that doubts the existence of the mind—has become a legitimate, and growing, philosophical theory.

The argument from conceivability fails because the fact that something is conceivable does not mean it is logically possible. One might conceive that the morning star exists while the evening star does not, but since the morning star is the evening star (they are both the planet Venus), one existing without the other is not logically possible. Further, conceiving that one’s mind exists without one’s body may only be possible because one has a limited understanding of what one’s mind is. One cannot conclude that minds are necessarily un-embodied unless one is perfectly aware of all aspects of minds. Indeed, our growing knowledge of the brain’s relation to the mind suggests that minds are embodied. (We will talk more about this later.)

Lastly, the argument from divisibility fails. In the same way that ‘doubtability’ can’t delineate substances, neither can ‘divisibility.’ But, more importantly, the fact that minds are in fact divisible has been revealed by the phenomenon of split brains. When one’s corpus callosum, which connects the brain’s two hemispheres, is severed (in surgery) or damaged (by a stroke), one’s mind, literally, becomes divided. Each half of the body is controlled by a separate mind—a separate stream of consciousness. In controlled experiments, Nobel Prize winner Robert Sperry

communicated with each half of such minds separately, conveying to and eliciting different information from each.⁴

The fact that the arguments for the existence of souls fail is enough reason to doubt their existence. When it comes to claims of existence, the burden of proof is on the believer. As Bertrand Russell famously pointed out, if I want to believe that a teapot orbits the sun, I cannot rationally do so unless I provide evidence for that belief. (Sure, no one can prove a ‘celestial teapot’ doesn’t exist—I can always claim it is too small to be seen—but that is no reason to believe it exists. That would be a fallacious appeal to ignorance.) Likewise, even if the existence of the soul can’t be disproved, belief in the existence of the soul is irrational unless positive evidence or argument can be given in favor of its existence. Thus the failure of the most well regarded arguments for the existence of the soul is a detrimental blow to the soul hypothesis.

Many would argue, however, that the existence of the soul can be disproved—or, at least, buried beneath an insurmountable amount of counter argument and evidence. Before we look at the scientific objections, let us first consider the philosophical objections that have been leveled against the soul.

Philosophical arguments against the existence of the soul

Let’s begin by pondering a question. If decisions happen in ‘your soul’, then when you decide to move your arm, why does your arm move and not, say, my arm? Your decision happens in *your* soul, of course, but in virtue of what is your soul connected to your body and not mine? It can’t be because your soul is closer to your body than mine. Souls are not made of matter and only matter can have location in time and space. So in virtue of what does your soul belong to you and not me? No satisfactory answer to these questions has ever been given.

Even if we ascribe a physical location inside your body to your soul, one still wonders, what facilitates the causal connection? After all, I can be inside my car, but unless I have the key, know how to drive, and the car is gassed up, it's not going anywhere. So, how does the soul drive the body? How could a non-material entity interact with a material one? No satisfactory answer to these questions has been given either.

An even more troubling fact is this: the soul can't control the body. The Law of Conservation of Energy (which states that energy cannot be created nor destroyed) and the Law of Conservation of Momentum (which states the total momentum of any system always remains constant) are well established. Also well established is the causal closure of the physical, which says that physical events can only have physical causes. Many scientists and philosophers maintain that this latter law is known a priori (without the need of sense experience), but it is also confirmed by the fact that any time we have gone looking for the cause of physical events, it has turned out to be another physical event.⁵ This includes events in the body, like bodily movements, which causally trace back to events in the brain. If the soul reaches out from beyond the physical realm, to cause things to happen in the brain and body, it would violate all three of these principles. It would be adding energy to the system of the body (or brain), and ultimately the universe; it would not be allowing the amount of momentum in the system that is the physical body (or the brain specifically) to remain constant, and it would be a non-physical cause of a physical event.

Of course, any or all of these principles could be shown false in the future, but the fact that something is possibly false is no reason to think it is false. The evidence is in favor of these principles; unless they are overturned they constitute a problem for soul belief—a problem philosophers call 'the problem of downwards causation.'

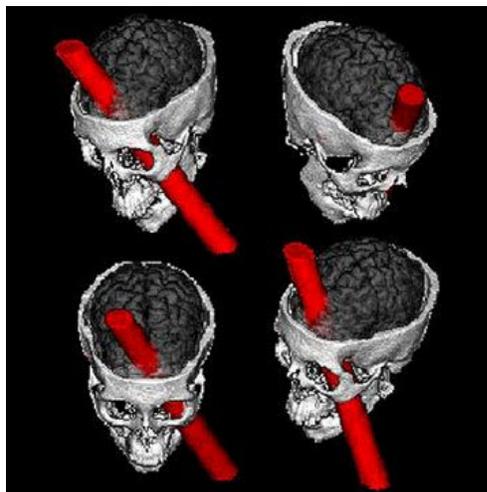
As you can see—because of the failure of the philosophical arguments for the soul and because of the problem of downwards causation—the philosophical prospects for the soul hypothesis are not good.

Scientific Reasons to Doubt the Existence of Souls

We just brushed against some reasons in physics that contradict the soul hypothesis. But the most convincing scientific evidence against the soul comes from neuroscience, and the perfect place to start exploring this evidence is the case of Phineas Gage.

The brain does everything the soul is supposed to do

Phineas Gage was a young railway foreman in the 1800s. An accident, on September 13, 1848, caused a tamping iron to pass through his skull—entering under his left cheek and exiting through the top of his skull—pulverizing part of his forebrain.



The path the iron took through Gage's skull and the part of his brain that was pulverized.

Gage survived, but his personality completely changed. Whereas he had been a gentle, respectable man and a responsible foreman, he became a rude and aggressive man and an irresponsible worker. He was no longer able to be employed as a foreman; he was annoyingly indecisive and careless, abandoning plans almost before he made them. His subsequent rudeness and profanity didn't help his employment prospects either. Perhaps worse, women were advised not to be in a room alone with him, as he would attempt to molest them.⁶



This previously unknown picture of Gage, while still alive, was recently discovered.

Gage's case challenged the classic soul hypothesis because physical damage cannot change one's personality if personality is housed in a non-physical thing like the soul—yet it undeniably had done this in Gage. Thus, it was concluded, personality must not be housed in the soul; instead it must be a result of the functioning of one's brain. The case of Phineas Gage, we might say, gave the soul one less thing to do—one less thing for it to explain. It pulled personality from the realm of the non-physical soul, and placed it squarely within the realm of the physical—the neurophysical.

Recently some have challenged the severity of Gage's personality change, but the point is moot. Gage set us down the path of discovery. Neuroscientists subsequently have discovered the brain areas responsible for language use and understanding (Broca and Wernicke's areas), for physical sensations of touch (the Penfield Map), for emotions (The Limbic System), for reasoning and decision making (the frontal lobes), for visual sensations (the aptly named visual cortex)...the list goes on. Many of these discoveries, in fact, were fueled by cases similar to Gage's, where specific mental capacities were lost when people suffered specific kinds of brain damage. Now we even know why Gage's personality changed.⁷

Although not everything about how the brain works is fully understood, it is now undeniable that all mental activity is a direct result of brain activity. Not only has personality been pulled from the realm of the non-physical soul into the realm of the physical brain, but everything that was once the purview of the soul—emotions, language, decisions, sensation, memories, personality—is now known to be the purview of the brain.

The inadequacy of the soul hypothesis

The soul hypothesis was supposed to function as an explanation for our behavior by being the cause of our intentional actions and dispositions. But it has always been lacking in this regard. Good explanations don't raise more questions than answers, but what the soul is made of⁸ and how it causes changes in the body, has always been a mystery. Now, since neuroscience has shown us that the cause of all we do is neural firings in the brain, not the activity of the soul, there is no explanatory gap for the soul to fill. Neuroscience has rendered impotent any explanatory power the soul hypothesis might have had. And hypotheses that explain nothing are not good explanatory hypotheses.

Attempts to save the soul from such objections do not succeed. For example, one might suggest that the known correlation of mental events to neural firings merely shows us how the soul operates. Although neuronal firings explain our behavior, the activity of the soul could be interjected to explain neuronal firings. ('Controlling neurons is how the soul controls the body.')

But such attempts harm the cause more than help. Not only would such a suggestion violate the physical laws mentioned at the end of the last section, and not only do we know that all brain activity is ultimately caused by physical reactions in the nervous system, but such an attempt renders the soul hypothesis wholly irrational. To explain why, let me draw an analogy.

Many scientists used to think heat was the product of a material called phlogiston that flowed into objects to make them hot and flowed out to make them cold. When we discovered that heat is actually a result of the movement of particles, phlogiston defenders suggested that 'making particles move is how phlogiston makes objects hotter.' But, of course, that was only an ad hoc excuse to save their theory. There was no need to hypothesize the existence of phlogiston—it didn't explain anything. Heat could be accounted for solely by the movement of particles; no extra substance was needed. Defending the phlogiston hypothesis in this way was merely a result of wishful thinking on the part of those who were emotionally attached to it as a pet theory. And so the phlogiston hypothesis fell out of favor.

Hopefully the analogy is clear. In the same way that heat can be accounted for solely in terms of the movement of particles, so can behavior be accounted for solely in terms of the activity of the brain. And hypothesizing another substance—whether it be phlogiston, or the soul—to account for activity that is already explained is only a less-simple irrational ad hoc excuse made to save the theory grounded in wishful thinking.

The soul defender might also insist that, despite the evidence, brain damage does not affect mental capacities. When it seems that someone has lost mental capacities upon the loss of particular brain functions, perhaps those capacities are actually still intact—safe and sound, in the soul. It's just that the brain damage prevents the soul from being able to communicate this fact to the outside world.

Again, such rationalizations hurt more than they help. First, such attempts are ad hoc suppositions interjected merely to save the theory from falsification. Worse however, such suppositions are untenable. Am I supposed to believe that Phineas Gage's personality remained gentle, but his brain damage was such that when he tried to act in gentle ways, he instead cursed profusely and tried to molest women? Am I supposed to believe that an Alzheimer's patient doesn't really forget their past experiences or their loved ones? Is it rational to believe that their memories are all still there, fully accessible, but when they try to describe their memories their brain damage is such that it just causes them to act or say that they have forgotten, or that they don't know who is standing in front of them? Of course not. And the silliness of such suggestions clearly reveals that they are merely desperate rationalizations to save the soul hypothesis.

All in all, neuroscience has shown that there is nothing left for the soul to do and thus no reason to suppose that it exists. Everything that was once supposed to be housed in or explained by the soul is now known to be housed in or explained by the brain.

What the Non-Existence of the Soul Entails

The soul's non-existence often evokes strong reactions. 'If there is no soul, all religion is a lie, God doesn't exist, an afterlife is impossible, and free will is an illusion.' Such worries are exaggerated, however.

First of all, not all religions profess the existence of the soul. The Hindu concept of "atman" is different than the classic concept of soul we have been considering. The Buddha himself said, "Only through ignorance and delusion do men indulge in the dream that their souls are separate and self-existing entities."⁹ In addition, the ancient Jews didn't have a classic conception of souls¹⁰ nor did they believe in a conscious afterlife.¹¹ In fact, most Jews today still don't believe in souls. Since Christianity was born out of ancient Judaism, most early Christians didn't believe in souls either.¹² Consequently, the classic doctrine of soul is also absent from the New Testament.¹³ In fact, the idea that humans have immoral souls stands contrary to what the Bible teaches about the resurrection of Jesus¹⁴ and the biblical hope in an eventual resurrection of the dead.¹⁵ The soul hypothesis is prevalent in Christianity today only because it was imported from Greek philosophy into Christianity by the likes of Origen and Augustine.¹⁶ Many Christians today want to reject this influence and return to a traditional and scriptural view that emphasizes resurrection and rejects the soul hypothesis.

Certainly God's existence is not dependent upon souls. Of course 'soul talk' and 'God talk' are often found in religious circles, but as we just saw, the ancient Jews and many early Christians believed in God, without believing in souls. There is nothing about God that demands souls exist.

Souls are not necessary for an afterlife either. Of course, our soul cannot float away from our corpse right after we die if it does not exist. But the bodily resurrection of the dead, as envisioned by the early Christians is still possible. In addition, God might facilitate our survival

into the afterlife by ‘copying’ our neural configuration, creating a new body, and then ‘pasting’ that configuration onto that new body’s brain.¹⁷ The resulting person would have all of your mental attributes and thus, many philosophers argue, would be *you*. If so, one could even continue to exist right after one’s death, even though souls do not exist. Other philosophers, like Peter van Inwagen, disagree; he thinks the resulting person would only be a ‘copy’ of you. But, he points out, God could still facilitate your survival into the afterlife by literally stealing and healing your central nervous system right before death.¹⁸ This may seem a bit of a stretch, but it actually has fewer problems than the soul hypothesis. Of course, belief that any of this will happen requires a leap of faith; but that shouldn’t pose a problem for religious believers. Regardless, the non-existence of the soul does not make an afterlife impossible.

The non-existence of the soul might threaten free will. Many think the physical realm is deterministic. If so, many argue, unless the soul exists to reach in from outside that realm to alter it, our actions cannot be free. Many philosophers, however, embrace compatibilism, the view that free will is possible even in a deterministic world.¹⁹ Only on a different definition of free will—the libertarian definition²⁰—does the non-existence of the soul threaten free will. But there are far greater threats to libertarian free will than the non-existence of the soul: theological and logical fatalism, ‘block world’ temporal ontologies that are entailed by general relativity, neuroscientific developments that show that our conscious decision processes are an ‘afterthought’— the list goes on. If there is no libertarian free will, it has little to do with the non-existence of the soul. Even if souls did exist, unless the above problems were solved, we couldn’t rationally conclude that we possess libertarian free will. And if we could solve these problems, it doesn’t seem the non-existence of the soul would really pose any serious threat.

All the nonexistence of the soul entails is that a particular view regarding what persons are is false. We can't 'float away' from our corpse after we die; ghosts don't exist, near death experiences are just dreams, and mediums (like John Edwards) are bogus. Hopefully this isn't too surprising. I suppose it does mean that eulogies which suggest that the deceased 'is looking down on us, right now, from above,' can't be right. But is the thought that we will all be reunited at the resurrection any less comforting?

Conclusion

I did not set out to prove that souls do not exist; to rationally doubt their existence, one does not have to. Recall, the burden of proof lies on the side of belief. I also did not set out to articulate every possible way one might redefine the concept of 'soul,' so that one can continue to use the words 'souls exist.'²¹ I was concerned only with the classic conception of soul, as it was originally defined and is conceived among the general populace. I was also not interested in replying to every possible response that classic 'soul believers' might give to the arguments I mentioned, nor to every conceivable pro-soul argument.²² It was my goal simply to bring together, in one place, the reasons and arguments that many philosophers and scientists have found convincing and to spell out what the non-existence of the soul does and does not entail.

¹ It's important to note that the soul is not merely the mind. Although soul believers may equate souls with minds, one can believe in minds without believing in souls. For example, one might believe that mental activity occurs within the mind, and even think of the mind as something other than the brain, but also maintain that all mental activity is dependent upon brain activity. Belief in the soul however, as it is classically conceived, requires one to believe that what houses mental activity is *separable* from the brain—that it can continue on without the brain. Unlike belief in souls, belief in the existence of minds is still the norm in most academic circles.

² In fact, one might argue that the theory of recollection merely assumes the existence of souls; it does not establish it. Regardless, as Socrates' dialogue partners point out in the *Phaedo* (77d-80c, 85D-86D, 91E-92C, 94D-94E), this argument doesn't prove that the soul is immortal, but only that it pre-exists the body. In the *Meno* (81b-E, 85B-86B) Socrates suggests that, if the soul pre-exists the body, it is reasonable to assume that it exists after death as well. Socrates presents other arguments for the existence and immortality of the soul, but they also fail for similar reasons. See *Alcibiades I*, 129B-130C and *Republic* 352D-354A.

³ For more on Descartes' arguments see Douglas C. Long's 'Descartes' Argument for Mind-Body Dualism' *The Philosophical Forum*, vol.1, no.3 (1969), pp. 259-273.

⁴ For more on Sperry's, and others' work, see M. S. Gazzaniga, 'Forty-five years of split-brain research and still going strong.' [Review]. *Nature Reviews Neuroscience*, vol.6, no.8 (2005), pp. 653-U651.

⁵ We have discovered that quantum events have no cause, but that does not violate causal closure.

⁶ See Rita Carter's *Mapping the Mind (Revised and Updated Edition)*. (Los Angeles: University of California Press, 2010), pp. 1, 24-27.

⁷ Our raw emotions and impulses arise from our limbic system, and would rule us if not for our reasoning-and-deciding frontal cortex, which sends inhibitory signals to squelch the limbic system when it becomes overactive. With Gage's frontal cortex considerably damaged, his impulsive and emotional limbic system ruled and controlled his actions.

⁸ Saying the soul is non-material adds no illuminating information about the substance of which the soul is made. That would be like describing your ideal house as 'not this one.' Negative descriptions are not enlightening.

⁹ See Paul Carus (Trans.) *The Gospel of Buddha*, (Chicago: Open Court, 1991), Part LIII, "Identity and non-Identity" Line 10, p. 153.

¹⁰ The Hebrew word often translated into English as "spirit" is 'ruach,' but only means 'the breath of life. "The belief that the soul continues its existence after the dissolution of the body is a matter of philosophical or theological speculation rather than of simple faith, and is nowhere expressly taught in Holy Scripture." From the 1906 Jewish Encyclopedia entry 'Immortality of the soul'. The entire encyclopedia can be found online at www.jewishencyclopedia.com.

¹¹ The ancient Jews did not believe in heaven or hell, only 'sheol,' a physical location where all the dead go to sleep.

¹² For example, the early apologist Justin Martyr did not. In chapter Chap. LXXX , of his Second Apology (the Dialogue with Trypho), Trypho asks Justin whether he believes that Jerusalem will be remade upon the resurrection of the dead. Justin says that he does, yet there are some Christians who don't. However, he tells Trypho, "...if you have fallen in with some who are called Christians, but who do not admit this ...who say there is no resurrection of the dead, and that their souls, when they die, are taken to heaven; do not imagine that they are Christians."

¹³ This has near universal agreement among biblical scholars. See Adrian Thatche's "Christian Theism and the Concept of a Person," in A. Peacocke and G. Gillette's (eds.) *Persons and Personality*, (Oxford: Blackwell, 1987).

¹⁴ For example, according to St. Paul in I Corinthians 15, Jesus' resurrection is supposed to prove that death is not the end. If Jesus was not raised, then we will not be either, and thus, when we die, that's it; those who have already died are lost (verse 17) and 'we are to be pitied more than all men' (verse 18). We might as well just 'eat and drink, for tomorrow we die'. (verse 32). But with the resurrection, God proved that he has power over death; as he did with Jesus, he can bring us back by resurrecting us. Jesus' resurrection was the 'firstfruits,' and later those who belong to him will also be raised (verse 23). By Jesus' resurrection, God has taken the "sting" (verse 55) out of death. But if the soul is immortal and thus we continue to live on after death anyway, death has no sting in the first place and the resurrection is pointless.

¹⁵ See Thatche, p. 184.

¹⁶ See Walter A. Elwell's entry on Soul in the *Evangelical Dictionary of Theology* (Grand Rapids: Baker Academic, 2001) p. 1129.

¹⁷ This concept is not biblical. However, given that the material that made up the bodies of ancient Christians has long since decomposed, reentered the ecosystem, and is now being used by our bodies, this may be the only way the Christian God can facilitate the resurrection of the dead.

¹⁸ See Peter van Inwagen's 'The Possibility of Resurrection' *International Journal for Philosophy of Religion*, vol.9, no.2 (1978), p.114-121.

¹⁹ See, for example, the chapters by Kai Nielsen, Daniel Dennett, John Martin Fischer, Derk Pereboom, and Harry Frankfurt, in Robert Kane's (ed.) *Free Will* (Oxford: Blackwell, 2002).

²⁰ This definition suggests that free will requires alternate possibilities. You can only freely do X if it is possible for you to not decide to do X.

²¹ For example, some Christians might affirm the existence of the soul, but simply deny its immortality. This would essentially be the same position of those that believe in the mind, and suggest that it relies upon the body for existence. It is not the classic view we have been addressing.

²² For a collection of arguments in favor of the soul's existence, see Mark C. Baker and Stewart Goetz (ed.) *The Soul Hypothesis, Investigations into the Existence of the Soul* (London: The Continuum International Publishing Group, Inc., 2011).