

The Gift of Soul

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An evaluation of biblical concepts of the soul in light of neuroscience reveals that it is not something that we possess but is a gift from God. Using the concept of forms, emergence, and supervenience, I will show that Greek concepts of dualism, where the soul is an added entity to a body, are untenable in light of both the biblical witness and neuroscience.

Humans, arguably, have the most complex brain of which we are aware. Neuroscience is allowing us to peer into this complex brain to understand the very bases of human consciousness. As our knowledge of this brain grows, it seems we may reach a point where our decision making abilities, our religious beliefs, our self-awareness, and even our concepts of a soul will all be entirely attributable to physical properties of our brains. Such a reductionist idea that humans are *nothing but* our bodies, neuronal networks, action potentials and hormones disregards any concept of a soul that is given to us by God.

Understanding the soul is crucial when so much new evidence demands integration into Christian belief systems. It is also important to provide surmise what happens when we die, how we should view the world, and how we are connected to God and each other. I will propose that the soul exists, not as a separate entity *added to* the body, but as a form which enhances qualities within that body.

The Reductionist Claim

The language of reductionism supported by neuroscience makes awfully large claims when so many gaps in our knowledge remain unfilled, yet they still have some implications in our conceptions

of a soul. A prime example of such a claim comes from Nobel Prize recipient, Francis Crick who stated, "... you, your joys and your sorrows, your memories and your ambitions, your sense of personal identity and free will, are in fact no more than the behavior of a vast assembly of nerve cells and their associated molecules."¹ Such a statement is based on a "nothing but" value judgement of the data supplied by neuroimaging and psychological testing.

Neuroimaging

By using neuroimaging, one can show that every aspect of our conscious experience is accompanied by specific brain activity patterns.² For example, ethical decision-making was shown to involve changes in activity within the posterior temporal sulcus and the ventromedial prefrontal cortex. In another brain imaging experiment, Carmelite nuns who were experiencing a mystical state described as a *union with God* showed activity in many different brain regions including the lower part of the parietal lobe, the visual cortex, the caudate nucleus, and part of the brain stem.³ Imaging is a powerful tool for neuroscience, yet it only shows *correlation* between brain activity and mental activity. One still has to query the patient as to what she is thinking.

¹ Peters, 2005, p.382

² Clarke, 2009

³ *ibid.*

Psychological Testing

On the other hand, psychological testing provides some causative evidence. For example, brain lesions are shown to affect aspects of mental function such as the ability to see movement, understand sentences, store new information, and/or to plan in advance.⁴ To further connect the causative evidence, it has been found that electrical and magnetic stimulation of specific brain regions can evoke sensations, complex memories, emotions, and ‘out of body experiences.’⁵ Though gaps exist in neuroscientific knowledge, this evidence clearly lays out the necessity to acknowledge the body’s innate abilities and functions when trying to understand how a soul functions.

Case Studies

Looking at case studies further demonstrates the importance of our brain and body in regards to the idea of a soul, because changing our brain/body essentially changes who we are. The first case involves a 40-year-old schoolteacher who was arrested in America for pedophilia. He had made a sexual approach to his stepdaughter, was found to have child porn on his computer, and was allegedly using prostitutes.⁶ He even failed a 12-step program for sex addicts because he continuously chatted up other members of the program, looking for sex. He reportedly knew what he was doing was unacceptable, but he could not resist his sexual drives. It was soon found that he had a large orbitofrontal brain tumor, and upon removal and treatment, his excessive sexual drives dissipated. Two years later though, his sexual drives returned, only to reveal that his tumor had re-grown. Once removed again, his drives became controllable. This case shows that one man’s values and self-control

is highly dependent on his brain activity, suggesting a parallelism between brain events and mental events. This is one of many *bottom-up* case types, where changes in the brain cause corresponding changes in a person’s behavior and/or cognition.

There are also *top-down* cases, where cognition produces localized changes the brain.⁷ For example, MRI scans of London taxi drivers who have underwent detailed navigation training showed that the drivers had significantly enlarged anterior hippocampus (involved in planning spatial paths through our environment⁸) compared to the normal controls. These case studies combined with evidence from brain imaging and psychological testing do not seem to fit with most dualistic ideas of the soul where the soul is a separate and influential entity of the body.

Substance Dualism

Unsupported by Science

Plato was a proponent of substance dualism, where people are immortal souls trapped in a mortal body, and the soul is the essence of a person that decides what they do. It is easy to see how this idea ignores neuroscience knowing that our brains have such control over our everyday experience. To understand the appeal and rise of dualism, it is helpful to go back to Ancient Greek times where the chief spiritual goal of the Greek-speaking world was to “win the struggle between our higher spiritual or mental nature and our lower physical or bodily nature.”⁹

This ancient spiritual goal still remains prevalent most likely because this feeling of duality seems to fit with our everyday experience. For example, it seems common to look at some of our survival and reproductive drives as desires of the flesh

⁴ *ibid.*

⁵ *ibid.*

⁶ Gray, 2010

⁷ Scott, 2012

⁸ Viard, 2011

⁹ Peters, 2005, p.386-387

that we must combat. If a person is trying to lose weight, they need a strong desire to resist the temptation of unhealthy food when walking through the supermarket. If a person is trying to be a faithful Christian, it is very common for them to battle the desires to have sex before marriage, leaving them feeling as though they have to resist their bodily desires in search of spiritual salvation. This dualistic outlook of the soul seems to make sense, yet it is not supported by scientific data and may cause people to regard the body as evil rather than truly caring for it as our soul.

Unsupported by Scripture

Furthermore, this dualistic idea of the soul is uninformed by Scripture. In the Old Testament, the Hebrew word *nefesh* (transliterated from נֶפֶשׁ) is traditionally translated as ‘soul’ in most English translations.¹⁰ *Nefesh* does not refer to something immaterial, but rather the corporeal living person or being – the whole person. The Hebrew word *ruach* (transliterated from רוּחַ) which can mean wind or breath is often translated into English as ‘spirit’ or even ‘soul.’ But it normally refers to God’s spirit as a “vital force which animates living creatures,”¹¹ not something like an immaterial substance.¹²

Generally, the meanings of these Old Testament words are carried through to the New Testament Greek terminology, with

psychē being the replacement for *nefesh* (soul) and *pneuma* being the word for *ruach* (spirit).¹³ With this Biblical foundation in mind, it can be understood that humans don’t necessarily *have* souls, but that we *are* souls, of which come supervening qualities that I will later discuss. It is best to engage in other perspectives that differ from dualism and better to incorporate Biblical themes and scientific understanding.

Soul as Form

This is where the idea of the soul as a *form* comes into play, as it can better incorporate Biblical depiction of the soul as the “whole being,” while demonstrating how our bodily organization and neural structure is not the end of the story. To begin, Aristotle, in contrast to his teacher Plato, considered the soul as “the form of the body” instead of an immaterial substance that influences the body.¹⁴ He believed that this “form” was an essential characteristic of every living entity. Thomas Aquinas expanded upon these ideas, viewing matter as passive and activated by a “form” as Aristotle would put it.¹⁵ In this school of thought, a form is required as a companion of all matter. In other words, an entity of matter is inseparable from its form, such that a clay ball without its round form would not be a clay ball at all.¹⁶ Aquinas pronounced that, for living things, this form is called a

¹⁰ Oomen, 2003

¹¹ Scott, 2012, p. 91

¹² Scott, 2012

¹³ Unfortunately, translation of Hebrew to Greek tends to oversimplify the true meaning of the Hebrew. The translation of either Hebrew or Greek to English further obfuscates the biblical meanings. Even a simple internet search of Hebrew words where Rabbis are consulted will turn up considerable discussion. We do not have space here to discuss weightier matters like the fact that even plants have a *nefesh*; they are alive. Animals have both a *nefesh* and a *ruach*; they are alive and move/breathe. People have a *nefesh*, *ruach*, and a *neshama*; they are alive, breathe, and are imbued with a godly spirit.

<http://messiahtruth.yuku.com/topic/3608/nefesh-and-ruach#.VrZDIVIWZIE>

However, before the reader gets too excited that we truly *are* special since we also have a *neshama* see additional discussion of why even *things* (including animals) can also have the godly spirit (*neshama*) and why even humans may lack it since it is a *developed* thing given to us by discovering God (e.g., it is not something we possess at birth), see

<http://rooster613.blogspot.com/2011/03/do-animals-have-souls-part-i.html>

¹⁴ *op. cit.* ref. 10

¹⁵ *op. cit.* ref. 12

¹⁶ *op. cit.* ref. 9

soul, and is seen as “something like the organization by virtue of which something is what it is.”¹⁷ To illustrate this idea, many people, bricks, and computers make up an “office” or a “university” only by “virtue of the organization or network that brings them together.”¹⁸ When looking at the human, the soul is what brings the body together into a whole being, each human having a different and unique form.

It must be noted that humans are not the only living beings that Aquinas believed have souls.¹⁹ Plants and animals cannot be left out from the discussion, especially when animals are referred to as *nefesh* along with humans in the Bible. Aquinas differentiated between souls as living beings by stating that plants have vegetative souls²⁰ (corresponding with the abilities to grow and reproduce); animal souls have additional capacities that allow them to move around and perceive things;²¹ human souls have the capacities of the plant and animal souls, and capacities that are typically human.²² He said that humans have *rational* souls that allow for cognitive capacities greater than that of animals, which enables us to be attracted to goodness and seek a relationship with God, the ultimate good.²³ Though Aquinas’ ideas about different types of souls is postulation, this is a useful classification scheme in the way that it establishes a relationship between humans and the world, yet also exemplifies distinctness between humanity and other living beings.

Challenges to Dualism

The idea that all living beings have souls can be a challenge for some. But it makes sense that, if souls correspond to the organizational structure of the living beings,

then by virtue of that organization it allows them to function and be their specific entity; perhaps, then we can differentiate humans from the rest of the living beings and see what makes us “in the image of God.” The Bible gives us a picture of how God created the world, and clearly voices the distinctness of humanity among the rest of creation.

Humans, though very similar in building blocks and assembly to so many other living beings, have by virtue of our special organization found ways to express our gift of soul unlike any other life form through spiritual endeavors. Spiritual outlets such as music, aesthetic appreciation, and artistic creativity are hallmarks of the human race that can be related to the soul.

The Emotional Turn

These aspects of human life are very difficult, if not impossible, for science to quantify or comprehend. Attempting to understand why music or art evokes different emotions in different beholders would be a formidable, if not impossible, task for science. After all, science is not omnipotent as Oxford zoologist, Richard Dawkins, believes it to be.²⁴ Dawkins and “scientism” disregard some of the most important aspects of the human soul – intuition and emotion, because they cannot be quantitatively and reproducibly studied in the laboratory.²⁵

Supervenience and the Spiritual

It is true that brain imaging can visually depict activity of the brain during these spiritual activities, but the soul has properties that cannot be reduced to the neural connections. To truly understand the soul, one must be in touch with more of a spiritual energy that reveals itself in a totally different realm. This realm does not leave

¹⁷ *op. cit.* ref. 10, p.381

¹⁸ *ibid.*

¹⁹ *op. cit.* ref. 12

²⁰ *op. cit.* ref. 10

²¹ *op. cit.* ref. 12

²² *op. cit.* ref. 10

²³ *op. cit.* ref. 12

²⁴ Jones, 2014

²⁵ *ibid.*

clues for science and laboratory tests to unravel.

Getting ‘in touch’ with this spiritual energy is not necessarily straightforward, just like contemplating the soul is comparatively abstract. The spiritual energy of the world, where the soul can be explored, may come from the ideas of emergence and supervenience. Each form of an object or soul of a living entity has ‘supervenient’ qualities, or properties, that emerge as a result of the organization of the parts and then exert top-down causation on the very parts of which they are composed.

Supervenience and Music

For example, a piece of music has properties that the underlying set of tones does not have, such as a melody.²⁶ Similarly, a letter, though made up of only ink and paper, has an associated meaning that cannot be reduced to the materials. The same principle applies to human bodies, which have a physical basis consisting of neural connections and associated body parts, yet we have so many qualities and associated meanings that cannot be reduced to the material basis. These supervenient qualities and meanings can be thought of as the spiritual energy where our soul resides. Artistic expression and soul connection through music could be one example of a supervenient quality that is a result of our complex organization.

In many ways, music is the most universal of all spiritual expressions, providing an “essential expression of the soul to most people throughout the world.”²⁷ Music has been used since the earliest times of tribal and folk traditions, and remains an integral part of most modern events. For example, music accompanies some of the most important rites of passage in our lives such as religious ceremonies involving birth,

puberty, marriage, and mortal death.²⁸

Whether listening to pop music or classical music, emotional uplift can be found just by simply listening to it, without any analysis.²⁹ Not only does the listener experience spiritual and soulful escapes from reality through music, but many creative artists, composers and writers attribute their creative process to a source in the spiritual realm.³⁰ Therefore, music seems to be a uniquely human manifestation of the soul that connects us to the spiritual realm and to other people. It makes sense that music is used for worshipping God, as it can directly connect our souls to Him and the community of worshippers around us.

The Relational Aspect

Now that we have explored how music appreciation and musical expression may function as a supervenient quality of the soul, it brings this discussion to an important point: the soul is a relational concept. In other words, our souls are manifested through relationships, whether with God or with other people. This can be seen very clearly in the previous example regarding the connections that people have with God and others during worship. During worship, each individual soul has a chance to engage in the spiritual realm, whether listening, singing, or playing the music. Together, they also create, by virtue of their organization, “one body” that is full of supervenient properties. This produces a greater wonder for God to enjoy and with which to interact.

God has gifted us as individual souls, which allow us to change the form of the world and make ourselves who we are, but only by virtue of our organization for which God has designed. Such freedom to change the world and ourselves suggests that our

²⁶ Oomen, 2003

²⁷ Jones, 2014, p.84

²⁸ Jones, 2014

²⁹ *ibid.*

³⁰ *ibid.*

souls are always transforming, along with the form of the universe. Being the creator and sustainer of the forms of this world, God can not only interact in one person's soul, but also in the overall organization and meaning of the universe as one body. The universe, and us, has an ever-refashioning organization and meaning; only God can know exactly what the purpose of it all is. Humanity's best chance at understanding God's purpose for us can only be found by reaching into the spiritual realm of God. It is commonly said that accepting God into our lives, and living as a follower of Jesus and his teachings creates an ultimate redesign of ourselves (we are "born again"), giving us consistent contact with the spiritual realm (we receive the Holy Spirit). It is only through our gift of soul that God can be brought into one's life.

Redesign (or transformation) of the soul is a beautiful concept. As our lives progress, and our bodies change, we make more neural connections or we can lose neural connections; we also grow in community and we make decisions that would be regarded as 'sinful' by that community. Eventually we all die.

Immortality of the Form

Consequently, this discussion would not be complete without considering the idea of an immortal soul and its implications on the resurrection. Through this roller coaster of life, God may tug at our souls in ways we cannot explain, drawing us into our purpose. We may come to a point where we have nowhere to look, except to God for forgiveness and grace. We may try and go through life on our own until we realize that we are made for community with God and others. Every individual has their own soul journey; God perceives and assimilates it all. Life beyond this journey requires divine

action; "it does not come as an extension of a property we human beings possess."³¹

God is the ultimate decider of the resurrection, yet we do have the ability to change our soul, because our bodily organization and relationships will change throughout life. Going back to the example about the 40-year old school teacher who had a brain tumor which caused him to live a highly sinful life, it is clear that his soul changed over time. Both his brain structure and how others around him perceived him had been altered. He apparently knew that his actions were bad, and hypothetically could have sought Jesus' saving grace at some point in his life even had he not had brain surgery.

The Christian sees Jesus as the answer to these types of problems that cause people's souls to slip into darkness, since he sacrificed himself for humanity's sins. He essentially allows God to wipe away the bad parts of our souls upon resurrection. Potentially, God could take up all that he sees as good from our souls and resurrect that. In whatever way God decides to raise creation into a new life, it is certain that immortality will be due to a "creative act on the part of God who loves us."³² The Bible promises that we will be raised into a new creation. Let us then consider how our souls as forms of the body might be resurrected.

Though it may seem that a form cannot exist without its material basis, we also can understand how it is also possible for information structures to have a certain independence from their materialization.³³ Returning to the example about a letter being made of paper and ink, having a greater meaning that cannot be reduced to the material basis, we see that the meaning of the letter can be transferred between material bases.³⁴ For example, it can be rewritten on a computer, transferred orally

³¹ Peters, 2005, p.389

³² Oomen, 2003, p.388

³³ Oomen, 2003

³⁴ *ibid.*

via a telephone line, and perhaps then printed out again on paper. Therefore, it is at least conceivable that our own form/soul could be independent of our body and transferred to God at the resurrection.

Conclusion

The gift of a soul, specifically as a form of the body, is clearly a vital concept to grasp when contemplating life after death. It also applies to the overall understanding of human life. The idea is not in conflict with

neuroscientific evidence and is supported by Scripture as it does not oppose the body in any way, yet still refers to the whole 'living being.' Viewing the soul this way brings about a better understanding of how humans are unique among the rest of creation, especially through our ability to engage with the spiritual realm. It shows that we each have supervenient qualities that we cannot fully understand, and how only God can know the purpose of these qualities that make up his creation into one body.

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