

A portrait of a young woman with long brown hair, smiling, wearing a white lace blouse and a grey cardigan. She is standing in front of a wooden wall with vertical slats and a metal railing. The background is warm and textured.

# **RIANNE ROPS**

Honors Specialization in  
Catholic Studies - Year 4  
Department of Religious Studies

**SEARCHING FOR THE  
HUMAN SOUL IN AN  
EVOLUTIONARY WORLD**

# Introduction

In the mid-nineteenth century, Charles Darwin published his revolutionary work, *On the Origin of Species*, which led to a massive paradigm shift in society's understanding of humanity and the natural world. No longer were human beings fashioned from the "dust of the earth" (Gen. 2:7) by the hands of their Creator. No longer were human beings set apart, enjoying "dominion over...all wild animals of the earth" (Gen. 1:26). The discovery of evolution shook the very foundations of traditional Christian anthropology and cosmology. In response, theologians have taken up the exciting challenge of reconstructing a Christian understanding of human origins since traditional claims are no longer tenable in an evolutionary framework. Many creative possibilities have been put forth, so I will take up the task of examining and evaluating some of the strategies employed by theologians to account for the human soul in light of evolution. I will begin with a *very* brief explanation of evolutionary theory, followed by the Catholic Church's initial conservative reactions to this theory. I will then evaluate various theological strategies used to account for the human soul (i.e. Christian materialism, divine intervention, and emergent-soul theologies) with the aim of presenting Karl Rahner's articulation of the emergent soul as the best way of speaking about the human soul within an evolutionary framework.

## A Brief Explanation of Evolutionary Theory

Prior to the discovery of evolution, Christians believed that God individually fashioned and ordered each species to its proper end. With the advent of Darwinism, these assumptions have been put to rest. Where creatures were once able to boast of a divine blueprint, they must now attribute their design to the genetic mutations of their ancestors.

According to evolutionary theory, the vast array of species alive on earth has evolved from one single-celled organism affectionately known as LUCA (the "last universal common ancestor") (Rice, 2011). As LUCA reproduced generation after generation, the genetic mutations that inevitably and randomly occur in reproduction began to accumulate in the offspring. Eventually, these accumulated mutations would be expressed visibly, resulting in variation within the species (Charlesworth, 2003). Over thousands of generations, the accumulation of variations would eventually give rise to a new species altogether. This process of differentiation, which happens differently on each branch of variation, accounts for the incredible biodiversity we enjoy today. According to this model, all creatures on earth are a family, distantly related through our shared ancestry in LUCA (Rice, 2011). Human beings are not exempt from this story; although it may shake our anthropocentric ideals of intrinsic superiority, we too owe our existence to lowly, little LUCA.

## The Catholic Church's Reaction to Evolution

Such an account of human origins looks quite different from what is presented in the Genesis narratives. Since evolution affects human origins and therefore human dignity, the Catholic Church was wary of embracing this doctrine right away. The first statement made by the Church about evolution was in 1950 by Pope Pius XII. In his encyclical *Humani Generis*, he does not forbid Catholics from accepting evolution "in as far as it inquires into the origin of the human *body* as coming from preexistent and living matter..." (no. 36). However, he clarifies that, "the Catholic faith obliges us to hold that *souls* are immediately created by God" (no. 36). Through this language of "immediate creation", Pius XII promotes a model in which God acts *directly* in creation, individually imbuing each human being with a handcrafted soul (Haught, 2001).

In 1996, John Paul II issued another significant statement concerning evolution. In his address to the Pontifical Academy of Sciences, he affirms that evolution is "more than a hypothesis," (no. 5) but like his predecessor, he reiterates, "...if the origin of the human *body* comes through living matter which existed previously, the spiritual soul is created *directly by God*" (no. 5). Again, we see the Church's desire to retain a special divine origin for the human soul.

Pius XII and John Paul II have good reason to preserve the distinct origins of the soul; they are concerned with protecting the unique dignity of humanity. If John Paul II believes that “it is by virtue of his eternal soul that the whole person, including his body, possesses such great dignity” (1996, no. 5), then it is not surprising that he would attribute this soul to the immediate and intentional work of the Creator. He concludes, “...the theories of evolution which...regard the spirit either as emerging from the forces of living matter, or as a simple epiphenomenon of that matter, are incompatible with the truth about man” (1996, no. 5). Pius XII and John Paul II are wary of the soul emerging from matter for fear of it being reduced to a mere epiphenomenon (that is, a secondary byproduct) and thereby stripped of its unique dignity (Edwards, 2014). Therefore, they reason: we can say that the human *body* shares its origin with all other creatures, but the human *soul* must come from a divine source whence it receives its unique dignity. Given these seemingly definitive reactions from Church authorities, how have theologians gone about accounting for the human soul in an evolutionary world while remaining true to their Catholic faith?

## Christian Materialism

Perhaps the most clean-cut way of dealing with the tension between immaterial soul and material evolution would be to do away with the soul entirely. This is the strategy of Christian materialism. According to Christian materialists, the human being is composed of a “single stuff” (Clark, 2014, p. 167); matter alone. The Christian materialist acknowledges *God* as pure spirit while regarding everything else as strictly material, completely devoid of immateriality. Christian materialists use scripture to support their view by opting for a formulation of ‘Hebrew holism’ – a materialist understanding where humanity is created entirely from the dust of the earth (Clark, 2014) – in contrast to the Greek model of the body-soul composite. A materialist strategy is certainly effective in relieving the tension between evolution and the human soul, for it removes the human soul from the equation, thereby alleviating the tension entirely.

However, although the tension may be alleviated, the equation is left sorely unbalanced. As neat and tidy as Christian materialism may be, it cannot fully account for the human experience. Interestingly, it is not just theologians who want to hold onto this immaterial part of humanity; certain scientists also take issue with the idea of reducing the human person to mere matter. Human geneticist Gerard M. Verschuuren outlines an error of strict materialist neuroscience. He notes that science depends upon the rationality of the human mind. If the immaterial human mind were to be reduced to the brain (as a materialist would contend) and therefore be entirely subject to the interactions of atoms, then any thought would merely be the result of physical forces interacting at a given time and place. There would be no subjectivity or freedom in thought; we would be unable to think anything other than what we are already thinking, for materialism and determinism go hand in hand. In Verschuuren’s words (2012), “If thoughts were merely the product of bodily and other natural actions, all thoughts would be equivalent, and we would have no way of telling the true from the false” (p. 164). If this is so, then any arguments *for* materialism would bear no weight. Verschuuren is amused by this internal contradiction of materialist thought. He says, “It amazes me how evolutionists like to downgrade the human mind while touting their own minds” (p. 164). If rationality is to retain any of its integrity, then the human mind cannot be reduced to the physical brain.

Another issue with a materialist understanding of humanity is its failure to account for subjective human experience. Kelly James Clark (2014) uses pain as an example to show the difference between subjective experience and physical processes. He says, “Neither the brain activity nor the chemical processes are the pain itself” (p. 167). However, if a Christian materialist were to remain consistent, the materialist would have to contend that pain “is more than *caused* by a particular formation of neurons in the brain, it *just is* a particular formation of neurons in the brain” (p. 170). Although there are correlations between physical processes and the subjective experience of pain, scientists have found no adequate explanation of the mental experience in the physical realm. Clark

articulates this disparity between material processes and subjective experience:

[R]eductive materialism seems incapable of accounting for the subjective quality of what it is like to *experience* mental phenomena; it seems to leave out the felt qualities of our sensations. Indeed, one of the most devastating shortcomings of materialism is that *third-person physical descriptions* (of chemical processes or neuronal configurations) cannot, in principle, adequately represent *first-person subjective experiences or states* – the feel of a feeling, the sensation of a colour, the sadness of an emotion. Feelings, sensations, and emotions refuse reduction. (p. 173)

A similar problem with materialism relates to the human capacity for memory. If you were to witness the most glorious of sunsets, you have the capacity to treasure that experience in your memory; you can recall both the image and the feelings it evoked. However, if a neuroscientist were to scour your brain, he or she would remain unable to access the image or the feeling of that sunset. They may be able to *identify* which emotions that memory is associated with, but there remains a fundamental chasm between the mental world of the subject and the physical world of the third-party (Clark, 2014). For the sake of avoiding relativism and determinism, and to preserve the subjective human experience, many scientists and theologians rightly reject Christian materialism and maintain that there *is* an immaterial aspect to humanity – whether that be ‘mind’ or ‘soul’, a rose by any other name smells just as sweet.

## Interventionist Theologies

Another means of explaining the emergence of the human soul is through divine intervention. Admittedly, this way of thinking is considered outdated by many contemporary theologians, but since many people still hold onto this belief, it is worth addressing.

Richard W. Gleason, for instance, looks to the biblical creation story of Adam and Eve and argues that God created Adam’s body by subjecting an animal to a

series of rapid genetic mutations until it assumed a human form. Only then was it made “suitable for the infusion of a divinely created soul” (O’Leary, 2006, p. 168). Therefore, according to Gleason, the emergence of the human body *and* soul was due to God’s special intervention in creation (O’Leary, 2006).

Gleason’s account of human evolution is quite problematic. Even if you were to overlook his over-literal interpretation of Genesis, there are many shortcomings inherent to an interventionist theology which have led to the development of *non-interventionist* models of divine action. An interventionist theology is one that allows for God’s special intervention in the created world (e.g. God could stop the rain, force a genetic mutation, or move a mountain if He felt so inclined). Karl Rahner exposes the problematic nature of an interventionist God by putting forth two reasons to reject God’s “special intervention” in the created world. The first reason for rejecting an interventionist God is to preserve God’s transcendence. According to Rahner, if God were to intervene in the created world by individually inserting handcrafted souls into human bodies, it would make God “an agent like other agents, acting in specific finite ways in the causal order of the universe” (Barnes, 1994, p. 91). In other words, interventionist action would demote God from His position as Primary cause to a mere secondary cause – that is, from His position as the Ultimate Being who sustains the very existence of all created things, to just another inertial force acting within creation. Rahner’s second reason for rejecting an interventionist explanation for the human soul lies in the complexities that arise in extraordinary cases. For instance, “If a human zygote split into twins, does God then have to intervene to create an extra soul? Is God bound to create a soul for pregnancy that is a result of rape or test tube fertilization” (Barnes, 1994, p. 92)? As soon as the soul is said to be added to the human body at a particular time, things become complicated. For these reasons, Gleason’s interventionist account of the origins of the human soul is untenable.

## Theologies of an Emergent Soul

Twenty years ago, Pope John Paul II explicitly rejected any claims of the human soul arising from evolution. He said, "...the human soul, on which man's humanity definitively depends, cannot emerge from matter, since the soul is of a spiritual nature" (1986). However, theologians such as Karl Rahner and John F. Haught have worked to expand our concept of matter in such a way that *would* allow for an immaterial soul to emerge from matter without losing its inherent, God-given dignity.

Before diving into theologies of the emergent soul, let us consider the perspective of neuroscience lest these theologies be dismissed as blind, outlandish conjecture. In the world of neuroscience, the 'mind' is the immaterial locale of human consciousness, subjectivity, and thought – similar to the theologian's 'soul'. Michael Gazzaniga provides a model of the emergent mind that translates quite smoothly into our theological discourse. According to his model, the mind depends on the brain for its existence, but it also constitutes "a new level of organization and control" (Edwards, 2014, p. 117) that goes *beyond* that of the brain. Our capacity for consciousness arises from the underlying neuronal, cell-to-cell interactions. Therefore, the mind is "a somewhat independent property of the brain while simultaneously being wholly dependent on it" (Gazzaniga, 2011, p. 130).

Neuropsychologist Malcolm Jeeves also endorses an emergent model of the mind. He speaks of the mind as having "its own causal activity" (Edwards, 2014, p. 120) – that is, its own agency. William Hasker uses the analogy of a magnetic field to illustrate the emergence of the mind from the brain:

A magnetic field is something above and beyond the magnet itself. The magnetic field cannot be *reduced* to the magnet itself. An extremely intense magnetic field has within it the power (via gravity) to hold together, even in the absence of the magnet that created it. According to emergent dualism, while the mind is an independent entity, it is not an entity that is inserted from the outside. (Clark, 2014, p. 177)

This formulation of the emergent mind (or soul), which allows the mind its own agency, would certainly quell John Paul II's fear of the soul being reduced to a mere epiphenomenon.

We can see shared themes between Rahner's emergent-soul theology and this type of emergent-mind neuroscience. Karl Rahner begins his case for the emergent soul with a rejection of any sort of interventionist statements concerning the "immediate" and "direct creation" of the human soul (Barnes, 1994). He then reworks the papal language of "immediate creation" to fit into a *non-interventionist* framework. In his reformulation, he interprets "immediate" as referring to God's immanent presence, using it geographically rather than temporally (Barnes, 1994). Rahner also provides a nuanced interpretation of the Church's use of "creation". Instead of referring to a collection of separate acts throughout history, Rahner understands creation as a trajectory of God's one, continual act. In other words, the event of creation was not a one-time event; rather it is an ongoing process. According to Rahner, when God created the world, He instilled in it an orientation toward self-transcendence, a motion that is propelled by the immanent presence of the Holy Spirit (Barnes, 1994). Using this framework, we can say that the human soul is an "immediate" creation of God: it has emerged through the ongoing process of self-transcending creation, which God sustains through His immediacy.

A key question still remains: how is it possible for an immaterial entity (i.e. mind, soul) to emerge from a material process? Rahner responds to this conundrum by calling into question what exactly is *meant* by "matter". If an immaterial entity comes into being through the development of a material substance (i.e. as we see with the evolution of the human mind), then perhaps that material substance had immaterial properties all along – and this is precisely how Rahner views matter. According to Rahner, "...matter is in a certain way 'solidified' spirit..." (Rahner, 1965, p. 92). He says, "[It] must, after all, be quite spiritual" and "materiality itself must be understood as the lowest stage of spirit" (Rahner, 1988, p. 28-29). In short, matter is as much immaterial as it is material, and it is from this spiritual dimension of matter that

the soul can emerge. Barnes articulates Rahner's theory as such: "The soul is what matter becomes when matter actively transcends itself under the general dynamic influence of God" (Barnes, 1994, p. 94). God's immediate presence allows creation to transcend itself continually until this 'frozen' matter thaws into spirit. This understanding of the emergent soul requires no special divine intervention; rather, souls can come into being through natural processes. Rahner specifies that this soul-creating power does not belong to matter "in light of its materiality, that is, that mode of being which consists of a spatial and temporal limitedness" (Barnes, 1994, p. 93). Instead, this power to create souls originates from God's dynamism, which is present and active in the self-transcendence of all matter.

Rahner's model of the emergent soul is brilliant; it creatively explains how an immaterial soul could emerge from a supposedly material world while remaining coherent with the modern sciences and evading common theological pitfalls. For instance, Rahner's theory completely obliterates any risk of falling into an unhealthy dualism since he reconceptualizes matter and spirit as intrinsically inseparable. Furthermore, this redefinition of matter as a material-immaterial substance removes the need for any special divine intervention to bring about the soul. In this way, Rahner preserves God's transcendence and sidesteps the extraneous complexities of extraordinary circumstances concerning the human soul (e.g. zygote splitting, *in vitro* fertilization, etc.). In a sense, Rahner takes the Catholic doctrine of the human oneness of body and spirit and extends it to all of creation. Now *all* matter can boast of a sense of immateriality; each atom proclaims a spiritual pulse, bearing the invisible fingerprint of the Spirit-Creator who brought it into being. Moreover, Rahner's articulation graciously provides a way for the Church's initial language of "immediate creation" to be applicable to contemporary theology.

To further strengthen Rahner's model, I would supplement it with the thoughts of John F. Haught whose articulations seem to better preserve the unique dignity of the human person. Like Rahner, who attributes a spiritual nature to creatures beyond humanity, Haught (2001) acknowledges something

analogous to the soul in every living being – it is the "animating principle" of every living body. However, the degree of this 'soul' varies between organisms depending on their level of biological complexity. He writes, "The Spirit of God [is] present in all of life, animating each species *in a manner proportionate to its characteristic mode of organic or informational complexity*" (p. 28). The human soul, then, does not stand *apart* from other living creatures, but it is still able stand *above* them as the "most intense exemplification" (p. 28) of this spiritual interiority due to its unique biological complexity.

Supplementing Rahner's thoughts with Haught helps to reconcile humanity's awkward position as being part of creation and yet distinguished within creation. Although Rahner's theory *does* provide a privileged position for humanity through their distinct ability to transcend themselves, Haught's articulation allows for a more tangible gradation amongst creatures; the immaterial dimension of matter increases in organization and capacity in proportion to the organism's biological complexity.

However, I would then supplement Haught's thought with that of Karl Rahner. Haught professes a 'soul' within every *living* being as its animating principle. Rahner, on the other hand, claims that immateriality is inherent to all matter – living *and* non-living. The extension of immateriality to non-living matter is important, otherwise the question of the origin of immateriality would persist. For example, in Haught's model, the animating soul is present in living creatures but not in non-living matter. His model explains the emergence of the human soul as a more complex version of what was already present in other living creatures. So the question arises again: at what point did this animating principle arise and where did it come from? Haught's model simply pushes the question of the soul back to the least complex living being, which leaves the door open for divine intervention as an explanation. Rahner's model closes the door on divine intervention because, in his model, immateriality has *always* been a part of creation. Therefore, there is no need for a divine addition of immateriality along the way.

The strength of Rahner's argument is also made apparent through its shared themes with other creation-centered spiritualities beyond the Christian tradition. When John Paul II (1996) wrote to the Pontifical Academy of Sciences, he affirmed that the theory of evolution was far more than a hypothesis. After acknowledging the substantial body of scientific evidence, he also noted that the independent convergence of various disciplines on the matter of evolution lends to its credibility. He says,

In fact it is remarkable that [evolution] has had progressively greater influence on the spirit of researchers, following a series of discoveries in different scholarly disciplines. The convergence in the results of these independent studies – which was neither planned nor sought – constitutes in itself a significant argument in favour of the theory. (no. 4)

This principle of independent convergence can also be applied to Rahner's explanation of the emergent soul. Although we have no evidence from scientific research scouring matter for any hint of immateriality (and rightly so, since the immaterial is outside the realm of science), we can see evidence of convergent thought in native spirituality. Take, for example, the Inuit people. According to their belief, "all things are imbued with a form of spirit" (O'Murchu, 2012, p. 90). The Mayan people also believe that "every

being – living *and* nonliving – has a creative spirit. They call this creative spirit the 'Great Mystery'" (p. 93). Finally, Diarmuid O'Murchu (2012) writes, "The Spirit is not equivalent to material or cosmic creation, yet the Spirit dwells deeply within all that exists – energizing, animating, and sustaining everything in the process of being and becoming" (p. 93). These articulations of native spirituality are strikingly similar to Rahner's articulation of God's immediacy and His ongoing creation through the Spirit. According to John Paul II's principle of independent convergence, then, the similarity of these independent truths "constitute in [themselves] a significant argument in favour of the theory" (John Paul II, 1996, no. 4).

One final advantage of Rahner's cosmic model of the emergent soul is its anti-binarial nature. In order to explain the evolutionary emergence of the human soul, Rahner essentially 'queers' matter. He questions societal assumptions about what matter is and dismantles the binary of material/immaterial by claiming that everything material is also fundamentally immaterial. Society has recently come to embrace this art of dismantling binaries to better fit our experience of reality. This trend would certainly make Rahner's model attractive to those who are intrigued by queer theory, but it could also be yet another example of converging thought, indicating that he is on the right track toward what is good and true.

## Concluding Thoughts

Although we will never be able to claim absolute certitude regarding the nature and origin of the human soul, analyses of this sort are far from irrelevant. How human beings understand the nature and origin of their souls affects how they interact with the created world. Rahner's emergent soul theology puts forth a model in which humanity shares a deep solidarity with the rest of creation. Since all of creation is made of the same "stuff" and shares that same dynamic, spiritual pulse, then all of creation ought to be treated with equal reverence. With the influence of Haught's articulation of the soul, humanity might finally understand what it means to have "dominion over...all wild animals of the earth" (Gen. 1:26). Being part of the greater community of *all* created beings, humanity is not set apart *from* creation, but is set apart *within* creation. This dominion is not at all like the farmer who drives his oxen for his own use, but rather like the older sibling who, having more age and wisdom at their disposal, keeps a constant eye out for their younger brothers and sisters. Rahner's theology gives humanity permission to preserve that sense we have of being *more* than mere atomic interactions, incapable of being reduced to a scientific equation. We are matter, and yet matter is more. If emergent soul theology were embraced and promulgated, all that could come of it would be healing: healing between humanity and the rest of the created world, and healing *within* a humanity whose spirits refuse to be reduced to materiality alone.

## References

- Barnes, M. (1994). "The Evolution of the Soul from Matter and the Role of Science in Karl Rahner's Theology". *Horizons*, 21(1), 85-104. doi:10.1017/S0360966900027948
- Clark, K.J. (2014). *Religion and the Sciences of Origins: Historical and Contemporary Discussions*. New York: Palgrave MacMillan.
- Charlesworth, B., & Charlesworth, D. (2003). *Evolution: A Very Short Introduction*. Oxford: Oxford University Press.
- Edwards, D. (1999). *The God of Evolution: A Trinitarian Theology*. New York: Paulist Press.
- Edwards, D. (2014). *Partaking of God: Trinity, Evolution, and Ecology*. Collegeville: Liturgical Press.
- Gazzaniga, M.S. (2011). *Who's In Charge? Free Will and the Science of the Brain*. New York: HarperCollins.
- Haught, J. F. (2001). *Responses to 101 Questions on God and Evolution*. New York: Paulist Press.
- John Paul II (1986). *Humans are Spiritual and Corporal Beings: General Audience*. Retrieved from <http://inters.org/John-Paul-II-Catechesis-Spiritual-Corporeal>
- John Paul II (1996). *Message to the Pontifical Academy of Sciences: On Evolution*. Retrieved from <https://www.ewtn.com/library/PAPALDOC/JP961022.HTM>
- Tooker, E. (Ed.). (1979). *North American Spirituality of the Eastern Woodlands*. Mahwah: Paulist Press.
- O'Leary, D. (2006). *Roman Catholicism and Modern Science*. New York: The Continuum International Publishing Group Ltd.
- O'Murchu, D. (2012). *In the Beginning was the Spirit: Science, Religion, and Indigenous Spirituality*. Maryknoll: Orbis Books.
- Pius XII (1950). *Humani Generis*. Retrieved from [http://w2.vatican.va/content/pius-xii/en/encyclicals/documents/hf\\_p-xii\\_enc\\_12081950\\_humani-generis.html](http://w2.vatican.va/content/pius-xii/en/encyclicals/documents/hf_p-xii_enc_12081950_humani-generis.html)
- Rahner, K. (1965). *The Evolutionary Origin of Man as a Theological Problem*. West Germany: Herder KG.
- Rahner, K. (1988). "Natural Science and Reasonable Faith." In *Theological Investigations* (Vol. 21) New York: Crossroad.
- Rice, S. A. (2011). *Life of Earth: Portrait of a Beautiful, Middle-Aged, Stressed-Out World*. Amherst, Prometheus Books.
- Verschuuren, G. M. (2012). *God and Evolution: Science meets Faith*. Boston: Pauline Books.