


# Suffering in evolutionary biology and Christian theology: Mutually exclusive notions?

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The question of suffering, specifically that experienced by human beings, has been contentious in the discourses of biology and religion. The dilemma, especially in the Christian faith tradition has been to reconcile suffering with the idea of a benevolent deity in whose image humans are believed to have been created. Evolutionary biology, and specifically the field of cognitive psychology, contends that the experience of suffering may have more pragmatic origins, while not necessarily being to the benefit of the individual, may be a mechanism that favours the longevity of a species. This article explores the understanding of 'natural suffering' from the perspective of evolutionary biology and Christian faith convictions and proposes principles that can facilitate a mutually beneficial religion and science discourse.

**Contribution:** This article investigates suffering in evolutionary biology and Christian theology respectively. Its interdisciplinary nature contributes towards the science and religion discourse.

**Keywords:** suffering; Christian theology; evolutionary biology; theodicy; science and religion.

## Introduction

In 2005, the South African Science and Religion Forum (SASRF) hosted an international seminar on the topic: 'Can nature be evil or evil natural? A science-and-religion view on suffering and evil'. This resulted in a publication by the same title in 2006 with the lead-researcher, Prof. Cornel du Toit acting as editor (ed. Du Toit 2006). At this seminar, theologians, philosophers, and natural scientists wrestled with the question of suffering, trying to navigate the different ontological and epistemological approaches to this problem. Of course, it was found that we speak too loosely of suffering, as it encompasses a wide range of experiential realities. What exactly is suffering? One suffers when one experiences pain, but then pain has a wide range of definitions as well. An antelope, for example, brought down by a lioness, experiences pain, and hence suffers, but it is a different pain and form of suffering as that experienced by a mother giving birth. Pain and suffering are at times part of the process of healing, like in the resetting a broken bone or going through the arduous process of chemotherapy. Suffering, like some emotions, is something that we can identify with and 'know', but it is difficult to give an expressed definition thereof. It is like asking: 'What does it mean to be happy?'. We know what it feels like, but it is very difficult to describe. To narrow down our understanding of suffering for the purposes of this article, the author will draw on some existing definitions that may prove to be helpful in this discourse.

The first definition is found in Young's understanding of suffering. Two types of suffering are explored. Young describes suffering as a 'devalued state to which certain organisms are susceptible because of their biological makeup' (Young 1996:245). This means that certain organisms are naturally capable of experiencing a sensation or awareness of a state of suffering, either of the self or of another. The biological composition of an organism, such as a nervous system, and the cognitive mechanisms in the brain to receive and interpret impulses relating to pain and suffering, must be present for suffering to be experienced. This makes suffering a physical possibility. Young then expands the definition of suffering to include 'psychological, existential, or spiritual' suffering (Young 1996:245). This form of suffering is not necessarily experienced and felt in the same way as the first but relates to emotional states of discomfort.

These two forms of suffering can then be narrowed down further. Long adds a moral component to suffering by differentiating between justified and unjustified suffering (Long 2006:140). Justified suffering, like the suffering experienced in medical treatment to avoid further and more extensive suffering is an anecdotal example. Gratuitous or unjustified suffering, on the other hand, points to suffering that serves no benefit to the individual or group in the long term and hence should be

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avoided at all costs for moral reasons. This form of suffering has both physical and systemic examples. Physical unjustified suffering can be seen in, for instance, physical abuse. Structural unjustified suffering is found in, for example, extreme poverty stemming from systemic injustice. One is not even touching on the suffering experienced because of natural disasters. These can be contested as some natural disasters are linked to prolonged human activity (like the disasters resulting from human induced climate change), while other forms of natural disasters are purely part of natural processes, like the eruption of a volcano. These will not be explored in this article.

The last stratum of suffering is that which is experienced or inflicted as acts of cruelty. Here, Regan differentiates between active and passive acts of cruelty (Regan 1980:536). Active acts of cruelty involve the physical inflicting of pain and suffering on an organism, like torture. Passive acts of cruelty involve, for instance, the physical absence of inflicting suffering, but induces suffering by means of apathy. Withholding food from an animal and making it starve is an example of such cruelty.

Suffering, in all its forms and experiences is a reality, which accompanies the experience of life and consciousness. It comes as no surprise that humanity has struggled with the meaning of suffering and how it should be interpreted and processed as part of life. Through the ages, thoughts and ideas about suffering have been prominent in both philosophy and religion. When the author speaks of religion, for the sake of further delineation, the author needs to show his hand and state that he speaks from the Christian faith conviction as a theologian and ethicist. It is important to make this delineation as different religions have different understandings of suffering, ranging from the view that suffering is to be embraced as a guide towards self-actualisation (e.g., Buddhism), while other religions such as Islam (and some expressions in the Christian faith) may interpret some forms of suffering as divine punishment or the result of spiritual assault. The question is whether what is believed about suffering in, for instance the Christian faith conviction can be in dialogue with the understanding of suffering as described by the natural sciences and evolutionary biology in particular. Let us first explore some notions of suffering in Christian theology.

## Suffering in Christian theology

Christian theology's struggle with suffering is already articulated in the first chapters of the *Book of Genesis*. The first creation narrative as found in Genesis 1 describes an understanding of the natural order's state as being one of order and equilibrium. After each day's creative activity, God observes the created order and pronounces it to be 'Good'. With this pronouncement, a cosmological understanding is created that sees nature as divided between two moral poles, namely that which is good and that which is not. This becomes the lens through which the biblical story unfolds. The Fall as described in Genesis 3 results in the curse of pain and

suffering for the woman during childbirth (Gn 1:16), man is punished by having to endure the suffering of hard labour (Gn 1:17) and ultimately humanity is to suffer death (Gn 1:19). The lines seem to be clearly drawn between natural equilibrium and natural suffering, one being good and the other, not good. But there is more.

Genesis 4 describes the first act of cruelty, namely the murder of Abel by his brother, Cain. Genesis 6 leads us to the story of suffering experienced through the Flood, whereby God is claimed to have destroyed life on earth and saved only Noah and his family, along with some animals (Gn 6–9). The dividing of the nations (Gn 10), the Tower of Babel (Gn 11), famine (Gn 12), the suffering of family breakup (Gn 13), and so on draw a wider and wider distinction between the good and perceived evil, making suffering increasingly a symbol of that which is not in accordance with God's Will. Later in the Old Testament, a theology developed that claimed that prosperity and human flourishing were indicative of a good life, a life blessed by God, while a life filled with suffering and torment was a sign of God's judgement (See Sanders 2017). This does not mean that this theology was uncontested. Perhaps the best example in the Old Testament is the Book of Job, where Job, a righteous person who experienced tremendous suffering, questions the reason for his torment, as he claims to not deserve such bad fortune (See Gutiérrez 1987).

Linked to the idea of suffering as state of being, devoid of divine good, comes the flipside of the coin. Through animal sacrifice, and eventually in the idea of Christ serving as ultimate sacrifice on the cross,<sup>1</sup> can humankind be reconciled to God and the process of the restoration of nature's goodness ensue? Even in the New Testament we find the idea that suffering is unnatural and at times part of divine punishment. Jesus heals and repetitively tells people that 'Your faith has made you well' (Matt. 9:22). It is only when Jesus is questioned about the meaning behind a man's blindness, whether it was because of his or his parents' sin (Jn 9), that Jesus, like Job points away from suffering as a form of divine punishment. He proceeds to heal the man, and by doing so sets him as an example of divine providence.

Just in this summary of biblical interpretations of suffering one can see that the underlying understanding of suffering is that it is not the ideal in life. Furthermore, the belief that Hell and eternal damnation is a place and situation of perpetual suffering builds on the idea that suffering is not God's idea of that which is good. Who wants to suffer for all of eternity anyway?

The problem of suffering raises several other theological conundrums. Moritz asks the question whether the natural occurrence of suffering reflects on the character of God who created this nature (Moritz 2014:349). If God created nature

1. In Moltmann's *The Crucified God: The cross of Christ as foundation and criticism of Christian theology* (1993), the argument is made that the cross is not to be seen as a dilemma whereby an impossible God experiences the full extent of the human experience of suffering and pain, but where God shows full solidarity and identifies with the created order. The cross therefore becomes the pivotal symbol of hope that God and humanity cannot be separated even by the experience of suffering and pain.

with the natural occurrence of suffering built into it, then the problem of theodicy comes into play. If God created everything as 'good', along with the possibility and experiential reality of suffering as part of it, then how do we reconcile suffering with the idea of a benevolent God (Moritz 2014:350)? Is God a narcissist, who uses suffering as a tool to enforce submission and adherence to God's will? Is God a sadist, who does not shy away from inflicting suffering and humiliation on those who stand in God's way? These questions are only relevant when one adopts the biblical cosmology of a three-tier universe, with a created earth at the centre, a heaven above and a hell below. For centuries, this cosmology was the primary understanding of the universe, until modern science 'broadened the horizons', so to speak, with new insights into cosmology, biological life, and our understanding of it. This includes our understanding of notions such as meaning, consciousness and suffering.

To this end, theology has had to adapt its understandings, including that of suffering. Taking the process of evolutionary biology into account, theologians such as Moritz (2014:361) and Southgate (2011) are quick to point out that the phenomenon of suffering, such as the natural occurrence of suffering through predation, disease, and so forth, long predate the advent of human presence on earth. Sin is, therefore, not to blame for the primal cause of suffering, yet suffering can be the result of what is now deemed to be sinful activity.

Another theological adjustment in the understanding of suffering is offered by, among others, Gloria Schaab, who proposes a model of pantheism (Schaab 2007). In this view, God is not seen as an external being who objectively creates suffering, but whose being is part of all natural processes, including that of suffering. God is taken out of the frame of *deus ex machina* and is placed as God who is a subjective participant in the evolutionary processes of nature (i.e., the cosmos). This model appeals to the author in particular, as the Divine is not located as an anthropomorphised metaphysical projection, but emerges as the mysterious, wonderful, strand of the experience of all that is, whether animate, or inanimate, biological or inorganic. This is a discussion for another article.

Seeing God as part of, and present in the natural processes, is an unconventional but growing perceptive in Christian theology. As we find that in nature, concepts such as emergence and evolution entail the limitation, progress, or cessation of previous manifestations to present something new, so our growing understanding of the cosmos and of ourselves through the gift of science, leads to the emergence or evolution of theological tenets. In a theological position that still hangs on to a literal interpretation of Genesis and the accompanying three-tier universe, nature is defined in a closed system, with a clear creation-eschaton paradigm, and where human life is caught in the tension between sin and salvation. In such a system, suffering is interpreted in metaphysical terms and the problem of theodicy remains. In such a system, where humans are measured according to the

sin-salvation continuum, justice needs to be done, equilibrium needs to be achieved and suffering needs to be eradicated. When considering the notion of suffering in an evolutionary, emergent paradigm within an open universe, suffering is grounded and part of the natural processes that we experience, and the understanding of God is not incongruent with our understanding of nature and its processes.

Of course, how we speak of suffering, as pointed out in the introduction will lead to different conclusions, depending on context. Suffering because of unjustified cruelty is not part of natural processes and will hence lead to a different moral-religious assessment as compared with, for instance, the justified suffering as experienced in medical interventions.

The bottom-line, from a Christian theological perspective that takes seriously the development of scientific knowledge, is that suffering cannot be simply attributed to the notion of sin and the resultant divine (salvific) retribution. Suffering is much more complex than this, and as part of natural processes, needs to be interpreted using a paradigm that allows for suffering to take place without imposing metaphysical projections. But how natural is suffering?

## Suffering in evolutionary biology

Scientific enquiry suggests that suffering is, on many levels, fundamentally part of the experience of life. Of course, science has different interpretations of such an association, interpretations that are in flux and are developed within the scope of scientific methodological discourses. Taken from a reductionist perspective, Goodenough argues that the experience of suffering and pain is part and parcel of an organism's biological evolutionary development (Goodenough 2012). She argues that the cognition of the experience of suffering is itself a distinct feature of complex biological evolutionary processes. For an organism to experience suffering, it must have attained the ability to be aware of its surroundings and the accompanying stimuli. It is this awareness that harnesses the experience of pain and suffering for it to become an instrument that warns the organism of impending danger and/or death (Goodenough 2012:243). From this perspective, pain and suffering serve as processes, which through the experience thereof is a small price to pay for the organism's continued experience of conscious life.

What is meant by this? A person will burn their fingers on a hot coal and instinctively retreat so as not to suffer greater damage to the self. This withdrawal does not stop the sensation of pain or the experience of suffering but creates an awareness of the dangers that hot coals pose. The person, when confronted with hot coals again, will think twice before touching it. Goodenough goes to great lengths to describe the biological mechanics of the experience of pain and suffering but doing so, focusses solely on physical pain and the reductionist processes that are present in the organism to be aware of such sensations. This leaves out a whole host of other forms of suffering, which are not accounted for. To be

fair, Goodenough does refer to other, more abstract forms of suffering. Here she points to suffering and social pain, which relates to social needs not being met, leading to feelings such as marginalisation and loneliness (Goodenough 2012:245). Then there is suffering and psychological pain, which refers to pain that is experienced in the self, as psychological scars are created by physical or social trauma (Goodenough 2012:245–246). Of course, these latter forms of suffering and pain do not have the same form of external stimuli that generate the internal sensations of pain and suffering as compared with the tangible, biological experiences of, for instance, touching a hot coal.

Nonetheless, it has been well documented how trauma and the accompanying psychological pain impact the physiology of the brain and its associated hormonal mechanisms.<sup>2</sup> Let us now build on Goodenough's argument. From an evolutionary biological perspective, some forms of suffering can be seen as an evolutionary gift, 'enabling the organism to anticipate threats and to avoid its destruction' (Young 1996:258). Suffering also serves as a warning signal for the danger of disease (Schaab 2007:292), where, for instance, an organism will quickly learn that to eat contaminated food will lead to severe personal discomfort or witness the resultant death of another. For suffering and pain to be processed requires the organism to possess a level of consciousness that enables cognition and interpretation of such experiences. To Moritz, for instance, this is a vitally important point, as the lack or absence of consciousness may render a different moral assessment of the experience of suffering. Moritz uses quite a graphic illustration to draw this distinction, stating that if consciousness were not a defining factor, the act of harvesting plants would become morally problematic to the same degree as causing the death of conscious, sentient organisms (Moritz 2014:352). Similarly, Long argues that suffering is a given in consciousness (Long 2006:141), a byproduct of an organism's awareness of self, its surroundings and its interaction with it. That said, it must be observed that some forms of pain, for example, types of phylogenetic memory, do not enter consciousness, especially in cases where neural pathways associated with the memory or experience of a traumatic event have become engrained to the extent that perception to response cycles does not require any cognitive effort (Young 1996:254). The conscious awareness of such an event, nevertheless, precedes the building of memory, which then leads to such examples of subconscious suffering. The pain and suffering of psychogenic trauma must not be underestimated (Young 1996:246).

This said, three main conclusions can be drawn. Firstly, according to evolutionary biology, suffering is not seen as an existential dilemma. It is part of the processes in nature that enable organisms to pursue their own longevity and well-being. Secondly, suffering serves as a 'worldview modifier', creating an awareness of its cause and allowing the organism to envision a new direction and to systematically work towards the realisation thereof – suffering is not necessarily a

bad thing, but serves as a prompting towards the experience of flourishing (Hall, Langer & McMartin 2010:118–119). Thirdly, although suffering is part of natural processes, even science sees it as something to be avoided or remedied. On this count, Rawlinson argues that if this were not the case, then why pursue the alleviation of suffering through, for instance, medicine (Rawlinson 1986)? With these conclusions in mind, can we find a path that will accommodate both theological as well as evolutionary biological interpretations of suffering?

## Mediating the path of suffering between theology and evolutionary biology

Let me offer a proposal. To mediate between the understandings of suffering as offered by theology and evolutionary biology, let us consider the one common *response* to suffering that is found in both. Allow me to suggest that this is found in the virtue of compassion (Williams 2008:6). In both theology and evolutionary biology, suffering is deemed to be both inevitable and undesirable, but whatever form it takes, compassion seeks to remedy existing suffering wherever possible (Williams 2008:8). Another term for compassion that is prominent in recent discourses, is the word empathy.

Up to this point in the description of suffering, from both a theological and evolutionary biological perspective, one key factor was absent – the nature of our interconnectedness and the impact suffering has on our social relations. In theology, the focus on suffering relates to the individual, their experience thereof and the meaning attached to it. In evolutionary biology, although it may benefit of the species, the focus once again is on the organism's experience of suffering and the underlying functions thereof. But as human beings, our social interconnectedness must not be overlooked, even in the context of suffering. As far as suffering may be seen as part of natural processes of life, either from theological or biological perspectives, it is the compassion and empathy that is shown as part of our interconnectedness that tells us something more about suffering than what either the metaphysical or mechanical explanations can offer.

Writing from a South African perspective, the notion of social interconnectedness is important to our understanding of being human. The philosophy of ubuntu is well documented; a philosophy which states that 'I am, because we are' – we form part of each other's life experiences and hence to experience life entails that our common identity is shaped by our interconnectedness, even in the context of pain and suffering. This interconnectedness is the lifeforce (*seriti*) that promotes wholesome living. In contrast, it is believed that suffering is indicative of the lack of *seriti* (Metz 2012:53). Metz (2012) further describes the role of *seriti* in the following way:

Consider, along this line, that when African theologians, cultural analysts and moral theorists describe a person as exhibiting a substantial degree of lifeforce, they often use what appear to be non-spiritual concepts, or at least physicalist words, such as:

<sup>2</sup>For more on the research on trauma and brain physiology see (Hölzel et al. 2011; Keyers 2011; Kirsch et al. 2005; Phelps & LeDoux 2005)

health, strength, growth, reproduction, generation, vibrancy, activity, self-motion, courage and confidence; and, correspondingly, they typically characterize a lack of life-force in terms of: disease, weakness, decay, barrenness, destruction, lethargy, passivity, submission, fear, insecurity and depression. (p. 53)

Suffering, from this African perspective, has both relational and spiritual connotations. The goal of life is to find one's own personhood, which is promoted by one's sense of belonging to the greater community. Inasmuch as people should ideally participate in the process of ensuring each person's quality of life (Metz 2012:56), so the experience of suffering draws on the community to attend to the suffering individual for the sake of the whole.

This is a noble expression of what it means to be human, but it is sadly contested as injustices such as corruption, nepotism and power mongering are pervasive problems in the South African social context. Does *ubuntu* really exist, or is it just a nice idea? The author would contend that these negative social occurrences and the resulting social suffering prove *ubuntu's* point – a lack of life-force, a lack of interconnectedness leads us down the path of suffering. It would be up to South African society to (re-)gain its sense of social cohesion and work towards a common, just and wholesome future for all. This, once again, is a discussion for another article.

The point is that notions such as interconnectedness, compassion, kindness and empathy refer to the offering of virtue ethics (Regan 1980:537). The question at hand is therefore not confined to 'What is suffering?', but 'What would a good person do in the face of suffering?'

Theology, and theodicy, in particular, get stuck in the problem of suffering as its thinking begins and ends with an ideal (Rawlinson 1986:54) – a *good* creation needing to return to its *goodness*, but it does so purely from a metaphysical frame of reference. Evolutionary biology's interpretation of suffering may be accused of trivialising the experience of suffering by means of its reductionist epistemology. Yet, it is in the theological expression, 'Love your neighbour as yourself' (Matt. 22:39) and the biological impact of the experience of suffering for the benefit of the greater whole that the response to suffering through interconnectedness, compassion, empathy, and kindness, become the superseding factors in our interpretation of suffering.

Evolutionary biology explains this social response through empathy as a result of the activation of mirror neurons (Gallese, Eagle & Migone 2007; Iaconi 2009); this is a fascinating development in the understanding of the social cognition of suffering. This is a trait that has developed through evolutionary processes to mitigate the suffering of especially the young and vulnerable in social communities (Decety et al. 2012).

Forasmuch as what we can contend that suffering is a natural and unavoidable occurrence in life, whether from a

theological or scientific perspective, so we can state with confidence that the response to suffering is what is of greater interest. We seem to be wired, biologically and theologically to respond to instances of suffering by means of compassion, empathy and kindness, because we are interconnected.

So, what are the principles that can facilitate a healthy discourse on suffering between theology and evolutionary biology?

## Conclusion

Drawing from the insight gained from both theology and evolutionary biology, some common points are evident. Firstly, both theology and evolutionary biology concur that suffering is unavoidable and part of the experience of life. The reasons for the existence of suffering may differ between these two fields, but even so, it would be prudent for theology and evolutionary biology to acknowledge the insights given by the other as it will impact the understanding of their own. Theology, for instance, can note that suffering and sin do not have a fundamental causal relationship. Not all suffering stems from sin (or The Fall), and hence space must be created for the recognition that suffering has played a vitally important role in our survival as a species. Similarly, evolutionary biology should not ignore the moral component attached to the experience of suffering. Not all suffering is for the purpose of perpetuating or promoting the standing of a species. Some forms of suffering fall outside the scope of natural processes and speak to unnatural acts perpetuated that lead to the general or personal experience of suffering.

Secondly, both theology and evolutionary biology can agree that suffering in general is something to be avoided. Suffering is to be avoided from an evolutionary biological perspective, as it serves as a warning of impending danger. From a theological perspective, suffering is not the ideal of life and hence the striving towards a wholesome and healthy life entails the wisdom and insight to avoid suffering-causing obstacles. The theological expression, 'The wages of sin is death' (Rm 6:23) is more than an expression of the sin-salvation continuum; it speaks of the same cause and effect relationship of stimuli and suffering as that expressed by evolutionary biology. Suffering leads to the impairment of life and hence should be avoided.

Thirdly, theology and evolutionary biology can agree that suffering can have a positive consequence; it can be a life-altering instrument. Theology can glean from the evolutionary biological hypothesis that suffering steers behaviour away from demise and towards alternative, wholesome experiences of life. The theological expression during Ash Wednesday, 'Turn from sin and turn to God' is very similar in intent as that of evolutionary biology's mantra: 'Adapt or die', change for the better.

Lastly, theology and evolutionary biology's understanding of the response to suffering is actually of primary importance.

The question of suffering pales in comparison to the question of the response to suffering. Without a drive to respond to suffering, there would be no mirror-neurons, empathy, kindness, compassion, or interconnectedness. Without such a drive, suffering would be an occurrence in life that is passively received and experienced without it being questioned or contested. Life, from a theological and an evolutionary biological perspective, has a propensity for self-preservation. Let us rephrase it in a communal manner: life has a propensity for preserving itself, whether in the self or in the other.

The notion of suffering will remain contested in the conversations between science and religion, but our response to it is what builds bridges in our shared humanity.

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