



## Editorial

### Evolution, Suffering, and the Moral Texture of Creation

**Christopher J. Harrington**, Dean, School of Education, Social Sciences and the Arts, University of Maryland Eastern Shore, Princess Anne, Maryland, USA, [cjharrington@umes.edu](mailto:cjharrington@umes.edu)

---

This Editorial essay examines whether the structure of suffering in the natural world is compatible with the expectation that creation reflects perfect benevolence. Drawing on research in evolutionary biology, affective neuroscience, and moral psychology, it argues that suffering is not merely abundant but structurally embedded in the biological and psychological systems that sustain life. Pain systems prioritize threat detection, negative experiences exert disproportionate psychological influence, and many forms of suffering persist despite technological progress in alleviating them. These patterns raise questions about the moral character of the processes through which life has emerged. After examining several theological interpretations—including soul-making theodicy, evolutionary theodicy, and process theology—the essay argues that none fully resolves the tension between the structure of suffering and the idea of a benevolent cosmic order. Rather than concluding with metaphysical pessimism, the article proposes a constructive ethical response: compassion emerges as a deliberate moral stance through which human beings resist the structural harms of the world.

---



## Introduction

The natural world displays remarkable complexity, creativity, and resilience, yet it also reveals pervasive suffering across biological systems. Pain, predation, disease, and mortality appear not as rare anomalies but as persistent features of the processes through which life emerges and sustains itself. This observation raises a long-standing question in philosophy and theology: whether the structure of suffering in the natural world is compatible with the expectation that creation reflects perfect benevolence and therefore exhibits a positive moral valence in the experience of living beings.

Such questions lie at the intersection of scientific inquiry and theological reflection. From its founding, *Zygon: Journal of Religion and Science* has sought to encourage precisely this kind of interdisciplinary conversation. In 1972, Ralph Wendell Burhoe argued that modern scientific knowledge challenges traditional religious interpretations of nature while simultaneously opening new possibilities for constructive dialogue between science and theology. The present essay contributes to this ongoing conversation by examining how contemporary insights from evolutionary biology and moral psychology reshape reflection on the problem of suffering in creation. In this sense, the analysis that follows treats scientific accounts of nature and theological reflection as mutually informative rather than as competing explanatory frameworks.

This question has traditionally been framed as the “problem of evil.” In contemporary discussion, however, the issue increasingly intersects with empirical insights from evolutionary biology, neuroscience, and moral psychology. These fields increasingly suggest that suffering is not merely an accidental by-product of biological systems but is deeply integrated into the mechanisms that enable organisms to survive and reproduce. Pain functions as an adaptive warning signal, fear systems amplify perceived threats, and negative experiences often exert stronger psychological influence than positive ones. Together, these features create what might be described as an affective asymmetry within biological life: suffering is frequently more intense, more urgent, and more evolutionarily consequential than pleasure.

This article explores the theological implications of that asymmetry. The argument does not attempt to prove that the existence of suffering disproves the possibility of divine benevolence. Rather, it examines whether the structural patterns of suffering revealed by contemporary science generate tension with the expectation that the processes of creation reflect perfect moral goodness.

Insights from evolutionary biology and behavioral science provide a useful starting point. Scholars such as Richard Dawkins, Daniel Dennett, Frans de Waal, and Robert Sapolsky have emphasized that natural selection favors traits that enhance survival rather than traits that maximize happiness or minimize suffering (Dawkins 1976; Dennett 1995; de Waal 2016; Sapolsky 2017). From this

perspective, the prevalence of suffering in nature is not surprising: evolutionary processes reward efficiency in survival and reproduction, not moral harmony.

Within contemporary theology, several scholars have attempted to interpret evolutionary processes within constructive theological frameworks. Christopher Southgate (2008), for example, argues that evolutionary creativity and suffering must be understood together as part of the same biological history that produces the diversity of life, while Niels Henrik Gregersen's (2003) concept of "deep incarnation" emphasizes the theological significance of evolutionary continuity between humanity and the wider biological world.

Yet the theological implications of this observation remain contested. Philosophers of religion have also examined the evidential significance of suffering, arguing that patterns of pain and pleasure in the natural world may function as evidence relevant to evaluating the hypothesis of divine benevolence (Rowe 1979; Draper 1989). Some religious thinkers argue that suffering plays a necessary role in moral or spiritual development. Others propose that evolutionary processes represent a form of divine creativity unfolding through risk and contingency. Still others suggest that the presence of suffering reveals limits in the concept of divine power or benevolence.

The present essay examines these possibilities while focusing on a specific claim: that suffering appears not merely as a contingent feature of life but as a structural element of the biological systems through which life evolves. Understanding this structural dimension helps clarify why the problem of suffering remains a persistent challenge for theological interpretations of creation.

## **Evolutionary Origins of Suffering**

Biological evolution operates through natural selection acting on variation within populations. Traits that increase an organism's ability to survive and reproduce tend to persist across generations. Within this framework, mechanisms that detect danger and motivate rapid responses to threat provide a significant adaptive advantage.

Among the most fundamental of these mechanisms is the biological capacity for pain. In vertebrates and many invertebrates, nociceptive systems detect tissue damage and trigger behavioral responses that reduce further injury. From an evolutionary perspective, the function of pain is not to produce suffering for its own sake but to create an urgent signal that directs attention toward potential harm.

However, systems that efficiently detect danger often operate with a bias toward caution. Missing a real threat may have catastrophic consequences, whereas responding to a false alarm typically carries a smaller cost. As a result, natural selection frequently favors hyper-vigilant threat detection systems. Evolutionary behavioral research similarly suggests that natural selection

favors threat-detection systems that minimize fatal errors even at the cost of heightened sensitivity to potential dangers (Nesse 2005). This bias increases the probability that organisms will over-respond to possible dangers rather than fail to respond when genuine threats arise.

The asymmetry between threat detection and reward processing extends into human psychology. Research in cognitive and affective neuroscience consistently finds that negative experiences exert stronger and more durable effects than positive ones. Fear memories are often more persistent than pleasurable memories, and aversive stimuli tend to command greater attention in perception and decision-making. Psychologists sometimes refer to this pattern as the negativity bias, a tendency for negative events to have greater psychological weight than positive ones (Baumeister et al. 2001). In this sense, biological experience appears characterized by a broader pattern of affective asymmetry in which negative states are often more frequent, longer lasting, and behaviorally more influential than positive ones.

From an evolutionary perspective, this bias is understandable. Organisms that quickly recognize danger are more likely to survive long enough to reproduce. Yet the same bias can produce a world in which suffering exerts a disproportionate influence on conscious experience. These dynamics suggest that suffering arises not merely from occasional failures in biological systems but from the very mechanisms through which those systems operate.

### **Structural Suffering in Evolutionary Systems**

The structural role of suffering becomes particularly visible when examining certain ecological and evolutionary strategies. In many species, reproductive success depends upon processes that involve intense competition, predation, or the exploitation of other organisms.

A frequently discussed example appears in parasitoid insects, including certain species of wasps. These organisms lay their eggs inside or upon a host organism—often a caterpillar or other insect. The developing larvae consume the host from within, eventually killing it as they mature. From the perspective of evolutionary biology, this strategy is highly effective: it provides a reliable source of nourishment for the developing offspring. Yet it also illustrates how evolutionary processes can generate life cycles in which suffering plays a central functional role.

A different example appears in brood parasitism among birds such as cuckoos. Some cuckoo species lay their eggs in the nests of other birds, leaving the host species to raise the cuckoo chick. In several well-documented cases, the newly hatched cuckoo instinctively pushes the host's eggs or chicks out of the nest, ensuring that it receives all available parental care. This behavior dramatically increases the cuckoo's survival prospects but results in the death of the host's offspring.

Examples such as these suggest that suffering is not merely incidental within evolutionary systems. Instead, evolutionary competition can produce strategies in which the success of one organism depends directly upon the harm or death of another. While such processes contribute to the diversity and resilience of ecosystems, they also raise difficult questions about how the natural world should be interpreted from a moral or theological perspective.

### **Why Structural Suffering Raises Theological Tension**

The aforementioned examples illustrate a central feature of evolutionary systems: suffering frequently arises not from accidental malfunction but from mechanisms that contribute directly to biological success. Pain, predation, and mortality are not peripheral elements of life's history. They are woven into the processes through which organisms survive, compete, and reproduce. These observations give rise to a distinctive form of theological tension. Philosophers of religion have explored closely related arguments within discussions of the evidential problem of evil, where the distribution and intensity of suffering are interpreted as potential evidence against perfectly benevolent divine governance (Rowe 1979; Draper 1989).

Traditional discussions of the problem of evil often focus on particular events—natural disasters, diseases, or acts of violence—that appear morally troubling. Such events might be interpreted as consequences of human freedom, as temporary disruptions within an otherwise benevolent order, or as conditions necessary for moral development. Yet the evolutionary patterns described suggest that suffering operates at a deeper level. Many forms of harm occur not despite the functioning of natural systems but precisely because those systems function effectively.

In evolutionary biology, competition for limited resources shapes the development of species across vast stretches of time. Predation regulates populations, parasitic relationships evolve in complex ecological networks, and reproductive strategies frequently involve high rates of mortality among offspring. Marine species, for example, often produce thousands or even millions of eggs, the vast majority of which perish before reaching maturity. This pattern is not the result of failure within biological systems but a strategy through which populations maintain stability within dynamic ecosystems.

If suffering arises from such structural processes, the challenge for theology becomes more fundamental. The issue is no longer simply that individual organisms experience pain but that evolutionary mechanisms generating biodiversity and ecological balance may also depend upon patterns of harm. In this sense, suffering appears embedded within the very dynamics that allow life to flourish.

Recognizing this structural dimension does not logically disprove the possibility of divine benevolence, but it does sharpen the question of how

such benevolence might be understood. Theological interpretations may still propose that evolutionary processes serve purposes beyond immediate human understanding. Nevertheless, the prevalence of suffering within evolutionary systems raises questions about the moral character of the creative processes through which life emerges. The tension arises not from isolated events but from the observation that suffering functions as a structural feature of the natural world.

## Theological Responses

Theological traditions have long grappled with the question of suffering in creation. Several influential approaches attempt to reconcile the persistence of suffering with belief in a benevolent divine reality. While these perspectives offer valuable insights, each faces challenges when considered in light of the structural patterns described.

One influential response is the soul-making theodicy, associated most prominently with John Hick. According to this view, the presence of suffering creates conditions in which moral and spiritual development become possible (Hick 1966). A world containing risk, struggle, and uncertainty provides opportunities for courage, compassion, and moral growth that would not exist in a perfectly comfortable environment.

While the soul-making approach highlights the potential ethical value of adversity, its explanatory scope may be limited when applied to nonhuman suffering. Much of the suffering within evolutionary history occurs among animals whose experiences cannot plausibly be interpreted as contributing to moral or spiritual development. The immense scale of animal suffering across geological time therefore raises questions about whether soul-making alone can account for the broader structure of suffering within nature.

A second perspective attempts to integrate evolutionary science more directly into theological reflection. Evolutionary theodicy suggests that natural selection may represent a form of divine creativity unfolding through processes of emergence, contingency, and self-organization (Southgate 2008). Within this framework, evolutionary struggle becomes the means through which the diversity and complexity of life gradually arise.

This approach acknowledges the central role of evolutionary mechanisms while seeking to interpret them within a theological narrative of creative development. However, critics note that it can remain difficult to explain why evolutionary creativity appears to depend upon such extensive suffering. If the emergence of complex life requires processes involving widespread predation, competition, and mortality, questions remain about whether these conditions are compatible with perfect benevolence.

A third perspective emerges from process theology, which emphasizes the dynamic and relational nature of reality. In this view, divine power does not

operate through unilateral control but through persuasive influence within an evolving universe (Whitehead [1925] 1964; Griffin 1976). Because the world possesses genuine autonomy, suffering arises from the interaction of independent processes rather than from direct divine intention.

Process theology offers an important reinterpretation of divine action, suggesting that the persistence of suffering reflects the open and unfinished character of the cosmos. Nevertheless, some critics argue that this framework redefines divine power in ways that diverge significantly from traditional conceptions of omnipotence. While the process perspective may alleviate certain tensions, it also raises new questions about the extent of divine influence within the natural world.

Taken together, these theological approaches demonstrate the richness of contemporary reflection on suffering. Yet none fully eliminates the tension created by the structural role of suffering in evolutionary systems. The persistence of this tension invites further exploration of how moral meaning might be understood within a world shaped by such processes. Recent scholarship has also focused specifically on the theological implications of animal suffering within evolutionary history, arguing that traditional doctrines must be reconsidered in light of the immense scale of nonhuman suffering across geological time (Sollereder 2019).

### **Compassion as Defiance**

If the natural world contains structural patterns of suffering that resist simple theological explanation, the question remains how human beings should respond ethically to this reality. One possibility is to understand compassion as a moral response that emerges precisely within a world marked by vulnerability.

Human moral psychology appears deeply shaped by capacities for empathy and care. Studies in primate behavior and social cognition suggest that forms of empathy and prosocial behavior have evolutionary roots extending beyond the human species (de Waal 2016). These capacities allow organisms to recognize distress in others and respond with protective or cooperative behavior.

Within human societies, compassion often motivates efforts to alleviate suffering through medicine, social institutions, and humanitarian action. Advances in medical science, public health, and animal welfare illustrate how moral concern can gradually reshape aspects of the environment in which suffering occurs. While such efforts cannot eliminate suffering entirely, they demonstrate the capacity of moral communities to reduce certain forms of harm.

From this perspective, compassion may be understood not simply as a passive emotional reaction but as a deliberate ethical stance. To act compassionately is to recognize suffering as morally significant and respond in ways that seek to mitigate its effects. In a world where evolutionary processes do not guarantee

moral harmony, compassion represents a form of resistance against the harshness embedded in natural systems.

This interpretation does not require metaphysical pessimism about the universe. Instead, it acknowledges that moral meaning may arise within human communities even when the broader processes of nature remain morally ambiguous. Compassion thus becomes an expression of moral agency through which human beings participate in reshaping the conditions under which life unfolds.

### **Planetary Vulnerability and Moral Responsibility**

Contemporary environmental challenges underscore the continuing relevance of these questions. Climate change, biodiversity loss, and ecosystem disruption reveal the vulnerability of life within planetary systems that are both resilient and fragile. Scientific research increasingly demonstrates how human activity can intensify forms of suffering across ecological networks, affecting both human societies and nonhuman species.

These developments place new emphasis on the ethical responsibilities associated with technological power. If human beings possess the capacity to influence global ecological systems, moral reflection must consider how that influence should be exercised. The recognition of planetary vulnerability therefore expands the scope of compassion beyond interpersonal relationships to include responsibility for the broader community of life.

Within this context, scientific understanding of ecological systems can deepen rather than diminish moral concern. Awareness of the intricate interdependence among species highlights the significance of actions that protect or degrade environmental stability. Ethical reflection on suffering thus becomes inseparable from the challenge of sustaining conditions that allow life to flourish.

### **Conclusion**

The natural world presents a complex moral landscape. Evolutionary processes generate remarkable biological diversity and resilience, yet they also produce patterns of suffering embedded within the mechanisms through which life evolves. Pain, predation, competition, and mortality are not merely accidental features of nature but structural elements of many ecological systems.

This observation does not demonstrate that divine benevolence is impossible. Theological traditions offer a range of interpretations that attempt to integrate suffering within broader narratives of creation and meaning. Nevertheless, the structural character of suffering revealed by contemporary science creates enduring tension for interpretations that portray the natural world as the product of perfect moral goodness.

Recognizing this tension may encourage a more nuanced understanding of moral responsibility. Rather than assuming that the structure of the world already reflects perfect benevolence, human beings may understand compassion as an ethical response that arises within a morally complex environment. Through acts of care, protection, and solidarity, individuals and communities participate in efforts to reduce suffering and sustain conditions in which life can flourish.

In this sense, the presence of suffering does not extinguish moral meaning. Instead, it provides the context within which compassion becomes both necessary and transformative.

Generative artificial intelligence (AI) tools were used in a limited capacity during the preparation of this manuscript to assist with language editing, stylistic refinement, and organizational suggestions. No AI system was used to generate original research data, citations, or scholarly arguments. The author reviewed, verified, and takes full responsibility for all content presented in the article.

---

## Competing Interests

The author declares that they have no competing interests.

---

## References

- Baumeister, Roy F., Ellen Bratslavsky, Catrin Finkenauer, and Kathleen D. Vohs. 2001. "Bad Is Stronger Than Good." *Review of General Psychology* 5 (4): 323–70.
- Burhoe, Ralph Wendell. 1972. "Natural Selection and God." *Zygon: Journal of Religion and Science* 7 (1): 30–63.
- Dawkins, Richard. 1976. *The Selfish Gene*. Oxford: Oxford University Press.
- de Waal, Frans. 2016. *Are We Smart Enough to Know How Smart Animals Are?* New York: W. W. Norton.
- Dennett, Daniel C. 1995. *Darwin's Dangerous Idea: Evolution and the Meanings of Life*. New York: Simon & Schuster.
- Draper, Paul. 1989. "Pain and Pleasure: An Evidential Problem for Theists." *Noûs* 23 (3): 331–50.
- Gregersen, Niels Henrik. 2003. "Deep Incarnation: Why Evolutionary Continuity Matters in Christology." *Zygon: Journal of Religion and Science* 38 (2): 245–58.
- Griffin, David Ray. 1976. *God, Power, and Evil: A Process Theodicy*. Philadelphia: Westminster Press.
- Hick, John. 1966. *Evil and the God of Love*. London: Macmillan.
- Nesse, Randolph M. 2005. "Natural Selection and the Regulation of Defenses." *Journal of Theoretical Biology* 233 (1): 1–12.
- Rowe, William L. 1979. "The Problem of Evil and Some Varieties of Atheism." *American Philosophical Quarterly* 16 (4): 335–41.
- Sapolsky, Robert M. 2017. *Behave: The Biology of Humans at Our Best and Worst*. New York: Penguin Press.
- Sollereder, Bethany N. 2019. *God, Evolution, and Animal Suffering: Theodicy without a Fall*. London: Routledge.
- Southgate, Christopher. 2008. *The Groaning of Creation: God, Evolution, and the Problem of Evil*. Louisville, KY: Westminster John Knox Press.
- Whitehead, Alfred North. (1925) 1964. *Science and the Modern World*. New York: New American Library.

