

Evolution and the Cosmic Drama

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Abstract: According to Charles Darwin, the evolution of living species is the result of nature's mindless combining of random variations and impersonal natural selection, with enormous spans of time. Is there any need then, as many Darwinian scientists and philosophers have asked, to look for supernatural "design" or divine oversight in the story of life on Earth. The mixing and simmering of only three natural ingredients—accidents, selection, and time—seems sufficient to account for the entire evolutionary stew. Can theology possibly add anything of significance to this most fertile naturalistic explanation of biological phenomena? After Albert Einstein, this article proposes, the long story of life needs to be situated within the much longer scientific story of a universe that is 13.8 billion years old. In this larger cosmic setting the most relevant theological question is not so much whether living complexity points to a divine "intelligent designer," but whether the emergent, awakening universe is carrying an indestructible meaning.

Keywords: Charles Darwin • Albert Einstein • Natural Selection • Design • Drama • Cosmic Story • Deep Time • Intelligibility • Natural Theology

Introduction

Ever since 1859, when Charles Darwin first published *On the Origin of Species*, scientists and philosophers have often declared that the theory of evolution by natural selection has debunked Christian belief in divine creation and providence. Since the creation of all the diverse forms of life is the result of random variations, impersonal "natural selection," and enormous spans of time, we have no need, they have claimed, to look for supernatural influence or divine oversight in nature. The philosopher Daniel Dennett even asserts that any biologists "who see no conflict between evolution and their religious beliefs,"

are refusing to face reality.¹ And his mentor, evolutionist Richard Dawkins, boasts that modern atheism has discovered in Darwinian science the soundest intellectual foundation it has ever had.²

Apparently only three ingredients are needed for evolution to cook up the wide variety of living beings: 1) first, accidental, random, or contingent occurrences. These lawless ingredients include accidental genetic mutations that underlie the diverse pathways of life's historical unfolding, as well as many other unpredictable events in natural history that account for speciation (for instance: ice ages, volcanic eruptions, the formation of islands large and small, plate movements of the earth's mantle, meteorite impacts, famines, earthquakes, floods, and suchlike.) 2) The second generic ingredient in the recipe for evolution is the "law" of natural selection. Natural selection of favorable variations forcefully but blindly "constrains" randomness, placing limits on the play of chance, and contributing at least some degree of predictability to evolution. 3) Finally, in order to be prodigiously creative, biological evolution requires an enormous amount of time. Without the nearly four billion years of life's duration on earth the seemingly improbable outcomes of evolution could never have had sufficient opportunity to come into existence. The mixing and simmering of the three components—accidents, selection, and time—is enough to account for the entire evolutionary stew. What, then, could religion or theology possibly add to this most fertile of formulas?

Before responding to this question, I want to emphasize that an honest theological encounter with Darwin must also take note of biology's new sense of the

¹ Daniel C. Dennett, *Darwin's Dangerous Idea: Evolution and the Meaning of Life* (New York: Simon & Schuster, 1995), 310.

² Richard Dawkins, *The Blind Watchmaker* (New York: W.W. Norton & Co., 1986), 6.

extent of nature's insensitivity to the pain of all living beings. Darwin's science has hardly silenced the Job-like complaints that sensitive souls have always been making about the suffering of sentient life. Human beings have been aware of suffering, of course, but until Darwin they have lacked a palpable sense of the millions of years of suffering's extent. Evolution, it would seem, not only threatens to make divine creativity an intellectually superfluous idea, but it also challenges religious believers and theologians to look more focally than ever at the incalculable extent of life's travail. By extending the story of life's struggle, perishing, and pain, Darwin's picture of life only exacerbates the perennial human consternation about undeserved pain and the silence of God.

Nevertheless, I propose that a close look at evolution can lead theology to embolden its sense of divine creation and enhance the notion of divine providence. If God is by nature truly caring and compassionate, then theology must allow that *all* the sufferings, struggles, and achievements of the evolving life-world take place within the enviring presence of God's infinite love and the promise of redemption.

Accordingly, if Darwin is right, then the older religious notion of an initially planned and perfected world would make little sense theologically. Can a world that is brought about instantaneously and "planned" by God even be a creation at all?³ Nature, as Henri Bergson writes, "is more and better than a plan in course of realization." "A plan," he continues, "is a term assigned to a labor: it closes the future whose form it indicates. Before the evolution of life, on the contrary, the portals of

³ This is a theme that appears throughout Pierre Teilhard de Chardin's book *Christianity and Evolution*, trans. René Hague (New York: Harcourt Brace Jovanovich, 1969).

the future remain wide open.”⁴ Theology for the most part has failed to acknowledge and ponder fully what it means that the universe is still coming into being

An important task, at least for Christian theology in the age of evolution, is to face candidly the question of whether belief in a *promising* God, the God of the Bible, is intelligible today. Without denying the generally accepted results of natural science, can a biblically based theology still maintain that life and the universe are in some sense connected to the promise made by God to Abraham and the people of Israel? The idea of a divine promise is inseparable from belief that God *cares* for the universe. But is the doctrine of divine providence (which encourages trust in God’s promises) still believable in the age of evolution? Let us examine several possible responses to this question.

For many thoughtful people the cruelty and indifference of evolution make life—and the universe that sponsors it—incompatible with the notion of divine care. For others, divine providence may still be present, even after Darwin, in instances of living complexity that seem to require the existence of a supernatural “designer.” Still others propose that providence is present as divine “pedagogy” that interprets Darwinian evolution as a curriculum of tough love, a schooling that prods life to keep transcending itself. Still others have speculated that providence is manifested, after Darwin, in the form of a loosely directional, perhaps only faintly discernible, *anticipation* of fuller being such as the increase in consciousness and beauty over the course of deep time.

Finally, my own proposal is that a place for providence and divine promise may be deeply embedded in the three troubling aspects of Darwinian evolution that I have identified above: chance, selection, and time.

⁴ Cited by Louise Young, *The Unfinished Universe* (New York: Oxford University Press, 1986), 201-02.

I believe that the contingency, lawfulness, and temporal duration of nature that make evolution seem blind and godless to both scientists and anti-Darwinian Christians are in fact essential to a biblically based understanding of divine creation, providence, and promise. Let us now look more closely at each of the four approaches to the question of God after Darwin that I have just outlined:

1. Providence as absent. While I was writing *God after Darwin* an ex-clergyman sent me a book he had recently written on how Darwin's portrayal of the cruelty of nature had driven him to atheism:

Could an omnipotent, omniscient, and omnibenevolent God have devised such a cold-blooded competition of beast with beast, beast with man, man with man, species with species, in which the clever, the cunning, and the cruel survive?" "How," he asked could a loving God have planned a cruel system in which sensitive living creatures must either eat other sensitive living creatures or be eaten themselves, thereby causing untold suffering among these creatures? Would a benevolent God have created animals to devour others when he could have designed them all as vegetarians. What kind of deity would have designed the beaks which rip sensitive flesh? What God would intend every leaf, blade of grass, and drop of water to be a battle ground in which living organisms pursue, capture, kill, and eat one another? What God would design creatures to prey upon one another and, at the same time, instill into such creatures a capacity for intense pain and suffering?⁵

This and similar sincere expressions of theological defiance in the face of evolution's cruelty have led me to

⁵ A. J. Mattill Jr., *The Seven Mighty Blows to Traditional Beliefs*, 2d ed. (Gordo, Ala.: The Flatwoods Press, 1995), 32.

sympathize with those who simply cannot reconcile evolution with their own Christian faith. Not only religious believers but also scientific skeptics such as David Hull, a philosopher of biology, consider evolution, in Hull's words, to be "rife with happenstance, contingency, incredible waste, death, pain and horror." Any God who would oversee a Darwinian world must, he says, be "careless, indifferent, almost diabolical." This, he adds, is not "the sort of God to whom anyone would be inclined to pray."⁶ Other renowned evolutionists have voiced similar complaints. "So long as DNA is passed on," Richard Dawkins has famously written, "it does not matter who or what gets hurt in the process. It is better for the genes of Darwin's ichneumon wasp that the caterpillar should be alive, and therefore fresh, when it is eaten, no matter what the cost in suffering. Genes don't care about suffering, because they don't care about anything."⁷

The respected philosopher Philip Kitcher recently echoed the conviction of many intellectuals that evolution has destroyed the idea of providence for good: "A history of life dominated by natural selection is extremely hard to understand in providentialist terms," he writes. Pointing to the messiness of evolution, Kitcher observes that "there is nothing kindly or providential about any of this, and it seems breathtakingly wasteful and inefficient. Indeed, if we imagine a human observer presiding over a miniaturized version of the whole show, peering down on his 'creation,' it is extremely hard to equip the face with a kindly expression."⁸

⁶ David Hull, "The God of the Galapagos," *Nature* 352, no. 6335 (1991): 486.

⁷ Richard Dawkins, *River out of Eden* (New York: Basic Books, 1995), 133.

⁸ Philip Kitcher, *Living With Darwin: Evolution, Design, and the Future of Faith* (New York: Oxford University Press), 124.

2. Maybe, however, theology after Darwin can make sense if we take providence to mean a kind of divine pedagogy. Guy Murchie, in his colorful book *The Seven Mysteries of Life* agrees that Darwinian process is harsh, but precisely because of that, it is also educational. Nature may be rendered theologically intelligible if we look at evolution as a “soul school.” If you were a creator, Murchie asks his readers, what kind of a world would you create? Would you have created a world of undisturbed ease and pleasure? No, says Murchie:

Honestly now, if you were God, could you possibly dream up any more educational, contrasty, thrilling, beautiful, tantalizing world than Earth to develop spirit in? If you think you could, do you imagine you would be outdoing Earth if you designed a world free of germs, diseases, poisons, pain, malice, explosives and conflicts so its people could relax and enjoy it? Would you, in other words, try to make the world nice and safe—or would you let it be provocative, dangerous and exciting? In actual fact, if it ever came to that, I’m sure you would find it impossible to make a better world than God has already created.⁹

Divine providence, according to this approach, may be present in the harshness as well as the creativity in Darwinian evolution.

3. Providence as intelligent design. Prior to Darwin a long tradition of “natural theology” saw evidence of divine providence in the adaptive design present in living organisms.¹⁰ The exquisite design in living organisms entails the existence of an intelligent divine designer just

⁹ Guy Murchie, *The Seven Mysteries of Life: An Exploration in Science and Philosophy* (Boston: Houghton Mifflin, 1978), 621-22.

¹⁰ William Paley, *Natural Theology* (Oxford: Oxford University Press, 2006).

as the intricate workings of a watch point to an intelligent watchmaker. “Intelligent Design” means that such marvels as the eye, the human brain, and sub-cellular mechanisms are too complex to have been produced by natural processes alone. Intelligent Design defenders have recently gone to war not only against Darwinian atheists but also against evolutionary biologists, arguing that blind natural selection is not intelligent enough to account for living complexity. Divine intelligence is needed.¹¹

In my opinion the notion of Intelligent Design is an intellectually and theologically unsatisfactory way to interpret the doctrine of divine providence after Darwin. Such an approach not only leads religious believers to deny well-established scientific theories but it also offers scientific skeptics a theologically impoverished understanding of God. After Darwin Christian theology cannot be content with conceiving of God simply as a designer.

4. Providence manifested in the drama of an awakening universe. I want to subordinate the idea of “design” to the biblical theme of promise. I believe that Darwin's dangerous idea, as Daniel Dennett calls it, now allows Christian theology to emphasize in a fresh way the biblical picture of a God who “makes all things new” (Is 43:19; Rev 21:5). That the universe has given rise to life and, more recently, to thought means that the cosmos is a dramatic awakening. God enters the picture not so

¹¹ See, for example, Phillip E. Johnson, *The Wedge of Truth: Splitting the Foundations of Naturalism* (Downers Grove, Illinois: InterVarsity Press, 1999); Jonathan Wells, *Icons of Evolution: Science or Myth? Why Much of What We Teach About Evolution Is Wrong* (Washington, D.C.: Regnery, 2000); Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: The Free Press, 1996); William A. Dembski, *Intelligent Design: The Bridge Between Science and Theology* (Downers Grove, Illinois: InterVarsity Press, 1999).

much as a designer, or as the source of order, but as the promising future to which the world has always been awakening.

Evolution implies that the world is not just a display of instances of order but also an experiment with various forms of novelty. Accordingly, God may be thought of biblically as the ultimate source of this novelty, and that means in some sense that God is a disturber of order, a constant challenge to the status quo. After all, by introducing newness and surprise into the world the present design of things must somehow give way. A God of promise is as much a stimulus to instability as an originator of order. A God of promise interrupts the deadness of any world based solely on acts of design.

I would note in passing that evolutionary materialists such as Dawkins and Dennett are not alone in celebrating the apparent death of design-obsessed natural theology. Many mainstream theologians, both liberal and conservative, want nothing to do with design either. They view natural theology's design arguments as idolatrous attempts on the part of finite humans to grasp the infinite and incomprehensible God in rational or scientific terms. Design arguments run the risk of diminishing the mystery of God. Natural theology attempts, sinfully, to bring the divine under the control of the limited human mind. For religious reasons, therefore, many theologians are grateful to Darwin for deflating what they take to be the pretentiousness of natural theology. However, this distrust of natural theology, motivated by lofty concern for purity of faith, unfortunately often leads theologians to ignore the natural world altogether.

The Jesuit geologist Pierre Teilhard de Chardin (1881-1955) provides a vision of the cosmos that allows us to think of nature as seeded not so much with design

as with promise.¹² From Teilhard we learn to “see” anticipatory trends in nature that are usually ignored by materialist biologists and philosophers. According to Teilhard, the universe has moved in a direction that is consistent with a biblical sense of hope.¹³ Empirical science has observed in evolution an increasing complexity-consciousness and “centration” at the heart of major phase transitions in evolution. By “centration” Teilhard means that ever since the beginning of the universe “matter” has had a tendency to gather (and complexify) around a center. The atom’s “nucleus,” the DNA of the eukaryotic cell, the nervous system of vertebrates, and most obviously, our own intensely centered “subjectivity” are all centers that bring rich unity to a multiplicity of items and events.

Now that humans have become the latest dominant terrestrial phenomenon in evolution, the “search for a center” is carried out most characteristically in our religions. Religions are ways through which the universe sustains, at least in terrestrial precincts, its ageless search for an ultimate Center in which everything has the promise of being brought into centrated Unity—what Teilhard refers to as God-Omega. Our religions, therefore, are providential paths of promise through which our evolving universe now wends its way toward ultimate communion with God.

One of the great gifts of Darwinian thought is that it makes the theological idea of “continuous creation” much more meaningful than at any other time in the history of Christianity. What I am proposing here is that we may specify the notion of continuous creation as a “dramatic

¹² For the following see Pierre Teilhard de Chardin, *The Human Phenomenon*, trans. Sarah Appleton-Weber (Portland, Oregon: Sussex Academic Press, 1999).

¹³ See my book *The Cosmic Vision of Teilhard de Chardin* (Maryknoll: Orbis Press, 2021).

awakening.” In an evolving world creation can awaken anew at every moment. It is even possible for us now to view the so-called “Big Bang” universe as a dramatic awakening whose meaning or intelligibility has yet to manifest itself fully. Both the universe and God are somehow “not yet.”

As I mentioned earlier, the idea of an instantaneously complete creation is theologically problematic. An initially complete and perfect universe would have nowhere to go. It would have no future. The universe, in that case, would hold no promise, and no creative independence. It would be a lifeless, frozen block, devoid of any real, indeterminate future. Evolution, however, requires that theologians now realize that the universe could not possibly have been created complete in one initial instant. Since the universe is an unfinished process, it is presently imperfect. And so, there is always a dark side to the creative process. Blessedly, however, an unfinished, evolving universe, unlike an initially perfected one, is open to the future. The epic of evolution expands our religious hope to include the whole cosmos from its beginning to whatever destiny awaits it up ahead.

Following the instincts of St. Paul, Christian theology need not separate the destiny of the physical universe from our personal religious hopes. Following Teilhard, we deny that human hope must take only the avenue of escaping into another world completely apart from the cosmos. Evolution, when joined to contemporary post-Einsteinian cosmology, allows that nature itself has the prospect of becoming “more.” In order for us to experience a deep connection between the cosmos and our own existence we would have to be able to discern in the larger cosmic process a general “aim,” “orientation,” or “promise” with which our own lives might now become morally and spiritually aligned. Evolution, Teilhard

claims, allows us to do so. In light of the fact that nature is a dramatic awakening, Darwin's initially puzzling 3-part recipe proves to be providential.

For example, the accidents in evolution, such as genetic mutations or meteorite impacts may seem at first to imply an aimless universe, but I propose that the very spontaneity in nature—usually labeled chance or accident—paradoxically illuminates the biblical belief that God deeply loves and cares for creation. For if the universe is grounded in divine self-giving love, as Christians believe, at least some degree of indeterminacy in the world's coming into being is just what one should expect. After all, genuine love never forces or compels. True love, by definition, allows the beloved creation ample space and time in which to become distinct from its Lover. If God loves the universe, then, the universe must possess some degree of indeterminacy or autonomy in order to be *other* than God. Apart from this indeterminacy the world would be dead. Since a foundational teaching of the theistic religions is that *the world is not God*, it follows that any world devoid of contingency and spontaneity could not be truly other than God. And if the world were not truly distinct from God, it could not be the recipient of divine love. Moreover, the emergence of human freedom would never have occurred in a universe hidebound by a manipulative divine magician.

Likewise, the reliable consistency and invariance of the laws of physics, along with the unbending "constraint" biologists call "natural selection," though it seems impersonal and even cruel at times, is fully compatible with the idea of a providence that does not force the world into a prefabricated form. Nature's predictable routines such as the laws of physics and natural selection function analogously to the inviolable rules of grammar that are necessary to give coherence to

human language and writing. Unbreakable laws of nature are absolutely necessary if the emerging universe is to be firm and consistent enough to have dramatic meaning. Thus, the rigidity of the laws of nature may be taken as a sign not of divine indifference but of divine fidelity and care.

It follows, then, that deep time too is providential. If God's creative and providential presence to the world includes "letting the world be" rather than magically controlling it, it would be strange indeed if the world's coming into being were to occur in a single creative initial instant. Instead, one may expect the universe to take a considerable amount of time—perhaps many billions of terrestrial years—to unfold. There could be no self-giving of God to the universe unless the universe were allowed in some way to become itself first—and to do so at its own pace. Evolutionary materialists, as well as creationists and intelligent design proponents, suspect that a universe whose evolution takes billions of years could not conceivably reside in the bosom of divine care. But listen to these words of theologian Jürgen Moltmann:

God acts in the history of nature and human beings through his patient and silent presence, by way of which he gives those he has created space to unfold, time to develop, and power for their own movement. We look in vain for God in the history of nature or in human history if what we are looking for are special divine interventions. Is it not much more that God waits and awaits, that—as process theology rightly says—he 'experiences' the history of the world and human beings, that he is "patient and of great goodness" as Psalm 103:8 puts it? . . . "Waiting" is never disinterested passivity, but the highest form of interest in the other. Waiting means expecting, expecting means inviting, inviting means attracting, alluring and enticing. By doing this, the waiting and awaiting keeps

an open space for the other, gives the other time, and creates possibilities of life for the other.¹⁴

To sum up, the theology of evolution I am outlining here portrays God as actively willing the world's independence in order that there may be the possibility of dialogical intimacy of that world with God. Hope for relational intimacy of God with creation presupposes the world's distinctness from God. As Teilhard often emphasized, "true union differentiates."¹⁵ As the world becomes more and more independent of God, the opportunity for intimate union of the world with God intensifies. So also, of course, does the risk of an ungrateful turning away from the freedom-bestowing Creator by human beings who have recently appeared in life's evolution. Nevertheless, the promissory thrust of biblical faith encourages believers to hope that God, the font of all freedom, will never forsake the world. And so, theology may picture the entirety of cosmic and biological evolution, along with human history, as having the inextinguishable promise of an increasingly deeper relationship with God.

If God were to follow a purely human ideal of "design," on the other hand, the story of life on earth would probably have been much shorter and less ragged than it has been. Human ideas of decent design would surely have edited out the outlandish outcomes of the Cambrian explosion, the creepy array of reptiles, and numerous puzzling episodes of the world gone wild. Darwin's portrayal of life points to a God who is apparently much more interested in arousing adventure than in

¹⁴ Jürgen Moltmann, "God's Kenosis in the Creation and Consummation of the World," John Polkinghorne, ed., *The Work of Love: Creation as Kenosis* (Grand Rapids, Michigan: Eerdmans Publishing Company, 2001), 149.

¹⁵ Pierre Teilhard de Chardin, *The Human Phenomenon*.

establishing unruffled order. I believe that evolutionary science suggests a larger and more interesting story of nature than design-obsessed humans could have ever conjured up on our own. Evolutionary science lays out an epic adventure of arduous liberation of creation from the dead end of triviality. It also suggests an indefinitely open future of creativity still to occur up ahead.

Conclusion

Divine providence cannot be thought of in a consistently biblical way as long as theologians separate it from the theme of *promise*. Thus, evolution now invites theology to extend the sweep of the divine promise beyond the narrow sphere of human history so as to embrace the story of the entire universe. In response to the outpouring of God's boundless love the universe is invited, but never forced, to undergo a process of perpetual self-transformation. As it awakens and adapts to an infinitely self-giving love, the creation is still undergoing a dramatic evolution toward increasing complexity, life, consciousness, and expanding beauty. Viewed in this wide way, evolution is more than just "compatible" with a biblically informed notion of providence. Faith in a humble, promising, self-giving God should already have prepared our hearts and minds to welcome the discoveries of Darwin and Einstein.

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