



Adapted from Michelangelo's  
"God Separating Sky and Water"

# God and His Most Glorious Theater

How rational people can believe in God—revisiting a version of the argument from design.

by John T. Baldwin

ADVENTISTS HAVE BEEN IN THE FOREFRONT OF Protestants concerned with continued belief in God in the light of scientific evidence. Not all Adventists agree on what kind of God they can affirm, and how God relates to the world.

The present discussion traces evidence for the interaction of God and the world—hence his existence—known as the argument for God's existence from perfection tradition, stemming from its probable inception in William Paley's *Natural Theology* (1802) to its influence upon contemporary thinkers such as philosopher of religion Alvin Plantinga, as well as scholars standing outside the tradition,

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such as geneticist Richard Goldsmith and paleontologist Stephen Jay Gould.

Throughout *Natural Theology* Paley frequently refers to and rejects as inadequate a theory of origins based on what he calls the concept of appetencies. These appetencies are located in soft, ductile pieces of matter. Introducing this theory, Paley writes, "Another system, which has lately been brought forward, and with much ingenuity, is that of *appetencies*."<sup>1</sup> Although in *Natural Theology* Paley does not explicitly link the name of Erasmus Darwin to this concept, Paley often refers to Darwin by name and also to several of Darwin's works in *Natural Theology*, thereby establishing his close acquaintance with Darwin and his works.

The source of the appetency theory is found in a chapter entitled "Generation" in Erasmus Darwin's work *Zoonomia; or the Laws of Organic Life*. Since this hypothesis had appeared just six years before Paley published *Natural Theology* in 1802, he describes it as a theory that "has lately been brought forward."<sup>2</sup> Darwin describes the theory in some

detail: "All animals therefore, I contend, have a similar cause of their organization, originating from a single living filament, endued indeed with different kinds of irritabilities and sensibilities, or of animal appetencies."<sup>3</sup>

The macroevolutionary implications of this theory are significant. Erasmus Darwin contends that the warm-blooded animals, for example, have "alike been produced from a similar living filament." Concerning birds, Darwin states that "this original living filament has put forth wings instead of arms or legs." Moreover, in language that anticipates concepts later advanced by Lamarck, he states that physical "exertions to gratify . . . lust, hunger, and security" have "changed the forms of many animals."<sup>4</sup>

This developmental method means, as Paley observes, that the animal parts "have themselves grown out of that action,"<sup>5</sup> rather than having been originally designed for a particular use. For instance, Darwin asserts that the trunk of the elephant "is an elongation of the nose for the purpose of pulling down the branches of trees for his food."<sup>6</sup> Darwin presents the following grand conclusion made possible by this theory:

In the great length of time, since the earth began to exist, perhaps millions of ages before the commencement of the history of mankind, would it be too bold to imagine, that all warm-blooded animals have arisen from one living filament . . . with the power of acquiring new parts, attended with new propensities, directed by irritations, sensations, volitions, and associations; and thus possessing the faculty of continuing to improve by its own inherent activity, and of delivering down those improvements by generation to its posterity, world without end!<sup>7</sup>

How does Paley answer this serious biological challenge to the design argument? Characterizing the difficulty, he warns, "The theory therefore dispenses with that which we insist upon, the necessity, in each particular case, of an intelligent, designing mind, for the

contriving and determining of the forms which organized bodies bear."<sup>8</sup> Paley briefly responds by introducing the argument from perfection.

I shall briefly discuss its essence and name. The argument from perfection is a subspecies of the design argument and focuses upon a restricted window of reality, specifically the rise *de novo* of a "first" new body part, instinct, or ability. This focus implies that the argument from perfection deals exclusively with the development *de novo* of the first incipient new animal structures or instincts. For example, assuming the Darwinian principle of *natura non facit saltum* ("nature does not make leaps"), the argument from perfection asks how, biologically speaking, a brand new, first-time-ever body part can originate over many generations by means of many small, incomplete, initial stages called incipient forms, if none of these structures are useful entities in themselves. In other words, the argument queries: How can these incipient forms be preserved by the action of natural selection when these bridging stages, viewed individually, have no selective advantage? Thus in effect the argument from perfection holds that nothing works until everything works.



Adapted from Michelangelo's "The Creation of Adam"

The first individual to give a formal name to this method of argumentation may be Gertrude Himmelfarb. While writing about the elements of this argument in a 1968 work entitled *Darwin and the Darwinian Revolution*, she offers this nomenclatural line, “The same supple and yet aggressive tactics are displayed in Darwin’s efforts to capture that traditional stronghold of teleology: the argument from perfection.”<sup>9</sup>

In the following passage, Paley discusses the formation *de novo* of the epiglottis; here the argument from perfection is articulated, perhaps for the first time in British natural theological thought:

There is no room for pretending, that the action of the parts may have gradually formed the epiglottis: I do not mean in the same individual, but in a succession of generations. Not only the action of the parts has no such tendency, but the animal could not live, nor consequently the parts act, either without it, or with it in a half-formed state. The species was not to wait for the gradual formation or expansion of a part, which was, from the first necessary to the life of the individual.<sup>10</sup>

A clearer indication of the argument from perfection can hardly be imagined. The two crucial concepts—“in a half-formed state” and “the species was not to wait for the gradual formation or expansion of a part, which was, from the first necessary to the life of the individual”—represent the essence of the idea of the argument from perfection. In effect, Paley is asking: How can an epiglottis first originate *de novo* and subsequently develop slowly by means of the supposed functioning

of a useless bulge? For Paley, the epiglottis could not evolve in this manner; hence, some form of causality other than chance origin is called for. Paley’s answer was “an intelligent and designing Creator.”<sup>11</sup> Soon other thinkers followed Paley’s lead concerning the impact of the argument from perfection.

In one of the most amazing shifts in the history of ideas, Alfred Russel Wallace (1823-1913) employed what may be considered an indirect use of the argument from perfection against the very theory of natural selection that he had founded with Charles Darwin. While studying the origin of the speech-forming mental capacities of selected races in the Far

East, Wallace discovered little if any difference in mental capacity between so-called sophisticated European minds and the abilities present in his study groups. In light of this finding he asks:

How was an organ [the human brain] developed so far beyond the needs of its possessor? Natural selection could only have endowed the savage with a brain a little superior to that of an

ape, whereas he actually possesses one but very little inferior to that of the average members of our learned societies.<sup>15</sup>

Here Wallace makes the important point that an instrument has been developed far in advance of the needs of its possessor, which presents difficulties for the notion that nature does not make leaps. In other words, Wallace concludes that based on Darwin’s principles, significantly advanced perfection in mental capacity should not be associated with a specific animal form prior to the need for such perfection and for immediate survival. Based

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on previous correspondence with Wallace, and anticipating his direction in the *Quarterly* article quoted above, Darwin wrote the following words to Wallace shortly before its appearance, "I shall be intensely curious to read the *Quarterly*. I hope you have not murdered too completely your own and my child."<sup>13</sup> Darwin wavered and seems to have returned to a formerly rejected and truly untenable Lamarckian position.

Two years later Huxley responded to Wallace with the following surprising retort, "The lowest savages are as devoid of any such conceptions as the brutes themselves."<sup>14</sup> This desperate remark implied that Wallace had misread his subjects and that they indeed had very little mental capacity. Wallace's findings prompted him to seek a form of causality other than one driven solely by the extremely gradual, fortuitous formation of human mental capacities. Concerning the nature of such a needed cause, Wallace writes, "We must therefore, admit the possibility, that in the development of the human race, a Higher Intelligence had guided the same laws for nobler ends."<sup>15</sup>

In 1871, the same year as Huxley's response to Wallace, St. George Mivart applied the argument from perfection in a work bearing the significant title *On the Genesis of Species*. The second chapter, entitled "Incipient Structures," discusses numerous biological anatomical parts of which the origin *de novo* Mivart believes defies adequate explanation by means of Darwin's gradualistic theory. For example, Mivart points to the alleged incipient development of baleen in whales and wonders how one can "obtain the beginning of such useful development."<sup>16</sup> In other words, he questions how the "network of countless" fibers constituting the food-catching plates of baleen could successfully function in a less than complete or perfect form.<sup>17</sup> Mivart's point, of course, is that if incipient structures of baleen are essentially of no use to the aquatic animal, how can these structures be retained

by a process of natural selection that in the building of a new body part retains only forms beneficial to the creature?

Early in the twentieth century, Henri Bergson briefly invoked the argument from perfection as he suggested the idea of an "original impetus of life" to replace the notion of materialistic evolution. He asked, "How could they [insensible variations in both vertebrate and mollusk eyes] have been preserved by selection and accumulated in both cases, the same in the same order, when each of them, taken separately, was of no use?"<sup>18</sup>

Twenty-nine years later, Richard Goldschmidt, although standing outside the argument from perfection tradition, nevertheless expressed sentiments similar to those of Mivart and Bergson. This eminent Berkley geneticist based his famous "hopeful monster" concept (which replaces the Darwinian rate of evolutionary development) in part on aspects of the argument from perfection. While remaining a wholly naturalistic evolutionist, Goldschmidt nevertheless boldly confronted the traditional Darwinian methodological rate theory with the following developmental puzzles:

I may challenge the adherents of the strictly Darwinian view, which we are discussing here, to try to explain the evolution of the following features by accumulation and selection of small mutants: hair in mammals, feathers in birds, . . . teeth, shells of mollusks, ectoskeletons, compound eyes, blood circulation, . . . poison apparatus of snakes, . . . etc. Corresponding examples from plants could be given.<sup>19</sup>

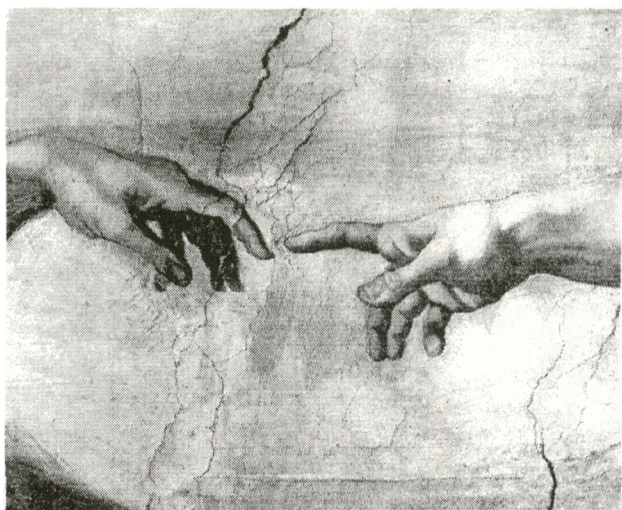
Goldschmidt illustrated the lethal effect of the argument from perfection on some aspects of traditional Darwinian theory, for example, in its account of the gradual origin *de novo* of the mouth parts of the mosquito and the bee: "Among these evolutionary steps there are many of a type which preclude an evolution by slow accumulation of micromutations. The

mouth parts of a mosquito or of a bee . . . are an example in question: gradations between generalized and specialized types would have died of starvation.”<sup>20</sup> These lines show the impact of the argument from perfection on Goldschmidt’s thought, which may have been one factor influencing him to develop the “hopeful monster” theory, which advocates genetic changes that are large enough in a single generation to be retained by natural selection.

A. E. Taylor contributes to the argument from perfection tradition in his 1947 work *Does God Exist?* He claims that the force of the argument from perfection has the following far-reaching implications:

If . . . we think of each change in the strict Darwinian fashion, as arising separately by a minute variation, it follows that during most of the period over which the process is going on there has been *no* advantage derived from the variations, and no reason, therefore, why they should have been preserved by “natural selection.” The reasoning seems to me to be fatal to *any* theory of the origination of species in the course of “unguided” evolution.<sup>21</sup>

Taylor’s admission that the argument from perfection seems “to be fatal to any theory of unguided evolution” is the most significant



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single evaluation of the implications of this argument that I have discovered to date. This conclusion has direct relevance for the discussion of the relation of God and the world at the conclusion of this article.

In “Punctuated Equilibria: An Alternative to Phyletic Gradualism,” Niles Eldredge and Stephen Jay Gould—both of whom, like Goldschmidt, stand outside the argument from perfection tradition—advance a new theory of the rate of evolutionary change largely based on the picture of a fossil record that documents biological stasis rather than phyletic gradualism. In some of his subsequent writings, however, Gould discusses the argument from perfection in a fashion that suggests that he may base the need for rapid and “episodic events of allopatric speciation,” not only on the absences of transitional forms in the fossil record, but also in part on the biological implications of some aspects of the argument from perfection.<sup>22</sup> For instance, concerning the significance of an aspect of the argument, Gould asks: “Can we invent a reasonable sequence of intermediate forms—that is, viable, functioning organisms—between ancestors and descendants in major structural transitions? Of what possible use are the imperfect incipient stages of useful structures? What good is a half a jaw or half a wing?”<sup>23</sup> The phrase “half a jaw or half a wing” shows Gould working with the basic concept of the argument from perfection. Although preadaptation, the conventional response to the incipient organ problem—perhaps the half-wing trapped prey—may apply to some cases, Gould raises the following question: “Does it [preadaptation] permit us to invent a tale of continuity in most or all cases? I submit . . . that the answer is no.”<sup>24</sup>

Although Gould does not discuss the issue, preadaptation also faces the biological difficulty of the infinite regress of preadaptation in light of the argument from perfection. The so-called half-wing that trapped prey is not,

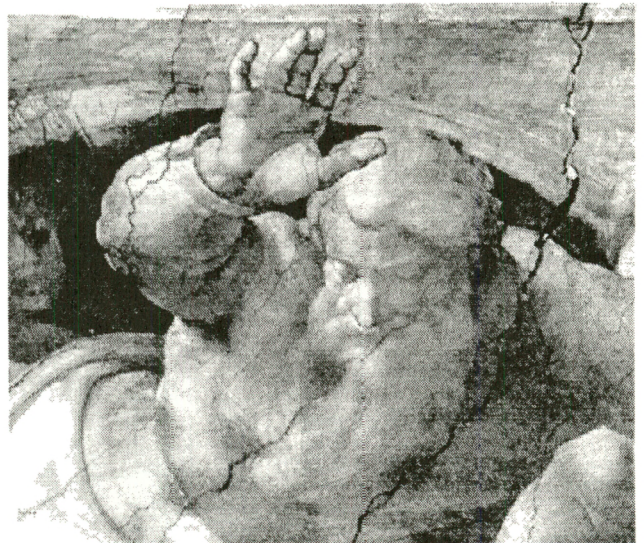
properly speaking, a “half-wing.” Rather, it is an end in itself, because there is no place for overarching future-oriented goals in evolution toward which forms develop. Therefore, the half-wing may be called an insect trap and so on, indefinitely. Biologically, the chain of forms seems to require some kind of perfection of structural forms from the beginning of its existence in order to function.

Two philosophers of religion, Anthony Kenny and Alvin Plantinga, and one scientist-theologian, John Polkinghorne, discuss what I suggest is the crucial theological significance of this research concerning the argument from perfection tradition. The argument from perfection raises afresh the question of the relation of God and the world.

This issue is concerned with problems such as the following: What are the foundational presuppositions necessary for a proper consideration of the issue of God and the world? In what way does the argument from perfection open the question of the actions of divine and secondary causality in the world? As noted earlier, Taylor concludes that the argument from perfection is “fatal to *any* theory of the origination of species in the course of ‘unguided’ evolution.”<sup>25</sup> Thus, does the argument from perfection suggest a need for an active causality in the world other than that described empirically? Can the divine causality properly be said to interpenetrate the phenomenal realm of space-time or secondary causation in some sense? In other words, how shall we properly characterize the relation of God and the world? These questions indicate the central theological issues raised by the argument from perfection, thus showing the theological significance of this study. The brief analysis below addresses such theological issues raised by the argument from perfection.

In his 1986 reflections, “The Argument from Design,” Anthony Kenny discusses the is-

sue of the “God-of-the-gaps” in relation to the design argument. Kenny makes a new distinction between contingent and necessary gaps in explanation. The former, he holds, would “only have a precarious hold on worship.”<sup>26</sup> Having made this important distinction, he cogently argues for the existence of a necessary gap in the phenomenon of the origin of what amounts to sexuality, that is, the origin of true-breeding species. Kenny states that the “Darwinian explanation cannot explain the origin of true-breeding species.”<sup>27</sup> In effect, Kenny is arguing that the origin *de novo* of true-breeding species represents a necessary gap which calls for a principle of originating causality other than that provided by the Darwinian theory. In this way he acknowledges in principle the biological gaps outlined by Gould and others. In his vision, however, aspects of the argument from perfection in conjunction with these gaps may suggest a more active role for God in relation to the world than is generally granted in modern theological thinking as demonstrated, for example, by Friedrich Schleiermacher in *The Christian Faith*. In Schleiermacher’s view the divine causality does not interfere with the realm of secondary causality, whereas in



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Kenny's vision there may be room for some form of a dynamic interpenetration of God and the world.

This last point is underscored by Alvin Plantinga in a recent article entitled, "When Faith and Reason Clash: Evolution and the Bible." In this piece Plantinga discusses the likelihood of evolution according to pure Darwinism in light of the argument from perfection, intensified in this instance by the fact that not just the eye is involved in this transition, but the "whole visual system, including the relevant parts of the brain."<sup>28</sup> The question is, how, biologically, can one properly "envisage a series of mutations which is such that each member of the series has adaptive value, is also a step on the way to the eye, and is such that the last member is an animal with such an eye."<sup>29</sup> In light of this developmental question, Plantinga concludes that the "vast majority of these paths contain long sections with adjacent points such that there would be no adaptive advantage in going from one point to the next, so that on Darwinian assumptions, none of them could be the path in fact taken."<sup>30</sup> According to Plantinga, the theological implication of this evidence is that from a Christian point of view one needs a scientific account of life that is not restricted by "methodological naturalism."<sup>31</sup> I suggest that the account of life includes the relation of God and the world.

Finally, in a recent article scientist-theologian John Polkinghorne also calls for a reconsideration of the relation of God and the world. In "God's Action in the World,"

Polkinghorne rejects, on the one hand, the popular notion of a God of extrinsic, imposed gaps, because these "bad" gaps represent arbitrary ignorance. On the other hand, Polkinghorne argues that within the hiddenness of flexible processes, God acts as guide in relation to intrinsic gaps: "I'm not talking about arbitrary gaps but rather intrinsic gaps. If the world's process is genuinely open, it has to be 'gappy' in this intrinsic sense. We are people of the gaps, as we make our way through choice, and I don't think *in that sense* it is all pejorative to speak about God as being of the gaps."<sup>32</sup> The implication

of Polkinghorne's quotation is to invite fresh reflection concerning the possibility of a dynamic interpretation of God and the world.

In summary, this study illustrates some biological and theological aspects of the continuing impact of the argument from perfection tradition. Due in part to aspects of this argument, the thinkers discussed turn to accounts of origins differing from

the strict Darwinian position. On the one hand, motivated by the biological evidence discussed, but restricting themselves to a one-dimensional model of world reality, Goldschmidt and Gould (themselves standing outside the argument from perfection tradition) of necessity turn for an alternative model of origins to a refined concept of the "hopeful monster" theory wholly explainable by empirical principles within a materialistic framework.

On the other hand, Paley, Wallace, Mivart, Bergson, Taylor, Kenny, Plantinga, and

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—John Polkinghorne

Polkinghorne, prompted by similar biological evidence but remaining open to a wider model of reality (one that can include a trans-empirical dimension) and to a dynamic relationship between God and the world, conclude that the evidence points more convincingly to some kind of originating causality that in the

final analysis lies beyond the reach of "methodological naturalism." Thus, for Adventists and other theists concerned about creation, the theological implications of the argument from perfection call for a fresh, continuing study of the issue of the relationship between God and the world.

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