

# Faith&Thought



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# **FAITH and THOUGHT**

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## Editorial

The Victoria Institute was founded in 1865 in the wake of the publication of Darwin's Origin of Species with the intention of defending "...the great truths revealed in Holy Scripture ...against the oppositions of Science falsely so called." The subject of Darwin and evolution refuses to go away and there has been a revival of interest in Darwin partly due to the popularising of Darwinian evolution by the atheist biologist Richard Dawkins, who claims that, "Darwin made it possible to be an intellectually fulfilled atheist" and also to the publication of Darwin's correspondence on the internet. The main article in this edition of the journal is to challenge Dawkins and to argue, using Darwin's writings and his voluminous correspondence, that the opposite is true. The author, Denis Lamoureux is Associate Professor of Science and Religion at the University of Alberta, Canada. He holds three earned doctorates in dentistry, evangelical theology and developmental and evolutionary biology. The article was first presented in 2009 at the University of Toronto and was subsequently published in Perspectives in Science and Christian Faith 64.2 (June 2012). We are grateful to Professor Lamoureux and the American Scientific Affiliation for allowing us to publish this revised version of a well-researched and thoroughly documented study. Also, following on with the theme of origins is a short paper by Professor Duncan Vere on the subject of pre-Cambrian fossils.

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### **Professor Colin A. Russell**

Colin Russell, who died on May 17<sup>th</sup> 2013, was a distinguished chemist and historian of science who will be sadly missed. He made significant contributions in his lectures to the Institute, which were always intelligible to all who heard, or later, read them. Two particular lectures stand out – one devoted to the subject of Noah’s flood and the other on the topic of where science and faith meet. A full obituary will be found in the current edition of *Science and Christian Belief* 25.2 (2013)165-6.

### **Toward an Intellectually Fulfilled Christian Theism – Part I: Divine Creative Action and Intelligent Design in Nature**

#### **Denis O. Lamoureux**

Few have provoked as many extreme reactions regarding the relationship between science and religion as has Charles Darwin. The Darwin Correspondence Project at Cambridge University observes, “Darwin is celebrated as a secular saint, and vilified as Satan’s agent in the corruption of the human spirit.”<sup>1</sup> For example, the father of modern young earth creationism, Henry M. Morris, contends that “Satan himself is the originator of the concept of evolution,” and that Darwin’s theory of natural selection led to racism, Nazism, Marxism, and numerous other social evils.<sup>2</sup> On the other hand, the inimitable Richard Dawkins, in his acclaimed bestseller *The Blind Watchmaker*, asserts that, “Darwin made it possible to be an intellectually fulfilled atheist.”<sup>3</sup> In answer to these opposing claims, the Correspondence Project is quick to note that Darwin “is misquoted in order to support a particular position.”<sup>4</sup> Notably, “the popular view of Darwin as purely secularist, or even atheist, is based on a highly selective reading of the sources.”<sup>5</sup>

In this article, I will swim against the Dawkinsian tide in order to defend the provocative thesis that Charles Darwin made it possible to be an intellectually fulfilled *Christian theist*. Not to be misunderstood, let me say it is clear that Darwin gradually came to reject Christianity during the middle of his life, and this is no attempt to “Christianize” him. Instead, employing a method quite different from that of Dawkins, I will submit to the authorial intentionality of Darwinian historical literature so as to glean theological insights that I believe inspire a conservative Christian approach to evolution. Often labelled “theistic evolution” but more accurately termed “evolutionary creation,” this view of origins claims that the Father, Son, and Holy Spirit created the universe and life, including human life, through an ordained, sustained, and design-reflecting evolutionary process.<sup>6</sup> In this first of two parts, I will draw theological insights from Darwin that deal with (1) divine creative action and (2) intelligent design in nature.<sup>7</sup> In the second part, to be published in

October 2014, I will examine Darwinian insights related to (3) evolutionary theodicy and (4) evolutionary psychology.<sup>8</sup>

A few preliminary comments are in order. First, Darwin was at best a nominal Christian as a young adult. After returning from the *HMS Beagle* voyage (27 Dec. 1831 to 2 Oct. 1836), he entered a period of religious reflection and “gradually came to disbelieve in Christianity as a divine revelation.”<sup>9</sup> Darwin had four critical arguments: (1) The opening chapters of the Bible were a “manifestly false history of the world”;<sup>10</sup> (2) the God of the Old Testament was “a revengeful tyrant”; (3) “the more we know of the fixed laws of nature the more incredible do miracles become”; and (4) “the Gospels cannot be proved to have been written simultaneously with the events,—that they differ in many important details, far too important it seems to me, to be admitted as the usual inaccuracies of eyewitnesses.”<sup>11</sup> Darwin also had an emotive complaint against the notion of eternal damnation, which he called “a damnable doctrine,” since he assumed that “my Father, Brother and almost all my best friends, will be everlastingly punished.”<sup>12</sup> His rejection of Christianity remained resolute until his death on 19 Apr. 1882. Responding in 1880 to whether he believed in the New Testament, Darwin writes back to F. A. McDermott, “I am sorry to have to inform you that I do not believe in the Bible as a divine revelation, & therefore not in Jesus Christ as the son of God.”<sup>13</sup>

Second, it is important to underline that Darwin was never an atheist. In a letter dated 1879, only a few years before his death in 1882, he responds to another query about his religious beliefs and reveals to John Fordyce

I may state that my judgment often fluctuates ... In my most extreme fluctuations *I have never been an Atheist in the sense of denying the existence of a God.* I think that generally (& more and more so as I grow older) but not always, that an Agnostic would be the more correct description of my state of mind.<sup>14</sup>

Darwin’s scientific colleague Thomas Henry Huxley coined the term “agnosticism” in 1869, and the first evidence of Darwin embracing this view appears in his 1876 *Autobiography*.<sup>15</sup> In a section entitled “Religious Belief,” Darwin concludes, “The mystery of the beginning of all things is insoluble by us; and I for one must be content to remain an Agnostic.”<sup>16</sup> Though he had gradually rejected Christianity, roughly over a period between the late 1830s and the late 1840s, Darwin continued to believe in a God prior to his acceptance of agnosticism.<sup>17</sup> In an 1878 letter to H.N. Ridley, he recalls, “[M]any years ago when I was collecting facts for the *Origin [of Species]*, my belief in what is called a *personal* God was as firm as that of [the Reverend] Dr Pusey himself.”<sup>18</sup> This statement aligns with Darwin’s claim in the *Autobiography* that he was a “theist” and that this belief “was strong in my mind” as he wrote the famed *On the Origin of Species* (1859), a book which included seven affirming references to the “Creator.”<sup>19</sup> In recent years, much has been written about the impact of the death of Darwin’s beloved daughter Annie in 1851 on his religious views.<sup>20</sup> But given his rejection of Christian faith by the late 1840s, and his acceptance of theism in the late 1850s, it is apparent that Darwin firmly embraced some generalized form of theism

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not connected to Christianity or to any other religious tradition even after her passing.<sup>21</sup>

Finally, my justification to pursue such a provocative thesis—and what may seem to some, a perilous thesis—comes from Charles Darwin himself. In the aforementioned correspondence to Fordyce in 1879, Darwin opens with a blunt indictment. “It seems to me absurd to doubt that a man may be an ardent theist & an evolutionist.”<sup>22</sup> He then offers the examples of Charles Kingsley, a self-described “orthodox priest of the Church of England,” and Asa Gray, an evangelical Christian and Harvard botanist who promoted Darwin in America with his pamphlet *Natural Selection Not Inconsistent with Natural Theology* (1861).<sup>23</sup> In other words, I feel comfortable speculating that rather than incurring the wrath of Charles Darwin for this two-part article, I may well receive his support.

### Insights into Divine Creative Action

Upon returning to England from his five-year circumnavigation aboard the *HMS Beagle*, Darwin entered a period that he describes as “the most active which I ever spent.”<sup>24</sup> Between October 1836 and January 1839, he outlined his theory of evolution by natural selection, and alongside his scientific hypothesizing, he admits, “I was led to think much about religion.”<sup>25</sup> Indeed, biological evolution has significant theological ramifications.

This two-year period is marked by Darwin’s stern rejection of any interventions by the Creator in origins. Commonly known as the “god-of-the-gaps,” this view of creative action assumes that a divine being entered the world at different points in time either to add missing parts or creatures, or to modify those already in existence.<sup>26</sup> For Darwin, the loss of dramatic divine acts in nature began in Brazil, where he viewed geological evidence through the lens of the first volume of Charles Lyell’s *Principles of Geology* (1830). The “infinitely superiority of Lyell’s” uniformitarianism quickly overthrew catastrophism, the geological paradigm of the early nineteenth century which held that features on the surface of the earth were caused by numerous diluvian events, with the Noahic Flood being the last.<sup>27</sup> However, Darwin did not immediately extend the Lyellian natural-laws-only view of geology to biology, and late in the voyage he still held a progressive creationist understanding of the origin of life.<sup>28</sup> Noting the similarity between ant lion pitfalls (traps) in both England and Australia, he argues in a diary entry dated January 1836,

Would any two workmen ever hit on so beautiful, so simple, & yet so artificial a contrivance [pitfall]? It cannot be thought so. The one hand has surely worked throughout the universe. A Geologist perhaps would suggest that the periods of Creation have been distinct & remote the one from the other; that the Creator rested in his labor.<sup>29</sup>

Clearly, an interventionistic god-of-the-gaps was still front and center in Darwin’s biological science late into his voyage onboard the *HMS Beagle*.

But dramatic divine creative acts were soon to be eliminated after landing in England. In the B Notebook of his *Notebooks on Transmutation* (1837-1839), Darwin draws an analogy between astronomy and biological evolution. Appealing to the history of science, he observes,

Astronomers might formerly have said that God ordered [i.e., intervened], each planet to move in its particular destiny [e.g., retrograde planetary motion]—In the same manner God orders each animal with certain form in certain country [progressive creation]. But how much more simple & sublime power [to] let attraction act according to certain law; such are inevitable consequences; let animals be created, then by the fixed laws of generation.<sup>30</sup>

In other words, Darwin contended that since astronomers no longer appeal to divine interventionistic acts to move planets around, biologists need not require dramatic creative acts in the origin of living organisms.<sup>31</sup> Natural processes alone could explain the data of astronomy and biology. In the D Notebook, he adds that creating life through natural processes was

“far grander than [the] idea from cramped imagination that God created (warring against those very laws he established in all organic nature) the Rhinoceros of Java & Sumatra, that since the time of the Silurian he has made a long succession of vile molluscous animals.”<sup>32</sup>

Such a micromanager view of divine creative action, concludes Darwin, is “beneath the dignity of him, who is supposed to have said let there be light and there was light.”<sup>33</sup>

Darwin then extended this rejection of the god-of-the-gaps to his evolutionary theorizing on the origin of humanity. “Man in his arrogance,” writes Darwin in the C Notebook, “thinks himself a great work worthy of the interposition [i.e., intervention] of a deity, more humble & I believe truer to consider him created from animals.”<sup>34</sup> Though this passage is ambiguous about God’s activity, Darwin places Him firmly as the Creator of the evolutionary process in the M Notebook. He asserts that a scientist is in error if he

“says the innate knowledge of creator is has been implanted in us (by ? individually or in race?) by a separate act of God, & not as a necessary integrant part of *his* most magnificent laws, of which we profane degree in thinking not capable to ~~de~~ produce every effect, of every kind which surrounds us.”<sup>35</sup>

It is important to underline that this view of evolution is not the dysteleological process assumed by Richard Dawkins. For Darwin, biological evolution is clearly teleological, and ultimately rooted in God. Moreover, he acknowledges the reality of natural (or general) revelation as an innate characteristic of human beings.<sup>36</sup> And by declaring evolutionary laws “most magnificent,” Darwin certainly alludes to their having been intelligently designed.

Darwin’s rejection of the god-of-the-gaps models, and his acceptance of a teleological evolutionary process ordained by the Creator, appear openly in his seminal book, *On the Origin of Species* (1859). The first epigraph of the book comes

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from William Whewell's *Bridgewater Treatise* (1833), and it sets the tone of his approach to divine action:

But with regard to the material world, we can at least go so far as this—we can perceive that events are brought about not by insulated interpositions [i.e., interventions] of Divine power, exerted in each particular case, but by the establishment of general laws.<sup>37</sup>

Applying this understanding of God's activity to the evolution of life, Darwin contends,

Authors of the highest eminence [i.e., progressive creationists] seem to be fully satisfied with the view that each species has been independently created. To my mind it accords better with what we know of the laws impressed on matter by the Creator, that the production and extinction of the past and present inhabitants of the world should have been due to secondary causes like those determining the birth and death of the individual.<sup>38</sup>

The analogy between developmental biology and evolutionary biology is powerful. No one today believes that God intervenes into the world to attach fins, wings, or limbs during the development of individual creatures. Instead, we know that living organisms arise through natural embryological processes. So too, argues Darwin, with the origin of all creatures that have ever lived on earth—they were created through natural evolutionary processes ordained by God.<sup>39</sup>

The embryology-evolution analogy is also found in Darwin's second most well-known book, *The Descent of Man, and Selection in Relation to Sex* (1871). As noted earlier, he embraced human evolution in the late 1830s. But sensitivity to Victorian society led him to make only one thinly veiled remark on the topic in the *Origin of Species*.<sup>40</sup> *The Descent of Man* was a complete and uncompromising treatise on human evolution; but still mindful of cultural sensitivities, Darwin offered assistance to those struggling with evolution.

I am aware that the conclusions arrived at in this work will be denounced by some as highly irreligious; but he who denounces them is bound to shew why it is more irreligious to explain the origin of man as a distinct species by descent from some lower form, through the laws of variation and natural selection, than to explain the birth of the individual through the laws of ordinary reproduction. The birth both of the species and of the individual are equally parts of that grand sequence of events, which our minds refuse to accept as the result of blind chance.<sup>41</sup>

Once again, Darwin provides a view of evolution that is clearly not dysteleological, as assumed by Dawkins. For that matter, it could be argued from this passage that embryological and evolutionary processes are both natural revelations that reflect intelligent design. And Darwin's significant epistemological claim that the human mind refuses to embrace a world run by blind chance offers an argument that God ordained the evolution of our brain in order to lead us to that very conclusion. Some implications of this conclusion will be explored in Part II of this article.

Finally, a comment is in order regarding Darwin's famed evolutionary mechanism of natural selection and the notion of survival of the fittest. Theories of



biological evolution were being discussed for at least one hundred years before the *Origin of Species*. For example, Charles's grandfather Erasmus Darwin outlined a deistic and "Lamarckian" model of evolution in *Zoonomia, or the Laws of Organic Life* (1794-1796).<sup>42</sup> But it was the discovery of a scientific mechanism—natural selection—that captured the imagination and respect of the scientific community in Darwin's day. Of course, dysteleological polemicists such as Dawkins are notorious for focussing on this rather unsavoury aspect of evolutionary theory along with the idea of the survival of the fittest in order to justify their disbelief. However, rarely do they reveal that Darwin later mitigated both of these notions. In the *Descent of Man*, he confesses, "In the earlier editions of my 'Origin of Species' I perhaps attributed too much to the action of natural selection or the survival of the fittest."<sup>43</sup> His "excuse" for "having exaggerated its [natural selection] power" was rhetorical in order "to overthrow the dogma of separate creations."<sup>44</sup> With characteristic candor, Darwin then adds, "We know not what produces the numberless slight differences between the individuals of each species."<sup>45</sup>

Indeed, evolution features two pivotal concepts: (1) the production of biological variability, and (2) the natural selection of the fittest variants. Yet Darwin had no idea about the mechanisms behind the former, and late in life he even postulated what could be seen as a teleological factor in evolution. In an 1878 letter to H.N. Ridley, he observes that "there is almost complete unanimity amongst Biologists about Evolution," but he qualifies that "there is still considerable difference as to the means, such as how far natural selection has acted & how far external conditions, or whether there exists some mysterious innate tendency to perfectibility."<sup>46</sup> Once again, such a view of biological evolution is far from that of Dawkins, which assumes that the process is driven by irrational necessity and blind chance.

To summarize, Charles Darwin offers some valuable insights to Christian theists regarding divine creative action. His appeal to the history of astronomy and his own experience with geological catastrophism show that god-of-the-gaps models have always failed. The purported gaps in nature are not indicative of divine intervention, but rather they are gaps in human knowledge later filled by scientific discoveries. Thanks to Darwin, it is clear that evolution is not necessarily atheistic or dysteleological.<sup>47</sup> From the writing of his *Notebooks on Transmutation* in the late 1830s to the publication of *On the Origin of Species* in 1859, he viewed the evolutionary process as God's method of creation. Finally, Darwin's embryology-evolution analogy, appearing in his two most important books, remains a powerful argument to assist Christians today in coming to terms with the evolution of life.

## Insights into Intelligent Design

Regrettably, the term "intelligent design" has been co-opted and muddled by proponents of the so-called "Intelligent Design (ID) Movement."<sup>48</sup> Purporting to detect design *scientifically*, ID theorists only entrench in the minds of the public a false dichotomy—biological evolution vs. intelligent design. ID Theory is a narrow

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view of design in which design is connected to miraculous interventions in the origin of life. In other words, it is just another god-of-the-gaps model. For example, parts of the cell like the flagellum are said to be “irreducibly complex”; as a result, it is claimed that they could not have evolved through natural processes.<sup>49</sup> Since this is the case, ID Theory is more accurately termed “*Interventionistic Design Theory*.”

Ironically, it is a famed atheist who has a more cogent grasp of the biblical and traditional understanding of intelligent design than the evangelical Christians who form the core of the ID Movement. In *The Blind Watchmaker* (1986), Richard Dawkins declares,

The problem is that of complex design. . . . The complexity of living organisms is matched by the elegant efficiency of the *apparent* design. If anyone doesn't agree that this amount of complex design cries out for an explanation, I give up. . . . Our world is dominated by [1] feats of engineering and [2] works of art. We are entirely accustomed to the idea that complex elegance is an indicator of premeditated, crafted design. This is probably the most powerful reason for *the belief*, held by the vast majority of people that have ever lived, in some kind of supernatural deity. . . . It is as if the human brain were specifically designed to misunderstand Darwinism, and find it hard to believe.<sup>50</sup>

Note that design has nothing to do with purported gaps in nature, or so-called “irreducible complexity.” Moreover, intelligent design is not limited to complexity alone (a prejudice so typical of the engineering mentality of ID Theorists), but also includes beauty as a significant indicator. And finally, though Dawkins dismisses design as merely “apparent,” he correctly asserts that design is a powerful argument, *not a proof*, that has been upheld and experienced by nearly everyone throughout history. These tenets are in alignment with Ps. 19:1-6, Rom. 1:18-23, and the apocryphal text Wisd. of Sol. 13:1-9.<sup>51</sup> In the light of Dawkins and Scripture, I define intelligent design as *the belief* that beauty, complexity, and functionality in nature point to an Intelligent Designer.

Regrettably, Darwin began his academic career by being entrenched in a view of design similar to that of the ID Movement. William Paley's *Natural Theology: or, Evidence of the Existence and Attributes of the Deity, Collected from the Appearances of Nature* (1802) was required reading at Cambridge University in the early nineteenth century, and, interestingly, Darwin admits that this was the best part of his education.<sup>52</sup> However, later in life, he recognizes,

I did not at that time trouble myself about Paley's premises; and taking these on trust I was charmed and convinced by the long line of argumentation. . . . I was not able to annul the influence of my former belief, then almost universal, that *each* species had been purposely created; and this led to my tacit assumption that *every detail* of structure, excepting rudiments, was of some special, though unrecognized, service.<sup>53</sup>

Three of Paley's premises of nature included: (1) intelligent design, (2) perfect adaptation, and (3) beneficence.<sup>54</sup> However, these categories were unnecessarily conflated together. Therefore, Darwin's notion of design *by necessity* had perfect

adaptation and beneficence built into it. In particular, according to Paley, each and every detail of every living organism fitted together flawlessly; as a result, each species was by definition *static*.<sup>55</sup> Darwin would eventually propose his *dynamic* theory of evolution, and in doing so, he came to reject Paley's immutability of species along with Paley's concept of intelligent design. However, observations in nature impacted Darwin deeply throughout his life, and it drove him back to the belief that the world reflected intelligent design. In other words, at a tacit intellectual level, Darwin assumed that design necessitated Paley's perfect adaptation, but, at an experiential level, he encountered what Christian theology has long recognized as a non-verbal divine revelation inscribed deeply into the creation. And as is always the case, conflation leads to conflict.

Immediately following the publication of the *Origin of Species*, Darwin entered a second two-year period of intense theological reflection. The central issue was intelligent design, and since he had uncritically accepted Paley's conflation of design with perfect adaptation, he experienced conflict, frustration, and fluctuation. Numerous letters dated between 1860 and 1861 reveal Darwin's confusion on design, and the following three passages, written to leading scientific colleagues of the day, depict his view and state of mind.

On 26 Nov 1860, Darwin admits to Asa Gray,

I grieve to say that I cannot honestly go as far as you do about Design. I am conscious that I am in an utterly hopeless muddle. I cannot think that the world, as we see it, is the result of chance; and yet I cannot look at *each* separate thing as the result of Design. . . . Again, I say I am, and shall ever remain, in a hopeless muddle.<sup>56</sup>

To the famed astronomer John F. Herschel, Darwin writes on 23 May 1861,

The point which you raise on intelligent design has perplexed me beyond measure. I am in a complete jumble on the point. One cannot look at this Universe with all living productions & man without believing that all has been intelligently designed; yet when I look to *each* individual organism I can see no evidence of this.<sup>57</sup>

And to show that Darwin's confusion about intelligent design extended beyond the early 1860s, he confesses to botanist J.D. Hooker on 12 Jul 1870,

[B]ut how difficult not to speculate! My theology is a simple muddle; I cannot look at the universe as the result of blind chance, yet I can see no evidence of *beneficent design*, or indeed of design of any kind, *in the details*. As for *each* variation that has ever occurred having been preordained for a special end, I can no more believe in it than that the spot on which each drop of rain falls has been specially ordained.<sup>58</sup>

These passages reveal both Darwin's wonderful candor with his correspondents and his confusion regarding design. He is trapped between (1) his experience of the creation which leads him to the belief the world is "intelligently designed" and not "the result of blind chance," and (2) his tacit Paleyan understanding of design featuring perfect adaptation as reflected in his use of the terminology "each separate

thing," "each individual organism," "beneficent design," "design of any kind, in the details," and "each variation."

But Darwin's confusion and frustration over intelligent design disappeared completely in his 1876 *Autobiography*. As noted previously, T.H. Huxley coined the term "agnosticism" in 1869, and Darwin embraces it in the section on "Religious Belief." He arrives at this position by offering arguments both *pro* and *contra* God, and in each case concludes with a rebuttal. Consequently, the stalemate leads him to an agnostic position. Notably, the issue of intelligent design is once more central to his views on religion. Employing what might be called an "emotional" or "psychological" design argument, Darwin observes,

At the present day the most usual argument for the existence of an intelligent God is drawn from the deep inward conviction and *feelings* which are experienced by most persons. . . Formerly I was led by *feelings* such as those referred to, (although I do not think that the religious sentiment was ever strongly developed in me) to the firm conviction of the existence of God, and of the immortality of the soul. In my Journal I wrote that whilst standing in the midst of the grandeur of a Brazilian forest, 'it is not possible to give an adequate idea of the higher feelings of wonder, astonishment, and devotion, which fill and elevate the mind.' I well remember my conviction that there is more in man than the mere breath of his body.<sup>59</sup>

However, Darwin is quick to rebut, "But now the grandest scenes would not cause any such convictions and feelings to rise in my mind. It may be truly said that I am like a man who has become colour-blind."<sup>60</sup> Indeed, the question must be asked, can one become "colour-blind" to design in nature? As we shall see, Darwin will offer a different answer in the last year of his life.

Darwin then offers a second design argument in the *Autobiography*, one which he finds more compelling and could be termed a "rational" design argument.

Another source of conviction in the existence of God, connected with *the reason* and not with *the feelings*, impresses me as having much more weight. This follows from the extreme difficulty or rather impossibility of conceiving this immense and wondrous universe, including man with his capacity of looking backwards and far into futurity, as a result of blind chance or necessity. When thus reflecting I *feel* compelled to look to a First Cause having an intelligent mind in some degree analogous to that of man; and I *deserve* to be called a Theist.<sup>61</sup>

It is important to recognize that here in 1876, Darwin employs the present tense for the verbs "feel" and "deserve." In other words, late in life Darwin had periods of theistic belief amidst his agnosticism, and the source of this belief was due to design in nature. Also worth pointing out is that immediately following this passage, Darwin reveals, "This conclusion was strong in my mind about the time, as far as I can remember, when I wrote the *Origin of Species*; and it is since that time that it has very gradually with many fluctuations become weaker."<sup>62</sup> To the surprise of most people today, and I suspect Dawkins as well, Darwin was a theist who embraced intelligent design when he wrote his most famed book!<sup>63</sup>

Yet consistent with the agnostic argument pattern of the *Autobiography*, Darwin rebuts his rational argument for design. He immediately adds,

But then arises the horrid doubt—can the mind of man, which has, as I fully believe, been developed from a mind as low as that possessed by the lowest animal, be trusted when it draws such grand conclusions?<sup>64</sup>

The problem with this rebuttal is quite obvious. What has Darwin just done to make his argument? He trusted his own mind, developed from the lowest animal! In other words, his argument is circular; more specifically, it suffers from self-referential incoherence.<sup>65</sup> This problem, which I term “Darwin’s epistemological dilemma on design,” results in Darwin not offering a sound rebuttal to his rational argument against design.<sup>66</sup> Therefore, the “impossibility of conceiving this immense and wondrous universe, including man with his capacity of looking backwards and far into futurity, as a result of blind chance or necessity” remains steadfast as a powerful argument for “a First Cause having an intelligent mind in some degree analogous to that of man.”<sup>67</sup>

Finally, in the last year of Darwin’s life, the Duke of Argyll engaged him directly on the topic of intelligent design by appealing to some of Darwin’s extraordinary research. Recalls the Duke,

In the course of that conversation I said to Dr. Darwin, with reference to some of his own remarkable works on the ‘Fertilization of Orchids’ and upon ‘The Earthworms,’ and various other observations he made of the wonderful contrivances for certain purposes in nature—I said it was impossible to look at these without seeing that they were the effect and the expression of mind. I shall never forget Mr. Darwin’s answer. He looked at me very hard and said, ‘Well, that often comes over me with overwhelming force; but at other times,’ and he shook his head vaguely, adding, ‘it seems to go away.’<sup>68</sup>

In the light of this passage, it is obvious that Darwin miswrote in the *Autobiography* when he claimed to be “color-blind” with regard to design in nature. This passage also adds clarity to his religious beliefs mentioned in the 1879 letter to Fordyce in which he wrote,

“I have never been an Atheist in the sense of denying the existence of a God. I think that generally (& more and more so as I grow older) *but not always*, that an Agnostic would be the more correct description of my state of mind.”<sup>69</sup>

Since Darwin was never an atheist, and since most of the time he was an agnostic, it follows that during his “not always” periods he was either a deist or theist. These periods were most likely the result of “effect and the expression of mind” in nature striking him “with overwhelming force.”

To conclude, Charles Darwin offers valuable insights concerning intelligent design. It is evident that throughout his life, beauty, complexity, and functionality in nature impacted him often and powerfully. This is consistent with the theological notion of natural revelation and the well-known biblical verse, “The heavens declare the glory of God, and the firmament proclaims the works of His hands” (Ps. 19:1). Unfortunately, popular culture today is led astray by a cacophony of views on intelligent design—from the intolerant atheism of Richard Dawkins, who sees design

as a delusion, to the equally intolerant anti-evolutionism of the Intelligent Design Movement that proclaims design in purportedly irreducibly complex molecular structures. Interestingly, Darwin sits between these two extremes. *Contra* Dawkins, he is “compelled to look to a First Cause having an intelligent mind” because of “the impossibility of conceiving this immense and wondrous universe . . . as a result of blind chance or necessity.”<sup>70</sup> *Contra* the ID Movement, he rejects Paley’s belief in the immutability of species and the perfect adaptation of “every detail of structure.”<sup>71</sup> Instead, Darwin opens our minds to a *via media* featuring a divinely ordained evolutionary process that reflects God-glorifying intelligent design.

<sup>1</sup> “Belief,” Darwin Correspondence Project. Online at:

<http://www.darwinproject.ac.uk/content/view/106/100>. Accessed 11 Jan 2011. Hereafter cited as DCP.

<sup>2</sup> Henry M. Morris, *The Troubled Waters of Evolution* (San Diego: Creation-Life Publishers, 1982), 75.

<sup>3</sup> Richard Dawkins, *The Blind Watchmaker* (London: Penguin Books, 1991 [1986]), 6.

<sup>4</sup> “Darwin and Religion,” DCP. <http://www.darwinproject.ac.uk/content/blogcategory/36/63/>. Accessed 11 Jan 2011.

<sup>5</sup> “Belief,” DCP.

<sup>6</sup> See Denis O. Lamoureux, *Evolutionary Creation: A Christian Approach to Evolution* (Eugene, OR: Wipf & Stock, 2009), xiii, 29-35. Hereafter cited as *EC*; Denis O. Lamoureux, “Evolutionary Creation: Moving Beyond the Evolution Versus Creation Debate” *Christian Higher Education*, 9 (2010), 28-48.

<sup>7</sup> Regrettably, in recent years the term “intelligent design” has been stripped of its traditional meaning and conflated with antievolutionism by so-called Intelligent Design Theorists.

<sup>8</sup> See part 2 to be published in October 2014.

<sup>9</sup> Charles Darwin, *The Autobiography of Charles Darwin, 1809-1882*. Nora Barlow, ed. (London: Collins, 1958), 86. My italics. Hereafter cited as *ACD*. This loss of faith appears to have occurred over a period of time, from the late 1830s to the late 1840s. In an interview with Edward B. Aveling in 1881, Darwin states, “I never gave up Christianity until I was forty years of age [i.e., in 1849].” Aveling, *The Religious Views of Charles Darwin* (London: Freethought Publishing, 1883), 5,7. This is consistent with Darwin’s assertion in the *Autobiography*, “Thus disbelief crept over me at a very slow rate, but was at last complete. The rate was so slow that I felt no distress, and I have never since doubted for a single second that my conclusion was correct.” *ACD*, 87. Regarding Darwin’s Christian faith, Michael Ruse notes that there is no evidence of “burning religious zeal” at any point in his life. *The Darwinian Revolution: Science Red in Tooth and Claw* (Chicago: University of Chicago Press, 1979), 182. Though Darwin studied theology at Cambridge, this decision reflects his father Robert Darwin’s “worldly wisdom more than piety” in that “it might at least save him [Charles] from dissolution and prodigality.” Frank Burch Brown, *The Evolution of Darwin’s Religious Views* (Macon, GA: Mercer University Press, 1986), 8-9.

<sup>10</sup> In a letter to his sister Caroline in 1837, it is evident that Darwin was reassessing the assumed concordist interpretation of the early chapters of Genesis. “You tell me you do not see what is new in Sir J. Herschel’s idea about the chronology of the Old Testament being wrong.—I have used the word chronology in a dubious manner, it is not to the days of Creation which he refers, but to the lapse of years since the first man made his wonderful appearance on this world— As far as I know everyone has yet thought that the six thousand odd years had been the right period but Sir J. thinks that a far greater number must have passed since the Chinese [space left in copy] the Caucasian languages separated from one stock.” Darwin to Caroline S. Darwin, 27 Feb 1837, DCP Letter 346.

<sup>11</sup> *ACD*, 85-86. Clearly, Darwin assumed that a concordist hermeneutic was essential to Genesis 1-11. As well, he does not seem to be aware that the Gospels went through an oral phase before being written down and later redacted. Concordism is not possible in the early chapters of Scripture since they feature recycled and reinterpreted ancient Near Eastern motifs (ancient scientific/historical paradigms-of-the-day); and sharp contradictions between some New Testament events are expected with

eyewitness accounts and their oral transmission. In fact, the latter argues for the authenticity of the accounts. Moreover, I wonder what Darwin would have said if he knew that 40% of American scientists believe in a personal God who answers prayer that is “more than the subjective psychological effect of prayer.” Edward J. Larson and Larry Witham, “Scientists Are Still Keeping the Faith” 386 *Nature* (3 Apr 1997), 436.

<sup>12</sup>ACD, 87.

<sup>13</sup>Darwin to F.A. McDermott, 24 Nov 1880, DCP Letter 12851. Similarly, in 1879 Darwin wrote to a German student, “For myself, I do not believe that there ever has been any Revelation. As for a future life, every man must judge for himself between conflicting vague possibilities.” Francis Darwin, ed., *The Life and Letters of Charles Darwin*, 3 vols. (London: John Murray, 1887), I:307. Hereafter cited as *LLD*.

<sup>14</sup>Darwin to J. Fordyce, 7 May 1879, DCP letter 12041. My italics. Also in *LLD*, I:304.

<sup>15</sup>Adrian Desmond, *Huxley: From Devil's Disciple to Evolution's High Priest* (Reading, MA: Helix Books, 1994), 374.

<sup>16</sup>ACD, 94. Darwin immediately follows this concluding sentence with what could be deemed as his definition of agnosticism: “A man who has no assured and ever present belief in the existence of a personal God or of a future existence with retribution and reward.” ACD, 94.

<sup>17</sup>See endnote 9.

<sup>18</sup>Darwin to H.N. Ridley, 28 Nov 1878, DCP Letter 11766. My italics. This letter is a response to Pusey's sermon criticizing Darwin's *Origin of Species*.

<sup>19</sup>ACD, 93. See Charles R. Darwin, *On the Origin of Species. A Facsimile of the First Edition* Introduced by Ernst Mayr. (Cambridge: Harvard University Press, [1859] 1964), 186, 188, 189, 413 (twice), 435, 488. Hereafter cited as *OS*.

<sup>20</sup>Adrian Desmond and James Moore assert that Annie's painful death “chimed the final death-knell for his [Darwin's] Christianity, even if it had been a long, drawn-out process of decay.” *Darwin* (New York: Warner Books, 1991), 387. The suffering endured by his father Robert (“for days he lay writhing on a sofa, ‘groaning & grumbling’ plagued by bursting boils”) before dying in November 1848 was undoubtedly a contributing factor as well. *Ibid*, 350.

<sup>21</sup>There is a challenge in understanding how Darwin employed the term “theist.” The traditional definition is someone who believes in a personal God, “transcendent from the world, who is omnipotent, omniscient, and perfectly good.” Michael Peterson, William Hasker, Bruce Reichenbach, and David Basigner, *Reason and Religious Belief* (New York: Oxford University Press, 1991), 9. Historians have offered a variety of categories to describe Darwin's religious belief. Michael Ruse calls him “a deist of a kind” when he wrote *Origin of Species. Darwinian Revolution*, 181. John Hedley Brooke refers to “a non-biblical deism” during this same period. “Darwin and Religion: Correcting the Caricatures” *Science and Education* 19 (2010), 393. James D. Loy and Kent M. Loy suggest that “Charles's Christianity would fade into a generalized theism.” *Emma Darwin: A Victorian Life* (Gainesville, FL: University Press of Florida, 2010), 86. And James R. Moore contends that “Darwin indeed gave up Christianity long before he wrote *Origin* but he remained a muddled theist to the end.” “Darwin of Down: The Evolutionist as Squarson-Naturalist,” in David Kohn, ed., *The Darwinian Heritage* (Princeton, NJ: Princeton University Press, 1985), 438. Moore also emphasizes the need to differentiate Darwin's rejection of Christianity from his acceptance of a general theism. He incisively notes, “[E]ven those [Darwin historians] who carefully distinguish Christianity from natural religion in Darwin's religious outlook have tended to conflate his growing doubts about the latter with his disbelief in the former.” James R. Moore, “Of Love and Death: Why Darwin ‘Gave Up Christianity’” in James R. Moore, ed., *History, Humanity and Evolution: Essays for John C. Greene* (Cambridge: University Press, 1989), 197. It is worth adding that Darwin was aware of the term “deist” and used it in an 1862 letter to Asa Gray. Commenting on Clémence Royer, the French translator of *Origin of Species*, he writes that she “is [an] ardent deist & hates Christianity, & declares that natural selection & the struggle for life will explain all morality, nature of man, politics Etc Etc!!!” Darwin to Asa Gray, 20 Jun 1862, DCP Letter 3595. I suspect that Darwin's distaste for controversy, especially anti-religious polemic like that expressed by Royer, might have kept him away from using the term “deist.”

Nevertheless, Darwin did employ the word “theist,” and as we shall see in these two papers, he often referred to the omnipotence and omniscience of God. And since he was aware of the word “deist,” I will suggest that he embraced a generalized or non-religious (meaning not associated with traditional religions, like Christianity) form of theism.

<sup>22</sup>Darwin to Fordyce, 7 May 1879, DCP Letter 12041. *LLD*, I:304. Agnostic and famed paleontologist Stephen Jay Gould holds a similar view. He claims, “Evolution [is] both true and entirely compatible with Christian belief—a position I hold sincerely.” “Non-overlapping Magisteria,” 106 *Natural History* (1997), 16. Of course, Richard Dawkins is not enamored with Gould. Writes Dawkins, “The belief that religion and science occupy separate magisteria is dishonest.” Dawkins, “Snake Oil & Holy Water: Illogical Thinking Is the Only Thing Joining Science & Religion Together” *Forbes ASAP* (4 Oct 1999), 237.

<sup>23</sup>James R. Moore, *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America 1870-1900* (Cambridge: University Press, 1979), 306. For the views of Asa Gray, see David N. Livingstone, *Darwin's Forgotten Defenders: The Encounter between Evangelical Theology and Evolutionary Thought* (Grand Rapids, MI: Eerdmans, 1987), 60-64.

<sup>24</sup>*ACD*, 82.

<sup>25</sup>*ACD*, 85.

<sup>26</sup>I am not philosophically opposed to this view of divine action, but history reveals that it has consistently failed. Purported gaps in nature are in reality gaps in scientific knowledge. Instead of widening the gaps with the advance of science indicative of direct divine action, the gaps always close with the discovery of new natural processes. See *EC*, 60-62.

<sup>27</sup>*ACD*, 101. On early 19<sup>th</sup> century catastrophism, see Davis A. Young, *The Biblical Flood: A Case Study of the Church's Response to Extrabiblical Evidence* (Carlisle: Paternoster Press and Grand Rapids: Eerdmans), 99-117. See also Henslow's caution to Darwin regarding Lyell's geology in *ACD*, 101.

<sup>28</sup>Progressive creation asserts that the earth is old and that God created different living organisms intermittently across the eons of time.

<sup>29</sup>Charles Darwin, *Diary of the Beagle in The Works of Charles Darwin*, Nora Barlow, ed. (London: William Pickering, 1986), I:348. Dated 18 Jan 1836.

<sup>30</sup>Charles Darwin, B Notebook (Feb 1837 to Jan 1838), 101. The Complete Work of Charles Darwin Online at: <http://www.darwin-online.org.uk>. Accessed 11 Jan 2011. Hereafter cited as CWCD. The clause “such are inevitable consequences” certainly aligns well with a teleological evolution envisioned by Simon Conway Morris. “[T]he constraints of evolution and the ubiquity of convergence make the emergence of something like ourselves a near-inevitability.” *Life's Solution: Inevitable Humans in a Lonely Universe* (Cambridge: University Press, 2003), 328. Frank Burch Brown notes examples throughout Darwin's career of a teleological or progressive element in his view of evolution. “Darwin's Religious Views,” 43-45.

<sup>31</sup>In a similar historical argument, Darwin notes that attacks against evolution “will be as powerless to retard by a day the belief in evolution as were the virulent attacks made by divines fifty years ago against Geology, & the still older ones of the Catholic Church against Galileo.” Darwin to H.N. Ridley, 28 November 1878, DCP Letter 11766.

<sup>32</sup>D Notebook (Jul 1838 to Oct 1838), 36-37. CWCD.

<sup>33</sup>*Ibid.*, 37.

<sup>34</sup>C Notebook (Feb 1838 to Jul 1938), 196-7. CWCD.

<sup>35</sup>M Notebook (Jul 1838 to Oct 1838), 136, WCD. My italics.

<sup>36</sup>Bruce A. Demarest defines general revelation as humanity's awareness “that there is a God and in broad outline what He is like,” and that this knowledge is “mediated through [1] nature, [2] conscience, and [3] the providential ordering of history.” *General Revelation: Historical Views and Contemporary Issues* (Grand Rapids, MI: Zondervan, 1982), 14. For these two papers, I will employ the term “natural revelation” and limit it to Demarest's first two mediating factors.



<sup>37</sup>William Whewell, *Astronomy and General Physics Considered with Reference to Natural Theology* (London, UK: William Pickering, 1833), 356.

<sup>38</sup>OS, 488. Interestingly, Galileo's view of nature is remarkably similar to Darwin. "For the Holy Scripture and nature derive equally from the Godhead, the former as the dictation of the Holy Spirit and the latter as the most obedient executrix of God's orders. . . . [N]ature is inexorable and immutable, [and] never violates the terms of the laws imposed on her." Galileo Galilei, "Letter to the Grand Duchess Christina," in M.A. Finocchiaro, ed. and trans. *The Galileo Affair: A Document History* (Berkeley, CA: University of California Press, 1989), 93.

<sup>39</sup>In his so-called "long version" of the *Origin of Species*, Darwin writes, "By nature, I mean the laws ordained by God to govern the Universe." Charles Darwin, *Darwin's Natural Selection, Being the Second of his Big Species Book Written from 1856 to 1858*, R.C Stauffer, ed. (London, UK: Cambridge University Press, 1975), 224.

<sup>40</sup>Darwin writes, "In the distant future I see open fields for far more important researches. Psychology will be based on a new foundation, that of the necessary acquirement of each mental power and capacity by gradation. Light will be thrown on the origin of man and his history." OS, 488. To Wallace he comments, "I think I shall avoid [the] whole subject [i.e., human evolution], as [it is] so surrounded with prejudices, though I fully admit that it is the highest & most interesting problem for the naturalist." Darwin to A.R. Wallace, 22 Dec 1857, DCP Letter 2192.

<sup>41</sup>Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, 2<sup>nd</sup> ed. (London, UK: John Murray, 1874 [1871]), 613. Hereafter cited as *DM*.

<sup>42</sup>I am grateful to an anonymous reviewer of the journal *Christian Scholars' Review* for pointing out that "It's a bit problematic to describe Erasmus Darwin's views as 'Lamarckian,' though technically they were in a scientific sense almost identical views. Historically, Lamarck almost certainly did not influence the elder Darwin, however, since his works post-date those of Erasmus Darwin." It is for this reason that I have added quotation marks to the word "Lamarckian" in the text.

<sup>43</sup>*DM*, 61.

<sup>44</sup>*Ibid.*

<sup>45</sup>*Ibid.*

<sup>46</sup>Darwin to H.N. Ridley, 28 November 1878, DCP Letter 11766.

<sup>47</sup>Commenting on *Origin of Species*, Darwin states, "I had no intention to write atheistically. . . . Certainly I agree with you [Gray] that my views are not at all necessarily atheistical." Darwin to Asa Gray, 22 May 1860, DCP Letter 2814.

<sup>48</sup>My debate, or more accurately my non-debate, with the father of the ID Movement, Phillip E. Johnson, is indicative of how little this debate deals with scientific issues. Phillip E. Johnson and Denis O. Lamoureux, *Darwinism Defeated? The Johnson-Lamoureux Debate on Biological Origins* (Vancouver, BC: Regent College Publishing, 1999).

<sup>49</sup>Interventionism in origins is clearly evident in the work of leading ID theorist Michael Behe, who coined the term "irreducible complexity." He argues, "An irreducibly complex system cannot be produced directly (that is, by continuously improving the initial function, which continues to work by the same mechanism) by slight, successive modifications of a precursor system, because any precursor to an irreducibly complex system that is missing a part is by definition nonfunctional. . . . [I]f a biological system cannot be produced gradually it would have to arise as an integrated unit, in one fell swoop, for natural selection to have anything to act on." Michael J. Behe, *Darwin's Black Box: The Biochemical Challenge to Evolution* (New York: Free Press, 1996), 39. My italics. See my "A Box or a Black Hole? A Response to Michael J. Behe." *Canadian Catholic Review* 17:3 (July 1999), 67-73.

<sup>50</sup>Dawkins, *Blind Watchmaker*, xiii, xvi, xv. My italics.

<sup>51</sup>Based on these passages, intelligent design in nature is a divine revelation that has the following features: (1) the creation powerfully impacts humans, (2) the revelation in nature is intelligible, (3) natural revelation is incessant, (4) similar to music, everyone "hears" the non-verbal revelation in nature, (5) the creation reveals some attributes of the Creator, (6) humans are free to reject natural revelation, but (7) they are accountable and "without excuse" if they do. *EC*, 65-69.

<sup>52</sup>*ACD*, 59.

<sup>53</sup> *ACD*, 59; *DM*, 61. My italics.

<sup>54</sup> For the sake of argument, I present only these three premises. Walter F. Cannon notes that Darwin had actually absorbed ten of these. "The Bases of Darwin's Achievement: A Reevaluation," *Victorian Studies* (December 1961), 128. Dov Ospovat underlines the importance of the concept of perfect adaptation in biology at that time. He observes "Naturalists in the mid-nineteenth century commonly believed that adaptation is perfect. In this they were guided by a number of considerations, not the least of which was their respect for the opinion of the greatest biologist of the first third of the century, Georges Cuvier. Cuvier held that every type of organism is perfect, in that its parts are functionally coordinated and the whole and all its parts are constructed in the best possible manner for the functions they are to perform and for the situation in which the organism is to live. The idea of perfect adaptation, in Great Britain especially, was a cornerstone not only of biology, but of natural theology as well. The perfect adaptation of structure to function and of the whole organism to its environment was evidence of purposeful design and hence of an Intelligent Creator." Dov Ospovat, "Perfect Adaptation and Teleological Explanation: Approaches to the Problem of the History of Life in the Mid-nineteenth Century" in Coleman and Limoges, eds. *Studies in the History of Biology* vol 2 (1978), 33. I am grateful to an anonymous reviewer at *Christian Scholars Review* for introducing me to this valuable paper.

<sup>55</sup> For the impact of perfect adaptation on Darwin's biology, see Dov Ospovat, *The Development of Darwin's Theory: Natural History, Natural Theology, and Natural Selection, 1838-1859* (Cambridge: University Press, 1981), 33-40; John Hedley Brooke, "The Relations between Darwin's Science and His Religion," in John Durant, ed. *Darwinism and Divinity* (Oxford: Basil Blackwell, 1985), 43-44, 57-58.

<sup>56</sup> Darwin to Gray, 26 Nov 1860, DCP Letter 2998. *LLD*, II:353. My italics.

<sup>57</sup> Darwin to J.F. Herschel, 23 May 1861, DCP Letter 3154. My italics. These thoughts are repeated to Julia Wedgwood in letter dated 11 July 1861. "The *mind refuses* to look at this universe, being what it is without having been designed; yet, where one would most expect design, viz. in the structure of a sentient being, the more I think on the subject, the less I see proof of design." *LLD*, I:313-14. My italics.

<sup>58</sup> Darwin to Hooker, 12 Jul 1870, in Francis Darwin, ed., *More Life and Letters of Charles Darwin*, 2 vols. (London: John Murray, 1888), I:321. My italics. In a letter three years later to a Dutch student, Darwin's confusion on design seems to give way to resignation. "But I may say that the impossibility of conceiving this grand and wondrous universe, with our conscious selves, arose through chance, seems to me the chief argument for the existence of God; but whether this is an argument of real value, I have never been able to decide." Darwin to N.D. Doedes, 2 April 1873, DCP Letter 8837. *LLD*, I:306.

<sup>59</sup> *ACD*, 90-91. My italics. The journal passage that is mentioned comes from Charles Darwin, *Journal of Researches* (London: John Murray, 1845), 26. It is dated 18 April 1832. In the final entry of the *Beagle Diary*, 25 Sept 1836, Darwin records similar thoughts of the impact of nature upon him. "Among the scenes which are deeply impressed on my mind, none exceed in sublimity the primeval forests, undefaced by the hand of man, whether those of Brazil, where the powers of life are predominant, or those of Tierra del Fuego, where death & decay prevail. Both are temples filled with the varied productions of the God of Nature: — No one can stand unmoved in these solitudes, without feeling that there is more in man than the mere breath of his body." Charles Darwin, *Beagle Diary*, 773.

<sup>60</sup> *ACD*, 91.

<sup>61</sup> *ACD*, 92-93. My italics. See my previous comments regarding Darwin's use of the term "theist" in endnote 21.

<sup>62</sup> *ACD*, 93.

<sup>63</sup> In an admitted act of bad behaviour, when I came to this passage in my presentation of this paper at the 150 year anniversary of Darwin's *Origin of Species* at the University of Toronto on 23 November 2009, I stepped away from the podium and said, "Well, there you have it ladies and gentlemen. Tomorrow night at the gala when we toast the man and his book, we will be toasting an intelligent design theorist." For some reason no one was amused by my comment. It seems that presenting the

Darwin of history instead of the skewed Darwin concocted by positivists offends academic sensibilities.

<sup>64</sup> *Ibid.* This argument appears in comments on William Graham's *Creed of Science* (1881). Writes Darwin, "Nevertheless you have expressed my inward conviction, though far more vividly and clearly than I could have done, that the Universe is not the result of chance. But then with me the horrid doubt always arises whether the convictions of man's mind, which has been developed from the mind of lower animals, are of any value or at all trustworthy. Would any one trust in the convictions of a monkey's mind, if there are any convictions in such a mind?" Darwin to William Graham, 3 July 1881, DCP letter 13230. Similarly, see Darwin to Grant James, 11 March 1878, DCP letter 11416.

<sup>65</sup> I am grateful to philosopher Gary Colwell for introducing me to this fallacy.

<sup>66</sup> Alvin Plantinga recognizes this problem in *Warrant and Proper Function* (New York, NY: Oxford University Press, 1993), 216-237. Robin Attfield contends that his criticism only applies to "deterministic versions of Darwinism." Recoiling from positing "a non-materialist concept of free-will," he proposes a secular non-deterministic model of evolution. "Darwin's Doubt, Non-deterministic Darwinism and the Cognitive Science of Religion" *Philosophy* 85 (2010), 471.

<sup>67</sup> *ACD*, 92-3.

<sup>68</sup> *LLD*, 1:316.

<sup>69</sup> Darwin to J. Fordyce, 7 May 1879, DCP letter 12041. *LLD*, 1:304. My italics.

<sup>70</sup> *ACD*, 92.

<sup>71</sup> *DM*, 61.

## Before the First Day

### Duncan Vere

Genesis ch.1 vs.1-2

In the beginning God created the heavens and the earth. Now the earth was formless and empty, darkness was over the surface of the deep, and the Spirit of God was hovering over the waters," repeated the words of Genesis 1: 1-2, adding to them " I looked at the heavens and their light was gone, I looked at the mountains and they were quaking, all the hills were swaying", adding later "the heavens above grow dark". This was a return to the state of the earth before the 'days' of Genesis 1 had begun

The words used are interesting. Earth in both Genesis and in Jeremiah is 'erets' which implies earth at large. Without form is 'tohu', a ruin, a vacancy. Void is 'bohu', meaning emptiness. Darkness is 'choshek,' which can also mean 'misery'. Deep waters are 'mayim'. 'Moved', of the Spirit of God is 'rechaph', 'to move' or 'to shake'.

It is notoriously hazardous to try to compare the Genesis account of creation with the scientific accounts of biological evolution; in the latter there are observations which point out the paths of life whereas in the Word of God there can be no contemporary evidence for its truth; the evidence lies in its post hoc fulfilment. Until recently (1957 to be exact), the correct view of the onset of macroscopic life on this planet was

thought to be that there was no evidence for life in rocks before the Cambrian period (500 MYa) and that the Precambrian rocks reveal no fossils save those of some microscopic blue-green algae. Few now seem aware that the Genesis account of the time before the 'first day' and the findings of science have recently drawn together. In 1957 some boys were using a rope to practice rock climbing in a quarry in Charnwood Forest 2. One of them found an odd leaf-like imprint on the stone. He called to his friend who looked at it and thought it was a fossil. They did not know that a girl had also seen that imprint and told her geography teacher who rebuked her for her ignorance and recommended her to read a textbook. She told no one about this, but the boy who had also seen it (and who later became a professor of geology) took a paper print of the stone and showed it to his father, a Unitarian minister. He showed it to a distinguished geologist at Leicester University who was persuaded to visit the quarry. What he saw there he recognised as the imprint of an unknown life form. It was of international importance.

Similar fossils have now been found in Australia, Newfoundland, White Russia and China.(2) There are a number of related forms, a fauna in fact, of creatures which lived on the bottom of a deep (50 metres) sea. Careful search has revealed no creatures like these in either older or younger rocks. They were in a narrow time band, always in volcanic ash dating from 600 to 550 MYa, as found by Uranium/Lead isotopic analysis. This belt was named Ediacaran, after the Australian site name. What was it? Minute single celled and chained cell algae had been found earlier, in still older rocks in America, the Gun Flint Shales. Their microscopic appearance was that of primitive, prokaryotic algae (that is cells without the full nuclear structure of eukaryotes which make up the bodies of higher plants and animals). These were cyanobacteria or blue-green algae and Glaucophyta which are still abundant on earth today. The atmosphere of the primitive early world lacked oxygen and was laden with carbon dioxide, methane and ammonia emitted from volcanoes. No animal life was then possible. But over the earliest ages of the earth (from 2.6 billion years ago), the carbon dioxide slowly declined and oxygen appeared in the atmosphere. This is reflected in the makeup of Precambrian rocks laid down at those times. The earth slowly cooled as a result, and eventually, about 650 MYa severe ice ages covered the whole earth. This era is called 'Snowball Earth'. Then, with great rapidity (covering several million years, but rapid by early earth standards) the earth rewarmed. It was then that the Ediacaran Age began. The remains of some parts of the snowball age can be seen near Aberfeldy, in Scotland, north of Mount Schiehallion., where cliffs rise above the north bank of the Tummel River. There the glaciation is well evidenced by rocks called tillites, the remains of glacial debris now turned into hard rocks. Nearby huge amounts of barytes, crystalline barium sulphate, are mined today in a deposit left by a 'white smoker', a vent that discharged in the floor of a primitive deep sea in the Precambrian age.

An obvious question arises, why did the Ediacaran age follow?4 The first clue to the answer comes from the fact that wherever in the world the Ediacaran fossils occur

they are in submarine strata of volcanic ash. Immense volcanoes had erupted under a world covering sea some 50 metres deep. The sliding sheets of ash on the sides of these craters had engulfed a deep sea fauna. Rocks from the neck of one of these volcanic cones are readily visible now as the 'bomb rocks' in Charnwood Forest. The next big question is this; if the algae which preceded the Ediacaran had been the cause of removing carbon dioxide from the precambrian atmosphere and had released oxygen by their photosynthesis over millions of years this would have needed light to provide the required energy. If the sky was darkened over all this time by a volcanic 'winter' there would have been no light reaching the earth's surface which would in any case have been covered by the ash laden deep sea. The probable answer is that during the earliest ages before the Ediacaran period much of the algal gas synthesis was done using not oxygen but sulphur as the oxidising agent <sup>5</sup>; the element next to oxygen in the periodic table of the elements is sulphur and some algae use it in this way even today in the mud of the seashore and in springs heated by volcanic action, as in Yellowstone Park. Indeed the 'smell of the seaside' has now been shown to be methyl disulphide in the air.

And so the planet was prepared, over billions of years, for an explosion of life in a darkened ocean where "darkness covered the deep" on an earth that was "without form and void". God's Spirit was "moving over the waters". No one knows whether the Ediacaran fossils were plants or animals, algae or none of these. In their geometry they resemble the 'sea pens' which inhabit the ocean floor today, but it has been shown clearly that they have no such relationship, only an apparent resemblance.<sup>6</sup> Life as we know it now requires light and land. These were to follow in the first few 'days' of Genesis 1.

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1. Jeremiah 4:23

2. Charnia. Wikipedia <http://en.wikipedia.org/wiki/Charnia>

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4. Carney, J, Noble, S., Geological setting, environment and age of the Charnwood biota. Seminar, Leicester Library and Philosophical Society. Section C (2007).

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### Book Reviews

*An Orthodox Understanding of the Bible with Physical Science (Updated)*, Geoffrey Ernest Stedman, Strategic Book Publishing/ Houston, 2012, 297p+ xi, ISBN 978-1-61897-449-5

I wish I could give a good review of this book. The author, a retired Professor of Physics in New Zealand, who is an Evangelical Christian, has two opponents in view. On the one hand, he wishes to answer those atheists who claim there is a conflict between modern science and Biblical Christian faith. On the other hand, he wishes to criticize those 'Creationists' whose views play into the atheists' hands.

The book's aims are laudable. It is also laced with numerous useful quotations and illustrations. However it gives the appearance of being self-published. There is nothing wrong with that. I have self-published a booklet myself. Before doing so, though, I asked a friend, a former editor of a popular Christian journal, to read through and criticize my manuscript. Unfortunately, nobody seems to have performed that service for Prof. Stedman, or if they did, they made a poor job of it.

The Preface has a quotation from 'the 16<sup>th</sup> century' Joseph Butler. While I was not aware of Joseph Butler, the quotation immediately struck me as being 18<sup>th</sup> century English, and a bit of research revealed that this was its actual date.

He gives his own testimony in chapter 2. In the course of this he makes reference to a 'magic 3D picture' that forms a frontispiece to the book. I can remember these being very popular three decades ago. They appear to be just a mass of dots, but if one focuses on an object in front of the picture (or is it behind?) and moves ones gaze to the picture without changing that focus, a 3D picture is revealed. As will be gathered, Stedman fails to explain how to view such pictures, which makes it a bit pointless.

Chapter 3 expounds Psalm 19, which perfectly illustrates Stedman's argument. Verses 1-6 speak of God's revelation in nature, in parallel with verses 7-11 speaking of God's revelation in Scripture, while verses 12-14 raise the problem of sin that only God can answer. However ... Table 3.1 is labelled 'Table 3.9' and a reference to nature not needing God's intervention needs to be clarified to rule out a Deist interpretation. There is a delightful story of a Bedouin telling an atheist: "How do I know that it was a man and not a camel that went past my tent last night? I know him by his tracks." Then pointing to the sun, he added "There is the track of God." (Figure 4) But Figure 4 is a picture of Earth-rise from the moon. How is that supposed to illustrate the regular course of the sun?

Even responsible publishers can let a few such slip-ups past their editing, but it goes on, and makes an account of the 'double-slit experiment' in Chapter 7 (Quantum Mechanics) seriously misleading. Figure 15 shows the pattern of waves passing through one slit; figure 16 shows the diffraction pattern of particles passing through two slits, though it is only labelled 'particle diffraction'. To make sense of this, there

needs to be a picture of waves passing through two slits, showing how they interfere. Stedman's text is confusing. He appears to say that figure 16 shows the pattern of electrons passing through a single slit.

I could go on and on pointing out such things. This could, potentially, be a very useful work of apologetics, but it needs the attention of a good literary editor to realise it.

Reviewed by Rev.Dr. Robert Allaway

**Gerald Rau** *Mapping the Origins Debate* Nottingham IVP 2013 236pp. pb. £12.99  
ISBN 978.1.84474.616.3

The debate over creation and evolution has continued for decades and shows little sign of ending, especially in the U.S.A., where this book originated. The question of origins has divided the scientific community as well as becoming almost a test of orthodoxy among religious believers (Christians, Jews and Moslems). There is no agreement as to what constitutes evolution and even those who claim to hold to the truth of the Bible, as the inspired revelation of God, cannot agree about what constitutes evolution or creation. No wonder there is confusion, especially among the lay public. What is needed is a guidebook to navigate us through the various models, looking at the evidence and how each group assesses it. This short study is a modest attempt at just that. The author, whose background is in applied genetics and the philosophy of science, makes no claims to encyclopaedic knowledge and aims the book at the college student rather than college professor. In the preface he writes, "It is my hope that this book will provide a good introduction to the topic for some, a clarification for others, and perhaps a challenge for those embroiled in the battle. I am not so naïve as to think this will resolve the issue, but I hope it will at least help the audience notice when participants use unfair tactics in the eternal debate." (13) The author packs a lot into his short study and deserves a lengthy review.

The first two chapters sets out the plan of action; to present a full range of possible models and show how religious and philosophical presuppositions, rather than evidence, often dictate preferences, Rau seeks to clarify what the terms used in the different models mean and how individual commitment to a specific worldview dictate the way reality is perceived. Scientific investigation involves presuppositions, evidence and logic and it is important to understand how participants in the debate understand the terminology used. He divides 'science' into the following categories:

- (1) Empirical evidence – anything observed by the senses, sometimes aided by telescopes, microscopes etc.
- (2) Experiment - examination of repeatable phenomena.
- (3) Observation – where it is impossible to study experimentally e.g. earthquakes, spread of disease etc.
- (4) Historical science – non-repeatable events from the past e.g. ice ages.

(5) Theoretical science – predictions usually made on the basis of mathematics.

He then proceeds to show how science works and how misunderstandings can arise from mistaking how terms are used. Science, he states, starts from belief that the world is real and that we can trust our senses. Each scientist works from a particular model, which determines what data is collected and how it is interpreted. Science is based on inferences arising from evidence, which is logically consistent

The second chapter considers the various Origin Models. A model is defined as an idealised and often simplified representation, showing how and why the theory works. He selects a number of models for understanding origins but points out that within these there are a variety of interpretations based on one's cultural upbringing and usually on popular writing, which does not always represent current thinking and is in need of constant revision. The models proposed are the following:

Naturalistic Evolution (NE) – Everything can be explained by natural processes and either the supernatural does not exist or else nothing can be known about it.

Theistic Evolution (TE) – A belief that the supernatural exists and that God plays a part in the origin of the universe and life. This further subdivided into –

(a) Non Teleological Evolution (NTE) – basically deist. God starts the process with no specific goal or end in mind and does not intervene thereafter.

(b) Planned Evolution (PE) – God started the universe with a definite plan in mind. God doesn't intervene thereafter, although he could, because of its original perfection. Changes occur because of changing circumstances.

(c) Directed Evolution (DE) – God created and continues to act within the universe.

Old Earth Creationism (OEC) – Agrees with DE but asserts that the Bible accurately reflects the order of creation although the days of Genesis are considered to be long periods of time.

Young Earth Creationism (YEC) – Assumes the Bible is inerrant in all matters and therefore the earth is about 6000 years old. Adam and Eve are real people created **de novo**. Death only came after a universal flood, which accounts for all the fossils.

The major part of the study is taken up with a consideration of three types of origin - of the universe, of life and of humans. In each case Rau presents a selection of relevant evidence and demonstrates how each model deals with it and what difficulties each position presents. He points out that the majority of scientists now accept the Big Bang model and presents the evidence for fine-tuning and the desperate lengths to which advocates of NE go to refute it and equally how YEC propose a 'white hole' where time goes slower to demonstrate that the universe is only a few thousand years old. As far as the origin of life is concerned he believes the jury is still out and that all proposed scenarios present difficulties.

The author surveys the abundant evidence for evolution and the disagreements over interpreting punctuated equilibrium, transitional fossils, mutation rates and the



relevance of population genetics and evolutionary development biology (evo-devo). He also points out how the concept 'evolution' has been defined in many different ways and concludes that each group sees what they are looking for and interprets it accordingly. For Christians the most contentious area is the origin of human beings. Rau carefully summarises and assesses the evidence from palaeontology, tool use, genetics and evolutionary psychology and sees the sticking point as the existence or non-existence of the soul/mind for distinguishing humans from non-human primates. In conclusion he likens the question of origins to a big picture in which no one model has all the pieces and indeed that new evidence seldom gets into popular textbooks. He claims that the way forward is for each group to concentrate on their opponent's **best not worst** arguments and not to downplay other evidence while presenting their own as true.

Gerald Rau deliberately keeps his own viewpoint from us and concludes by pointing out that most people are not dissatisfied with their current conception. For those who are dissatisfied he says "I hope I have helped you to understand the logic, plausibility and potential of other models, and provided enough references to allow you to take the next step, to begin to see the world from a wider, and perhaps eventually different, perspective." (192) Because the subject matter contains many technical terms the author has provided an extensive glossary. There are also two appendices, one charting six different models of origins and the other comparing various interpretations of Genesis chapter one. There is also a useful bibliography. This is an excellent study and deserves to be read by all who are interested in how the universe and ourselves came into being and what significance it all has.

Reviewed by Reg .Luhman

**Tim Heaton**, *The Naturalist and the Christ*. Circle Books. 2011 122pp. £ 7.99. ISBN 978.1.84694.762.9. DVD "Creation" 2009 Ocean Pictures/HanWay Films/BBC Films.£ 5.

The intention of this book and the DVD is to develop a Lent Course for churches and their congregations, who perhaps struggle with the implications of their faith and the theory of evolution. At the outset, this reviewer could say that having hosted a group on similar lines, only scientists attended ! Are our congregations not interested, or perhaps afraid of what might arise in discussion and disturb them? Or perhaps the failure was in the leader!

However, I would most enthusiastically recommend this combination of book and DVD,. The outcome could be very helpful. Tim Heaton is an Anglican priest in Salisbury Diocese, and although his CV tells of Army and City experience, there is no record of scientific training *per se*. That said, his scientific knowledge is exceptional, and spoken of highly by the clergy readers of this book.

There are four parts to the written course: How to lead it, a brief biography of Darwin, the course itself, and a theory of the suffering God. The film, which inspired the course, initially is a very moving account of that part of the life of Darwin where he struggled with the issue of publishing his book, his loss of faith and how that damaged his relationship with his wife, and the heart breaking loss of Annie, their daughter. This reviewer found this film intensely moving and true to life, well acted, standing on its own as a great story. In fact, I would recommend that before a house group meets for discussion, they should see the film in its entirety. It lasts just 104 minutes, i.e. one evening's meeting. There are extracts suggested for each meeting, which are only about 10 minutes each, that is to only 50% of the whole. Of course the clips are suggested to guide discussion and this they do. The author suggests that this course is used in Lent, which divides it into 5 sessions. He recommends that participants keep their focus on the Lent observances of the Church, from Ash Wednesday onwards.

The first part is a useful "how to" for leaders, especially if new to the practice. The second chapter is a biography of Darwin from his birth onwards, including a very useful summary of his theory. This reviewer lives close to Kent and has found visits to Darwin's home, Downe House have always been inspirational.

The course itself focusses on the Lent readings, the first being "Led by the Spirit". This outlines the various epochs of evolutionary history and brings in the creationist viewpoint for discussion. It should be mentioned that each session includes relevant writings from other authors. A copy of the book is obviously necessary for each member participating. The second session is entitled "Man does not live by bread alone", which covers the story of the Bible, and how other faiths see it. Then follows "Worship the Lord, and Him alone". This deals with the role of science and religion in the Victorian period, especially where it borders on education at that time. The fourth session is another temptation, "Do not put the Lord your God to the test" and considers evil and suffering in the world, and in particular the suffering God in the theodicies of Aquinas, Augustine, Malthus, etc. The final session "The devil returns" focusses on Judas, the Fall, and the reason for Jesus' death. He notes that different forms of the faith have differing views on these issues.

To do justice to ways in which these questions are presented, and its helpfulness for our Christian living, one would have to use this course, as intended, with a group of Christians. I would certainly like to do this. What the course cannot give us is how the author found it helpful in his experience.

The last part of the book is the author's own view on the suffering God. He is inspired by the writings of Studdert Kennedy, as I have been. Kennedy, after being a wonderful chaplain in the First World War (Woodbine Willie) he became a great priest in tough areas, and a pacifist. His book "The Hardest Part" appealed to Heaton. Other writers whom he mentions are Luther, Moltmann (a German POW) and Bonhoeffer. There is much here to stimulate our faith.

There is a brief but useful bibliography. I suggest that my readers read these books, view the DVD and use this course in our churches. It is my prayer that much help may come from probing these difficult questions.

Reviewed by Dr. A.B.Robins.

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| Journal of the Transactions of The Victoria Institute | 1-89                     | 1957 |
| Faith & Thought                                       | 90-114                   | 1988 |
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The *Faith and Thought Bulletin* first appeared in 1985 under the title *Faith and Thought Newsletter*. That new title reflected a wider coverage, since it contained some short articles, notes and book reviews, in addition to the news items, which previously would not have fallen within the purview of the journal. From the April 2005 issue it will be known as *Faith & Thought*.

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