illuminates an important and heretofore ignored aspect of British religious history, a similar work has the potential to make an important contribution to African American history. Such efforts are essential if Bahá'í history is to become "mainstreamed" as an important subfield of history.

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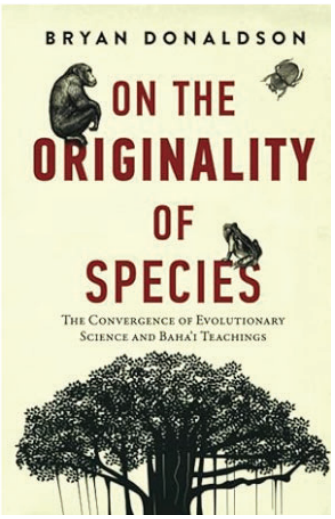

On the Originality of Species: The Convergence of Evolutionary Science and Baha'i Teachings by Bryan Donaldson. x + 291 pages, including appendices, glossary, and endnotes (no index). Akka Publishing House, 2023.[1]

DOUGLAS PERRY

In *On the Originality of Species: The Convergence of Evolutionary Science and Baha'i*[2] *Teachings*, Bryan Donaldson proposes a reinterpretation of evolutionary findings to arrive at a challenging conclusion: humans evolved separately from animals via a form of "parallel" evolution. I will say at the outset that, after carefully reading

1 This book is also available in a Kindle edition with slight variations in the endnotes.

2 This book does not follow the Bahá'í system of transliteration. For details on this system, see Moojan Momen, "The Bahá'í System of Transliteration."

and re-reading Donaldson's book, and investigating the scientific literature he cites (I am a cell biologist), I do not arrive at the same conclusion as he does. However, his book has merit, and I hope to do it justice.

Taken conjunctively, "science and religion" is a specialty of philosophy that examines the intersection of science and religion in all its aspects. Scholars in this field—generally theologians, scientists, historians, and philosophers—seek to refute or reconcile metaphysical beliefs held by scientists or religionists, deny or accept scientistic or religious propositions, and build either walls or bridges between the two domains. It is fertile ground for debate, and often for contention.

Given that the harmony of science and religion is one of the main principles of the Bahá'í Faith, it is unsurprising that many Bahá'ís are actively engaged in this discourse. Supporting and fostering the harmony of science and religion is important, and not merely in order to establish good will and understanding; it is essential in order to ultimately create a peaceful global civilization. Science and religion *need* each other (Mehanian and Friberg).

The central Expounder of the Teachings of Bahá'u'lláh, 'Abdu'l-Bahá, spoke at length about the creative will of God, the nature of the universe, and the station of humankind. These authoritative statements inform Bahá'í perspectives on science (Hatcher). For the holders of any metaphysical belief structure (including atheistic belief structures such as scientism), there is always a dynamic tension between presumption and perception—between what we hold to be true based on our metaphysical model, and what we perceive as we interact with the world. For Bahá'ís, this tension can be experienced with respect to some of the statements of 'Abdu'l-Bahá that have occasionally challenged assumptions related to science from His day up to the present. These statements need not generate crises of faith; they are simply instances of a reasonable tension between the sacred text and our understanding of it.

Although the dialectic of science and religion covers all manner of subjects, it is reasonable to view the topic of human evolution as its main nexus. There is probably not a single book or course on science and religion that does not include this topic. The statements of 'Abdu'l-Bahá on evolution, contained in works such as *Some Answered Questions*, *Paris Talks*, and *The Promulgation of Universal Peace*, have served as a source of reflection for generations of Bahá'í scholars (Brown and von Kitzing). There is no space in this review to recapitulate these statements; Donaldson does an excellent job of this in his book (11–22). However, I will turn to one statement that seems particularly problematic considering current evolutionary theory, and which is the focus of the book under review:

> The lost link of Darwinian theory is itself a proof that *man*[3] *is not*

3 In this and other passages by

> *an animal*. How is it possible to have all the links present and that important link absent? Its absence is an indication that *man has never been an animal*. ('Abdu'l-Bahá, *Promulgation* 359, emphasis added)

Now, how shall we take this statement? On the face of it, a biologist, seeing it as clearly contrary to our knowledge of humanity's biological descent, might feel compelled to reject it out of hand. To those who, like Bahá'ís, believe that science and religion are and must be in harmony, there are several possible responses to the tension that can be elicited by a statement such as this one. Often, the apparent conflict or puzzle is resolved as we gain deeper experience, knowledge, and wisdom, or when different facts come to light. If not, we can accept ambiguity, trusting that in an absolute sense science and religion are ultimately in harmony, even if we cannot discern it in our immediate circumstance. And then there is another alternative: to try to remove the perceived dichotomy by purposefully selecting and/or willfully re-interpreting scientific findings in order to make science "conform" to our own personal understanding of what it should imply or support. This is the path, it seems to me, taken in the book under review.

Donaldson opens his book with some general introductions: brief sections on science and religion, evolution, Darwin, and 'Abdu'l-Bahá's approach to evolution. It is a lot of ground to cover, but he keeps it brief. While he also includes a succinct description of the Bahá'í Faith, Donaldson states in the preface that his book is intended for those who are already familiar with the Faith. Indeed, I would say *very familiar*, because further on he presents quotes and correspondence that will probably only be fully appreciated in a larger Bahá'í context that is beyond the scope of his book to explain. While the author is justified in focusing on a relatively narrow target audience, for reasons explained below, this approach probably weakens the impact of this book with a wider, non-Bahá'í audience already disinclined to accept his challenging thesis.

Donaldson then presents relevant Bahá'í texts bearing on science and evolution, and discusses the authentication of textual sources, variations in translation, and prior scholarship and interpretations. This is one of the real strengths of this book. Included are most if not all the pertinent statements of 'Abdu'l-Bahá, as well as those of Shoghi Effendi and the Universal House of Justice that speak to 'Abdu'l-Bahá's statements. Where translations have varied over the years, he provides a comparative table of juxtaposed quotations. He also reviews the prior contributions of Bahá'í writers to the ongoing conversation. There is much valuable information here, carefully curated and clearly presented, that will

'Abdu'l-Bahá, "man" is the translation of *insán* or *bashar*, both of which have the general meaning of "human," "humans," "human race," or "humankind" (Thomas).

be useful for future scholarly work on the subject, and Donaldson is to be praised for this.

Before going into the science-related chapters, I will address an important point for any Bahá'í-related book, including independently published books such as Donaldson's. Individual Bahá'ís are, of course, free to express their own understanding on subjects, and free to publicly share their understanding, but should do so in a way that allows readers to recognize that the author's opinions are their own and not part of what I'll call the Bahá'í canon: the sacred scriptures of Bahá'u'lláh and the Báb, the scriptural interpretations of 'Abdu'l-Bahá and Shoghi Effendi, and the explicative writings of the Universal House of Justice. That is, the opinions of Bahá'í authors should not be mistaken as formally authorized expositions of Bahá'í beliefs. This is all the more vital when dealing with positions on controversial subjects that invite judgment, warranted or not, from the wider community.

To his credit, Donaldson is very open about the controversy of his position. When preparing his book, he directly contacted the Universal House of Justice, asking for its guidance about publishing his manuscript. Donaldson provides the House of Justice's reply, a letter written to him in 2019, in Appendix I In that letter, the House of Justice writes:

> Provided that individuals do not, in their written works, misrepresent the Bahá'í teachings, they have a right to express their opinions even if those opinions prove to be mistaken. Thus the friends are free to express their own personal views about the teachings in relation to a particular scientific theory or body of thought, but what they cannot assert is that these constitute the Bahá'í view on the matter.

In this same letter, the House of Justice makes clear that the author must not ascribe to 'Abdu'l-Bahá the author's own understanding of the matter and cautions that both the author and publisher must be prepared to be scrutinized by science-literate reviewers and to be judged by them according to the scientific accuracy of the book.
With all this in mind, Donaldson states the following in his preface:

> I present the results [of his study of this subject] without any authority in the fields of science or religion. Of course, any interpretation of the Bahá'í Writings reflects my personal understanding and not the Bahá'í position. (page vii)

Fair enough—but while I commend Donaldson for his transparency in this regard, the statement may easily be overlooked by readers, or even forgotten as they get caught up in the narrative. Additionally, I do wish that the book's subtitle were more circumspect: *The Convergence of Evolutionary Science and Baha'i Teachings* gives the impression (whether intentionally or not) that this book presents an

authoritative finding that is in some way connected with the Bahá'í Faith.

What view, then, does the book advance? Donaldson's proposition is that humankind literally (i.e., biologically) never had common descent from animals because humankind emerged through a parallel evolutionary process that was separate and independent from the evolution of animals. Humans thus originated as a separate species from the beginning, although Donaldson does not specify exactly when this beginning occurred. The book's main content is devoted to developing and defending this thesis.

It may come as a surprise to many readers that there actually *is* a variant of evolution called "parallel evolution." In fact, there has been substantial research on parallel evolution in recent years, with 3,849 scientific articles published on the topic in the past five years alone, according to PubMed (PubMed). Donaldson refers to this development, giving the impression that it represents a shift in evolutionary thinking towards his own thesis.

However, he seems to be unaware that what he calls "human parallel evolution" is substantially different from what the scientific community is investigating under the name "parallel evolution."

Simply put, parallel evolution is the evolution of closely related but separate species along similar pathways (Futuyma and Kirkpatrick 52). Experimental researchers in this specialty examine genetic change and adaptation generally within populations or closely related species, commonly at the level of microevolution (minor changes over limited generations) (Kawecki et al.). Donaldson, on the other hand, has taken this concept to an extreme not intended in these studies, using their findings to support his own speculation at the level of macroevolution (major life form changes, such as the emergence of entirely new species and genera over millions of years).

To understand why this amounts to confounding two very different things, we should define two other variants of evolution: divergent and convergent evolution (Bolnick et al.). *Divergent evolution* is evolution as most of us would understand it: the bifurcations of most recent common ancestors into new taxa[4] (the phenomenon of speciation), which give rise to phylogenetic (evolutionary) trees. *Convergent evolution* is the independent development of functionally similar features in disparate taxa, such as the separate evolution of similarly hydrodynamic body plans in reptilian ichthyosaurs and mammalian dolphins. Donaldson relies heavily on the concept of convergent evolution to support his speculation on parallel evolution. In fact, Donaldson mentions convergent evolution much more frequently than parallel evolution—by my count, 211 versus 50 instances, respectively. He often appears to be using these terms interchangeably—and to be fair, so do many researchers in the field. Ostensibly, parallel evolution

4 Biological classifications such as order, family, genus, and species.

refers to the independent development of similar traits in related species that have common ancestry, and convergent evolution refers to the independent development of similar traits in different species that are *not* closely related (i.e., having only distant ancestry) but experience similar natural selective pressures (Alejandrino et al.). However, in the literature this distinction is often blurred.[5] This blurring makes it tempting to call upon one process in place of another, as Donaldson often does, trying to prove that because different evolutionary lines can converge in some features (as in ichthyosaurs and dolphins), humans could converge with hominoid primates in numerous traits—so numerous that it would make humans *appear* to actually belong to the order Primates without having evolved within that order from a common ancestor. This is a huge leap of the imagination.

Donaldson's thesis is one that I cannot accept, on both scientific and philosophical grounds. I will start with the scientific aspect. Quite simply, the evidence for humans and apes sharing a most recent common ancestor is overwhelming (Almécija et al.; White et al.; Wildman et al.). This is not speculation; it is based on evidence obtained from phylogenetic (DNA sequencing, etc.) and phenetic (biological traits, etc.) studies (Lockwood et al.; Horai et al.), conducted by numerous researchers (Aarssen 15–23) using multiple, disparate methods pertaining to paleobiology (Grabowski et al.), molecular biology (Goodman et al.), computational modeling (Coleman), and statistical analysis (Baum et al.).

In scientific discourse in general, and in new theory formulation in particular, current scientific theory must be taken into consideration. This is true for Bahá'ís, be they scientists or not, who view current science from a Bahá'í perspective. Farzam Arbab addressed this point in his 2016 Balyuzi Memorial Lecture; his comments bear quoting at some length:

> We may say . . . that today's science is still in its infancy. We may be confident that it will advance a great deal, that new discoveries will revolutionize many fields of scientific inquiry, and that existing insights will be refined again and again. We can also readily accept that minds illumined by the light of Bahá'u'lláh's teachings—working within systems of research uncorrupted by competitiveness and desire for personal prestige and in the context of a culture that venerates knowledge rather than treating it like a commodity—will open new horizons toward which science can move, strengthening its contribution to

5 For examples of differing understandings of the distinction between divergent and convergent evolution and the issues raised by their imprecise definitions see, for example Jeff Arendt and David Reznick, "Convergence and Parallelism Reconsidered: What Have We Learned about the Genetics of Adaptation?" and Robert W. Scotland, "What Is Parallelism?"

> the advancement of spiritual and material civilization. But it is my conviction that this thing we call science will not be thrown away and replaced by something else called "Bahá'í science." Grand theories like Newtonian mechanics, quantum mechanics, relativity, and evolution are here to stay. They are valid within the parameters of the physical phenomena that they were constructed to explain. And it is this science that will advance and lead to extraordinary new discoveries and elegant theories to explain them.

In the case of human evolution, the theory of primate common ancestry has been repeatedly scientifically substantiated. It is not enough, to refute this theory, to merely say there is a "better idea," yet this is precisely what Donaldson does. In fact, he does not deal rigorously with the scientific evidence for common ancestry. He mostly sidesteps the subject, and instead conjectures using other, handpicked research that actually does *not* refute common ancestry. Indeed, the works cited generally are not directly concerned with common ancestry; they mostly deal with convergent evolution, which actually *presumes* common ancestry somewhere along the evolutionary line.

This approach leads to the problem of speculation, of taking the limited conclusions of scientific articles and bundling them into a preconceived narrative far afield from the contexts of those articles. Just how great is Donaldson's speculative leap? It is ultimately so ungrounded in actually relevant evidence that the model he constructs could just as easily be applied to any other life form—dogs, for example. The only thing that keeps his proposal human-related is 'Abdu'l-Bahá's original comments, which refers to humans. Put simply, there is no scientific basis for the thesis Donaldson proposes in the research that he cites. I turn now to a philosophical objection to the book's thesis. The are several points to be taken from the statements of 'Abdu'l-Bahá: 1) God created humankind; 2) humans are distinct from the animals by reason of human spiritual capability; 3) in potentiality, humans have always been distinct from the animals since the former's inception; 4) the human potential existed even in earlier, developmental life forms, and in general, in the laws of nature.

By inference from these statements, 1) God created humankind in the same manner that He created all of nature and life; 2) this creation was in divine consciousness even when humankind had not yet been physically realized; that is, the essence of humankind existed before its physical creation; 3) at some point in the evolution of Earth as a life-supporting system and of life itself, humankind arose as a distinct life form with properties of consciousness and spirit.

This last inference is at the heart of the mystery. At some point in an unfolding, evolving creation, the human essence was instantiated in nature

when the potential human was actualized into the biological human imbued with spirit. But what or where is this point? Consider this statement by ‘Abdu’l-Bahá:

> [A]t the beginning of his formation in the matrix of the world, man was like an embryo. . . . From the beginning of his formation, the mind and the spirit existed, but they were hidden and appeared only later. (*Some Answered Question* 4:3)

When was “the beginning of his formation”? Was it during a gene transfer event in a primordial, cross-evolutionary matrix (a possibility Donaldson suggests), or did it occur even earlier as an isolated abiogenic occurrence? Or was it at an evolutionary node—a common ancestor of humans and primates, perhaps—at which a novel genome acquired the potential to develop language or recursive reasoning eons hence? For that matter, this instantiation may not have been a discrete point in time at all, but a continuous unfoldment. In any case, the fundamental mystery of instantiation of the human essence remains unexplained.

Thus, Donaldson’s proposition fails in its intended purpose, which is to explain ‘Abdu’l-Bahá’s dictum that man has always been man. This statement cannot be explained by human parallel evolution because the problem of instantiation—when and how humans became humans—is not resolved by his proposal, which merely pushes the problem back to an earlier, unknown, and entirely speculative time in evolutionary history.

There is a subtler philosophical problem with Donaldson’s reasoning. He is, of course, aware that the nature of humankind is twofold, both physical and spiritual. Yet oddly, that dual nature is not addressed in his proposal, which, in fact, focuses exclusively on the physical aspect of humanity, leaving the spiritual aspect as an unspoken given. However, this physical nature is shared directly or indirectly with all life forms, including animals; but the spiritual nature is not. I am sure that Donaldson would agree that this is really the main point of ‘Abdu’l-Bahá’s statements. And yet, were Donaldson’s thesis to be true in all its aspects, it would not—could not—support this fundamental point made by ‘Abdu’l-Bahá, because his conjecture does not include instantiation of the human spirit, which constitutes the real reason that humans are not animals:

> *The human spirit, which distinguishes man from the animal, is the rational soul*, and these two terms—the human spirit and the rational soul—designate one and the same thing. (*Some Answered Questions* 55:5, emphasis added)

> *The reality of man is his thought, not his material body*. The thought force and the animal force are partners. *Although man is part of the animal creation, he possesses a power of thought superior to all*

> *other created beings*. (*Paris Talks* 2:1, emphasis added)

Returning to the statement of 'Abdu'l-Bahá quoted at the beginning of this review, that "man has never been an animal," this statement does not refute the findings of evolutionary biology when viewed in the context of what, from a Bahá'í perspective, it means to be "human." In the two passages above, 'Abdu'l-Bahá is very clear that the distinguishing characteristic of humans is the rational soul. That this distinction is not apparent in current evolutionary biology is due to the exclusively materialistic orientation of its practitioners. 'Abdu'l-Bahá assures us that this will change as science continues to mature. In this statement, 'Abdu'l-Bahá refers to "philosophers," but it applies to scientists as well:

> We now come to the question of the transformation of species and the evolutionary development of organs, that is, whether man has come from the animal kingdom.
>
> This idea has entrenched itself in the minds of certain European philosophers, and it is very difficult now to make its falsity understood; but in the future it will become clear and evident, and the European philosophers will themselves recognize it. (*Some Answered Questions* 46:1–2)

Here, the "falsity" that 'Abdu'l-Bahá refers to is the materialist idea that because humans physically evolved, they are *only* animals. This false conclusion is based on the denial of the spiritual component of humans. This component, the rational soul, is what distinguishes humans from animals—not the physical evolutionary pathway.

The motivation behind seeking a separate, parallel evolutionary history for the human seems to be to distinguish our species, and sanctify it from association with the animal. Yet no matter how far back we push the point of instantiation, we cannot avoid a physicality that is ultimately in common with animals, and for that matter, with plants and the earliest forms of life. Whether at the level of recent common ancestry, or simply shared material substance, we are physically of this creation—unless we are willing to posit that the atoms and molecules that make us up are themselves a separate category of atoms and molecules, that resemble but do not interchange with the base stuff of other matter. This is patently absurd, and no one argues it, but it would seem to be the logical endpoint of an intentional search for humanity's physical distinctiveness and separateness from nature. It follows, then, that it is only in the spiritual respect that the human's fundamental distinction from the animal can be found.

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