

Biology well described, but evolution hardly a fact

A review of
The Fact of Evolution
by Cameron M. Smith
Prometheus Books, New
York, 2011

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The author identifies himself as a onetime graduate student at Harvard University's Koobi Fora Field School near Lake Turkana, Kenya, searching on hands and knees for hominin fossils. It was then that he became fascinated with evolution. He later shifted his studies to that of the archaeology of the US Pacific coast. He has taught university courses in human evolution and prehistory, and says that he is always on the lookout for what he calls student misconceptions about evolution.

This book is really two books: one defending the factuality of evolution and the other a book on biology. It quickly becomes obvious that it fails miserably in the former sense, but is quite successful in the second sense. A better title for this book is: *Elements of Biology and Its Supposed Implications for Evolution*.

Biology in action

This book is packed with information, generally lucidly described. Much of the information is common in books of this genre. There is a good overview of the history of biology, including Darwin's belief in pangenesis. An informative description is provided of protein synthesis as directed by the DNA molecule, heredity and/or environment in the expression of biological traits, subtle variations in living populations, the nature of

genetic drift, genetic pleiotropy, and much more.

Distinctive living things

Other information in this work is perhaps of a lesser-known nature. Did you know, for instance, that 99% of the acorns on the forest floor are incapable of germinating? (p. 104).

Caterpillars of the Silvery Blue butterflies give off secretions that feed ants. The ants, in turn, form a protective cordon around the caterpillars, fending off flies and wasps that would otherwise lay eggs that would hatch into larvae, parasitizing and eventually killing them (p. 110).

Did you know that, in sexual selection, it is not always the males that compete with each other for the females? Among creatures such as the social meerkats and the South African mongooses, it is the females who compete for the males (p. 121).

Hummingbirds live in subtle, different microhabitats. Microhabitats vary by such things as species of plants, distance off the ground, proximity to rocks, direction of the compass, etc. (pp. 188–189).

On another subject, the reader may be astonished to learn that pollinator choice is not based on rigid hard-wired instinctive behaviour. Experiments that change the colours of flowers demonstrate that, when pale-coloured flowers are the ones that provide more nectar than red flowers, the hummingbird pollinators switch their preference to feeding on pale flowers (figure 1). What if flower colors are eliminated entirely as a variable? Hummingbirds in that case shift preference to the flower with the wider *corolla* ('feeding tube'), because the wider *corolla* makes for easier feeding.



Definition of evolution

Smith's mantra about the 'fact' of evolution revolves around his self-serving definition of the same. He writes,

"Evolution is not a thing; it is the *consequence* of these three observable facts of *replication*, *variation*, and *selection*. And because evolution is the logical consequence of these three facts, it is no longer debatable; evolution doesn't just happen, it *has* to happen [*italics in original*]" (p. 22).

Notice the typical evolutionist-apologist logic that equates the *observed* limited variation and selection in nature with the *non-observed* inferred origin of life from non-life, and the *non-observed* inferred derivation of all living things from a common ancestor or set of common ancestors.

Continuing this hackneyed reasoning, Smith tacitly assumes that such things as *limited* changes in populations of living things, and the origin of new species, necessarily implies *unlimited* change in living things. He also fails to show how observed *downhill* changes will somehow add up to *uphill* changes if we wait for millions of years.

Smith's reasoning boils down to: "Living things exist, therefore they have evolved. Fish swim, so that is how they evolved. Birds fly, so that is how they had evolved, etc." Selfishness exists in nature because of evolution, and altruism exists in nature because of evolution.

Evolution lacks purpose, with praise for evolution-accepting religion

Smith not only rejects anything teleological about evolutionary processes as a whole, as is the case in many forms of so-called theistic evolution, but also resists the kind of inadvertent language that seems to imply a purpose in even small, specific outcomes of evolution. These include innocuous statements such as "Evolution 'sculpts' species to perfectly fit their environment." "Evolution 'produced' the human race." "Evolution 'only cares' about the survival of the fittest." "Human ancestors lost their large [canine] teeth the better to chew from side to side." All of the preceding statements imply intent in the evolution process involved, for which Smith condemns them (pp. 21, 36).

Smith also frowns upon terms such as adaptation and 'evolutionary progress', as these terms seem to imply that organisms 'strive' to be or do something, or that there is a predetermined goal of some sort towards which they are approaching. The term 'selection' he sees as objectionable in that it seems to imply that there is someone or something that volitionally does the selecting. He comments,

"In no species other than humanity do we see a conscious effort to drive the variations of a given life-form one way or another... . But again, this is absent in nature" (p. 135).

In spite of this, Smith manages to praise the American Scientific Affiliation, an evangelical organization, for having accepted evolution as of the 1940s (p. 27), as incoherent as the

concept of God-directed evolution is.¹ Is Smith speaking with a forked tongue?

Why question evolution?

Predictably, Smith tries to dismiss questioning of evolution as based solely on religious beliefs, and fear of the loss of the unique status of humankind. Of course, the double standards are glaring, given the huge percentage of obsessive atheists among leading evolutionists, who *need* Darwinism for their atheistic faith. For example, Richard Dawkins famously said in his *Blind Watchmaker*, "Darwin made it possible to be an intellectually fulfilled atheist." And this book was published by a major atheistic publisher, Prometheus Books. Smith also makes the transparently absurd and self-serving statement that no scientists oppose evolution (p. 26).

Predictably, Smith tries to smuggle in acceptance of evolution under the guise of all the advances made by science. Smith gets especially ridiculous by equating the questioning of evolution with the questioning of the engineering of aircraft and the questioning of the use of DNA evidence to convict criminals (pp. 33–34). In doing so, Smith deliberately confuses the proven ability of airplanes to fly,

and the proven value of the distinctive features in the DNA molecule, with such things as the decidedly unproven capability of the DNA molecule to originate from non-life, and the decidedly unproven capability of mutations and natural selection in causing the emergence of radically novel forms of life from pre-existing life.

However, Smith is on to something in his suggestion that evolution is also opposed by the culturally and linguistically ingrained tendency of humans to think in terms of design and creation (p. 34; see also pp. 247–248). Humans observe information-bearing designs as having an intelligent cause, and transfer such thinking to the origin of living things. Could it be that such reasoning exists because it is in fact true? Could it be that humans are resistant to the notion that complex living things arose by spontaneous non-intelligent processes precisely because there is no convincing evidence that complex information-containing phenomena *ever* arise from such processes? Indeed, as shown by the ID (Intelligent Design) Movement, virtually all human experience points in that direction. Evolutionists are being inconsistent in their reasoning: if they were to find a complex machine on Mars, they would unhesitatingly



Photo courtesy of Mdr

Figure 1. Hummingbirds pollinate flowers. Astonishingly, their choice of flower is not governed by hard-wired instinctive behaviour.

accept design, but they will not admit even the possibility of design for vastly more information-containing living things here on Earth.

Smith likes to take knocks at the Church, as for the putative medieval ‘Dark Ages’, its onetime punishment of heretics, and the like. He is silent about the vastly more severe forms of thought control and persecution conducted by atheists. He is also silent about the fact that fundamental advances in biology made by the likes of Linnaeus and Mendel were those of Christian creationist scientists—and about the huge scientific advances made in the Middle Ages he calls ‘Dark’.² Furthermore, as evidenced by this book, Smith is abysmally ignorant of the many advances in research that have been made by scientific creationists and Intelligent Design proponents in recent years.

Straw men creationists

Smith also makes several straw men out of creationists, as by attributing to them the belief that the universe is static and unchanging (p. 35)—something, if it ever actually was a creationist position, has not been believed by creationists for centuries.

The author discusses blind cave salamanders (pp. 159–160) and how the Creator made non-functioning eyes. No modern creationist believes that God created animals with non-functioning eyes. Rather, they are on record as explaining this as degeneration of sighted eyes in dark places where natural selection would no longer eliminate defects.³ Hello, Dr. Smith! Welcome to the real world!

The magic wand of time

Smith waves off Paley’s argument from design by the premise that Paley was unaware of the vast amount of time available for complex living things to develop step-by-step without a designer (p. 208). As if time was a magic wand that had inherent creative powers! Obviously, by itself, it cannot.

One can see water rearranging the sand on a beach and, after millions of years, there still is nothing more but sand being rearranged on the beach.

As for the ID movement, Smith attacks Michael Behe’s concept of irreducible complexity (specifically the bacterial flagellum) by asserting that, “But this misses the possibility that the flagellum could have developed in small steps *not for what we see today* but for some other function or functions in the past [italics in original]” (p. 209).

This is purely *ad hoc* conjecture on Smith’s part, and he presents no evidence for what this imagined alternative function was supposed to be. Moreover, recount the fact that evolution lacks foresight, and that each step must be of immediate fitness benefit to its bearer in order to be passed on to its offspring. His ‘explanation’ raises the question as to what selective advantage a partially developed flagellum was to have according to *any* function, not just its presently observed function.

Secondly, had there been a change of function, there must have been a period of transition between the old function being phased out and the new function being phased in. Smith’s contention raises the question as to what selective advantage the part-old-function and part-new-function variants would have had for the organism. If Smith supposes that the flagellum went through a period to two full-fledged functions at one time, this too is entirely *ad hoc* speculation on his part. It now begs the question as to how *two* functions, instead of one, now had developed incrementally, with each partly functional step, relative to two functions instead one, conferring increasing fitness to its bearer.

The non-fact of molecules-to-man evolution

Despite his glossing over the matter, Smith tacitly admits that there is no evidence that living things

(specifically the DNA molecule) evolved from non-life. He notes that, “Chemists have for some time known that the distinction between living replicators and nonliving replication can be tough to pin down” (p. 41).

He touches on autocatalytic reactions, ones that promote and propagate themselves, as follows,

“A little further along the spectrum, autocatalytic chemical reactions have some information content, but it’s pretty simple. Further along the spectrum is the complex coding of information content (we’ll see how in this chapter) in the self-replicating DNA molecule that is the basis of all life on Earth” (p. 41).

Quite a slippery and huge leap in reasoning, and quite an understatement by the author!

Smith’s dubious reasoning on evolutionary issues

Some of Smith’s reasoning borders on naiveté. For instance, he believes that ‘natural selection is a tautology’ is dispensed with by the fact that we can see actual maladaptation in nature, such as insects with malformed wings that cannot compete with their normal counterparts (p. 107). Such trivialities tell us nothing about such distinctive phenomena as the long neck of the giraffe. We must *assume* that the giraffe has a long neck because, according to *post hoc* evolutionary storytelling, long-necked ancestors were the ones that happened to be the ones that managed to pass their genes on to their offspring, and that this went on, over and over again, for innumerable generations. This is a clear example of the tautological ‘survival of the survivors’. Identical tautological reasoning, used by evolutionists, applies, of course, to the multitudes of short-necked creatures in existence.

Smith discusses the unexpected discovery of horizontally transferred genes (p. 216–on), especially among bacteria. He does not mention that the premise of horizontal transfer was

invoked because the deployment of genes had contradicted evolutionistic expectations of nested hierarchies.

Throughout this work, Smith makes vague claims, such as mention of embryology. What he does not tell the reader is that embryological stages are deemed to ‘skip’ evolutionary stages when they do not agree with phylogenies. He also claims agreement between molecular clocks and the fossil record (p. 215). This, at best, is an exaggeration. Molecular clocks often have to be ‘massaged’ in order to get them to agree with the fossil record. Otherwise, ‘ghost lineages’, sometimes tens of millions of years long, have to be invoked to explain away discrepancies between the two systems.⁴

Conclusions

This is certainly a good biology book. However, it is not difficult to see that this book is nothing of the sort as claimed by its title. It provides no evidence for the factuality of evolution. Instead, it *assumes* evolution and then looks at every living thing and process through that lens.

References

1. Theologians claiming “Evolution works because God is directing it” is like a farmer claiming “My tractor works because my horse still invisibly pulls it”, although rational people would realize that the tractor has *replaced* the horse. See Woodmorappe, J., The horse and the tractor, *Creation* 22(4):53, 2000; creation.com/horsetractor.
2. James Hannam, who earned a doctorate in the history of science from Cambridge University, UK, documented this in his book *God’s Philosophers: How the Medieval World Laid the Foundations of Modern Science*, Icon, London, 2009. See also the even-handed review by Statham, D., *J. Creation* 24(2):31–34, 2010.
3. For just one example, see Sarfati, J., Christopher Hitchens—blind to salamander reality, creation.com/hitchens, 26 July 2008. Indeed, as noted, a shrivelled eye might be an advantage in the dark, since ordinary eyes would be prone to damage. There is also a pleiotropic effect in some cases.
4. Doyle, S. and Nethercott, P., Ghosts in the rocks, creation.com/ghost-lineages, 14 July 2011.

Scientific orthodoxy, theological innovation

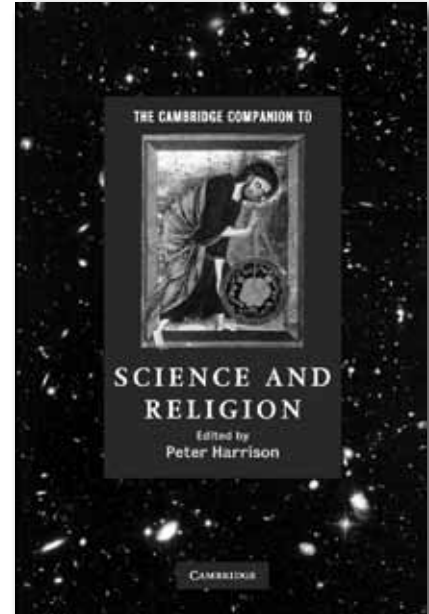
A review of
*The Cambridge
Companion to Science and
Religion*
by Peter Harrison (Ed.)
Cambridge University Press,
Cambridge, 2010

Daniel Davidson

This book is divided into three parts, each containing four to five chapters. The first part addresses the historical interactions between science and religion. The second part examines selected contemporary issues in science and religion. The third part contains philosophical perspectives on the relationship between science and religion. Peter Harrison notes in the introduction that the book focuses almost exclusively on Western monotheistic perspectives (meaning primarily Christianity).

The book’s contributors all represent what might be classed as middle-of-the-road perspectives on science and religion: sympathetic to religion and deferential to scientific orthodoxy. No contributors represent creationist or design perspectives, which would challenge the scientific orthodoxy. Neither are there any contributors of the Richard Dawkins variety, who actively oppose religion in the name of science.

It would be fair to say that scientific ‘orthodoxy’, when it comes to evolutionary uniformitarianism, is the non-negotiable for the contributors, while theological orthodoxy is not.¹ Particularly in dealing with contemporary issues, the contributors clearly want to find ways for peaceful coexistence between modern science and religion. But coexistence is usually



a one-way affair. Where religious orthodoxy clashes with scientific orthodoxy, it is the religious perspective that is creatively reinterpreted (as in ‘creative accounting’). Creation or design perspectives are distinctly unorthodox and are repeatedly mentioned as virtually the touchstones of bad (unorthodox) science.

Historical perspectives

The historical chapters are primarily focused on debunking the idea that religion and science have been adversaries (often referred to as the ‘conflict thesis’). American historian of science David Lindberg opens by covering science and religion in the patristic and medieval periods. According to the conflict thesis, the church fathers attacked science and scientific learning as a pagan pursuit, or at least a waste of time. Paul’s warning against ‘philosophy’ in Colossians 2:8 and his critique of worldly wisdom in 1 Corinthians 1 are examples often trotted out (out of context) as evidence