

# Snake oil and evolutionary biology

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A standard part of the tool kit of the traditional stage magician or conjurer is a box with a diagonal mirror inside it. When the conjurer shows the interior of this box to the audience, the box appears to be empty because the part that can be seen from the direction of the audience is indeed empty, and the mirror acts to ‘double’ this empty part, giving the illusion that it forms the whole.

I think that some readers of this essay may be under the illusion that modern-day Christian teaching does not accept mainstream evolutionary biology, and offers instead bad arguments about the development of the eye and things like that. This is an illusion. The reality is that modern-day Christian commitment, across the world, and in its various forms, is a lot more comfortable with evolutionary biology than the illusion suggests. Broadly speaking the picture is the following. The vast majority of theologians have accepted the notion that what science offers is an important set of insights that ought to be welcomed and allowed to play its part in a developing understanding of the big picture of the world and human life in it. They tend to judge that the Darwinian or neo-Darwinian story is, on a deep level, a story in which the biosphere developed depth and richness by the operation of its own innate nature, and this is a remarkable truth and unthreatening to theism, rightly conceived. God is not inferred from a set of miraculous events in pre-history, but rather trusted to furnish or guarantee an ultimate meaningfulness of this rich, astonishing, painful, delightful, epic, persevering exploratory process.

Ordinary members of Christian churches, meanwhile, mostly do not think it very important exactly how life on Earth developed, but in so far as they have views about it they are willing to be directed by their general education and by their leadership. The leadership in the Catholic, Orthodox and many of the Protestant traditions is welcoming to Darwinian insights; the Pentecostal movement is varied; and the conservative end of the Evangelical wing continues to resist, and feel threatened by, some of the mainstream

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<sup>1</sup>This was mostly written a long time ago but never published, though parts have been incorporated into one of my books.

science. But large parts of the modern-day Christian community do not offer bad arguments about the development of the eye because—well it's obvious isn't it?—because we learned at school how evolution works.

It is true that there is, especially in America, a struggle going on in this area, but that struggle is not characteristic of the broad sweep of Christian thinking. The broad sweep is happy to accept that life developed slowly and gradually in all its varieties, by the trial-and-error process we know as Darwinian evolution.

So how did the illusion come about? It came about partly because the struggle in the USA has been difficult and long-drawn-out, for complex social reasons involving fear and theological shallowness on all sides. Fights capture the attention of onlookers, so it looks as if this is the main story when really it is not. So this explains, to some extent, the illusion of universal conflict. But the illusion is also owing to a conjuring act in which any public speaker who so chooses can show to the world at large the intellectually empty side of religion, and keep the intellectually full side hidden from view. And this conjuring act has been carried forward with great persistence, until it has achieved the dubious 'success' of hood-winking the general public. As a result, I felt I had to add this prelude to the present essay (before I proceed to my parable of the snake oil salesman), in order to make it clear that I, and most Christian theologians for that matter, have no problem in receiving the neo-Darwinian evolutionary account of the development of life on Earth by variation and natural selection, as it is laid out and developed in studies and publications by the mainstream scientific community.

But what we like is straight evolutionary biology: the thing itself, not illogical claims about what it all means.

In movies about the American wild west, one of the standard tropes is the snake oil salesman who comes into town with his horse and carriage, and offers a form of quack medicine. He has bottles of stuff that may be snake oil, or something like it, and he sells them at a fat profit because the people are suffering and ready to invest in remedies even though the healing power of those remedies is dubious at best. We recognise this figure well enough, and indeed he does not inhabit only the movies, but was, to some extent, a feature of frontier life in eighteenth century America.

Now if a snake oil salesman comes to town, then I have not got any problem with what he is doing, as long as he talks straight and tells me it is snake oil he is selling, pure and simple. There's nothing wrong with snake oil as such. If a man says to me, "Here is a bottle, and it contains some oily substance that comes from a snake, do you want to buy some?" and I say, "Does it have any curative properties that you know of?" and he says, "Hell, no! Why would it? I don't know if it is good for anything. You probably shouldn't drink it," well in that case I am dealing with an honest fellow and maybe I will buy some snake oil for the pleasure of having it on my mantelpiece.

In a similar way, I like the behaviour of a man who wants to explain to me the principles and processes of evolutionary biology. I haven't got any problem with what he is doing, as long as he talks straight and tells me it is genetics and natural selection he is selling, pure and simple. There's nothing wrong with, and a lot right with, helping each other get a good understanding of physical processes in the natural world. If a man says to me, "Here is the nervous system of the giraffe, and it came about by a long sequence of gradual development underpinned by gene replication, do you want to learn some more?" and I say, "Does it have anything to say about the relative merits of atheism and theism, properly understood?" and he says, "Hell, no! Why would it? I don't know if it is good for anything like that. You probably shouldn't swallow a philosophically naïve take on it," well in that case I am dealing with an honest fellow and maybe I will buy some evolutionary biology for the pleasure of having it in my general understanding.

Recently my town has been bugged by a salesman of the following kind. He has plenty of evolutionary biology in his wagon, and he sets up on the street corner, and sells his wares, and he says: "One hundred percent genuine science! Guaranteed to cure all religion!"

What sort of a salesman do we have here?

Now it turns out that some forms of snake oil do have curative properties. As long as you have the right species, then drinking it will do you some good. Like fish oil, it can be a help with arthritis, heart disease and maybe even depression.<sup>2</sup> The problem is with sweeping statements to the effect that it cures all medical ills. Similarly, evolutionary biology can correct some of the attempts that people have made to understand the relationship between physical and theological statements. The problem is with sweeping statements to the effect that the Darwinian picture totally reconfigures the territory, in such a way that atheism emerges as the best or most natural partner to science, or the true champion of science, or the position that gets to grips with scientific understanding most fully. It is these sorts of sweeping statements that do not pass muster and ought to be objected-to under the trades descriptions act.

Given the degree to which this conjuring act has had success in recent years, and given the admitted fact that plenty of religious leaders don't have a good understanding of, or receptivity to, plain facts about evolutionary biology, let me repeat what I alluded to above: I like snake oil, and I like evolutionary biology. I like the genuine article, pure and simple. I find it fascinating and illuminating and important. What I don't like is illogical flights of fantasy which take the facts about genetics and natural selection as their launch-pad. By a flight of fantasy here, I mean the claim that

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<sup>2</sup>Cynthia Graber, *Snake Oil Salesmen Were on to Something*, Scientific American November 1, 2007.

evolution has been entirely random, or the claim that it is entirely without purpose, or that its purpose is the multiplication of information-bearing molecules. It is these sorts of claims that ought not to be presented as if they were scientifically established, and it is the wish to put them over as science which I am questioning here.<sup>3</sup> This is not a matter of opinion. It is a matter of honest dealing. It is a matter of correct practice, especially when it comes to education of young people who are easily swayed by eloquence presenting itself as science. By and large they will not have the confidence or the sharpness of mind to tell where the eloquence has taken off and carried the discussion to claims that do not follow from the science.

There is now a welcome and lively tradition of presenting science to the general reader, and it is important to guard this tradition from abuse. Readers expect not to be subject to an unannounced sleight of hand, and this means one should maintain the proper distinction between elucidating the mechanism of a physical process and forming a judgement about what purpose that process may be serving at the most rich and complex levels of physical existence known to us—those of human culture and human lives. It does not mean one may not form and present such a judgement; it does mean that when one is doing so one must admit that one has made the step from science to religion.

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<sup>3</sup>I am writing tersely here; I have earned to right to do so by first presenting a full argument in *Science and Humanity*, Oxford University Press, 2019, and in *Liberating Science*, OUP 2023.