

Religious difficulties with the theory of evolution in biology

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In the United States, the familiar loud objections to the teaching of the theory of evolution in the public schools coming from the Christian right may give the impression that the religious concerns about the theory center on a narrow Biblical literalism that insists on reading all of the Bible as though it were a science or history text. It is fairly easy to argue that there is no good reason to read all of the Bible in that way, and to point out that very important and influential ancient Christian thinkers such as Origen and St. Augustine argued that the Biblical creation stories cannot be taken as literal accounts.

Unfortunately, this way of looking at religious concerns regarding evolution misses the deeper issues. There are general religious ways of looking at life and the world that can conflict with the theory, or at least cause tension with it. These are not limited to conservative US Bible-belt Protestant Christianity, but instead arise out of central themes in many religious traditions around the world. (I do not want to say “all” religious traditions, since, for example, at the moment I do not see any important issues between Taoism and evolution. There may be traditional African religions as well that could be evolution-friendly with ease, from what little I know of them.)

If I am right about all this, Dawkins has a point when he claims that religions generally make factual claims about the world (which is also what Geertz pointed out), and that such factual claims about the world have not only the potential to conflict with science, but that some of them really do conflict with science. In particular, they at least appear to conflict with science in the case of the theory of evolution. Dawkins also appears to talk as though the conflict is inevitable and that religion in all forms is discredited because of it, but as far as I can see he has no argument for such a strong claim. Gould wanted to downplay the degree to which this conflict can develop, and supposed that religion should adjust its views as science develops, so as to avoid the conflict and not attempt to tell scientists what they should believe about the world. **My point in this little essay is that the potential for conflict often runs fairly deep in many religious traditions, so that it might take considerable reworking of those religious belief structures to keep the peace between the theory of evolution and those religious outlooks. I will not talk here about whether or not this *should* be done, and whether it *can* be done without severely damaging any particular religious belief structure.** For the religious believer, it is, of course, this latter issue that is the most important. My little essay will thus omit the most important topics for such persons, but it should nevertheless point in the direction of what needs to be solved if one were interested in avoiding the conflict.

So, where do these conflicts that I am talking about arise? What follows is a list of the main points I have noticed so far.

The special place of humankind in the grand scheme of things

Religions are often human-centered, conceiving of human beings as having unique status among all living beings.

In the Judeo-Christian-Islamic tradition, that special status emerges in connection with the central notions of good and evil. Human beings, among all natural creatures, are the only ones capable of evil, the only ones capable of alienation from God, the only ones who can turn to God and ask for mercy or forgiveness, the only ones to whom moral commands are given, the only ones with a sense of the sacred, the only ones whose road to Paradise can be assured. There is a great conceptual gulf between human beings and the rest of nature, with humans set aside for a special role of great religious significance. Jesus is seen by Christians as on a divine mission to restore people to God. He does not restore sheep and goats, or sparrows and snakes. Muhammad does not have a revelation about God's will for camels; desert creatures do not need to go on a pilgrimage to Mecca.

The Hindu who thinks about karma—the natural working out of consequences for appropriate and inappropriate behavior, in this life and in reincarnated lives to come—is concerned with the ultimate destiny of humans, not the ultimate destiny of cattle or cobras. Even though animals may get into the picture as intermediate stages along the soul's journey, the focus is on what will become of people—what will become of the present believer. Karma is really about people, not about animals, for the final goal of salvation—escape from the never-ending cycle of suffering-filled lives—is salvation for the human soul. It is true that at the deepest level, the Hindu may well not see himself or herself as distinct from the heart of the rest of the universe, but it is only human beings who have the potential to consciously realize what it takes to escape from suffering and attain salvation. Cows cannot attain salvation.

There is a similar theme in Buddhism. Only humans can become enlightened—the ultimate goal. Only humans can develop the sensitivity of outlook and thought practice to escape from suffering through that enlightenment.

But doesn't the theory of evolution now stand in stark contrast, and potential conflict, with the notion that there is an important difference between human beings and other animals? Doesn't the theory of evolution suggest strongly that although humanity constitutes a distinct species at this moment in time, it is no more distinctive than any other species? We humans may find the human species especially interesting, and we may have a special interest in preserving it. But the theory of evolution suggests that as conditions on earth change, homo sapiens will become extinct, perhaps to be replaced by some other species capable of language and laughter, perhaps not.

Even if these factors don't represent a genuine conflict, there is at least a difference in outlook between the evolutionary perspective and the religious one. A difference in "feel". One might debate just how important this difference is.

Nevertheless, there is another respect in which the special character of humanity from the religious perspective is quite directly challenged by the theory of evolution. I have in mind the evolutionary picture of gradual change and development that produces

new species. The evolutionary process of natural selection that resulted in the emergence of humankind not only took a great many years, but the development of the human species could not have occurred all at once. There were precursor species, somewhat human-like in character, but not yet the same as homo sapiens. The process was not uniform or linear. Some of these earlier human-like species perhaps became extinct without leading to a replacement species.

All of this gradualism leads to difficulties for religious views that hold that humans are very special. It is very unlikely from an evolutionary standpoint that at some point in the past there suddenly was born a creature that was so different from its human-like parents in terms of moral capacity or ability to conceptualize life that it was the first real human being from a religious perspective. In other words, from an evolutionary perspective, there will be no reasonable place to draw the line between creatures that count as human from a religious point of view and those who do not. To put this in Christian terms, it appears entirely arbitrary to say that creature A had an immortal soul that could be in harmony with God and be forgiven of sin, while A's parents did not have this status. And yet, recognizing that there is a serious issue here, the Roman Catholic Church has held that we are to believe that exactly this difference between A and A's parents did occur at some point, through direct divine intervention. That is, that at some point in the evolutionary process, some offspring of human-like parents who were not yet really human was given a soul by God, and thus became a human being in the religious sense. (This precise dividing line between humans and non-humans need not correspond to the biologist's fuzzier dividing line between homo sapiens and other species.)

As the Roman Catholic move illustrates, there may not be a out-and-out contradiction between evolutionary theory and religion when it comes to the gradual development issue. However, there is an awkwardness, at least. Unless there was a marked difference between creature A's mental capacities and those of A's parents, it is hard to see what the infusion of an immortal soul into A could possibly have amounted to. We all know that sometimes children are smarter than their parents, but the change involved here seems to be much larger and more significant. For the Catholic view to work, don't we need the sudden emergence of someone who has moral capacity, with parents who lack it? And doesn't that seem highly unlikely to ever have occurred, if evolution is an accurate picture?

So, we have two general areas of potential conflict between religious outlooks and the theory of evolution that pertain to the "special character" of humanity. The first might be summarized simply by saying that humans don't look so special from an evolutionary standpoint. The second has to do with the evolutionary awkwardness of drawing a line between the religiously special humans and their non-human parents.

The meaning and purpose of life

Religious outlooks generally provide people with a sense of “place” and meaning. Life is typically seen as part of a larger drama in which transcendent forces much greater than us, and on which we humans are at least somewhat dependent, are at work. (In this discussion I have to leave Buddhism aside, but I think what I have to say will fit other traditions.) We have all the creation myths, for example, according to which not only human life but also everything around us is ultimately due to the deliberate creative activity of conscious and intelligent supernaturals. Or, we have the idea that underlying all the levels of reality that we can physically detect with our senses and instruments, there is a world soul that holds it all together, and that manifests itself through the universe. Thinking of human life as taking place in such a universe appears to provide religious believers with a sense of meaning or purpose.

Exactly how meaning and purpose derive from such pictures of reality probably depends on the details of the religious outlook in question. But, here is one example of one aspect of how this can work: If one sees the entire universe as dependent on the intelligent creative power of an external creator-god (as in Judaism, Christianity, Islam, some versions of Hinduism, and some Native American traditions), it seems natural to suppose that there is a role for human life in the scheme of the creation laid out in the “mind” of the creator-god. Christian fundamentalists typically work this out by claiming that God has a “plan” for each person’s life—a blueprint, so to speak, drawn up by the Master Architect. But even if one doesn’t go that far, there is in this picture of dependence on the creator-god the makings of a sense that the universe is “in order”, and that everything is here for a reason. One doesn’t have to be a Christian fundamentalist to say that “everything happens for a reason”.

The sense that there is an overall dependence on transcendent powers to “hold it all together”, or to “sustain” it, to “unify” it, is a strong, central religious idea about the universe as a whole and human life in particular. The result of such thinking is a sense that there is some meaning to human life, and that humanity has a proper place or role in the grand scheme of things. This might come about because the transcendent power is seen as a person-like divinity that actually “assigns” a role to humanity. Or it might come about because the transcendent power is seen as something more like an impersonal force that runs through everything ensuring that everything holds together in a coherence. In this case, human life is part of that coherence.

By way of contrast, the theory of evolution appears to many observers to project a much more chaotic or random picture of life and the universe. (Never mind here where the universe “came from” or how it “got started”. That is not part of the biological theory of evolution, and so—although it is an issue related to the one in focus here—I will not be addressing it directly.) Sometimes religiously-minded people put this point by saying that evolution makes everything depend on chance, and that’s why they don’t like the theory and find it totally unbelievable. However, caution is in order when talking that way. The evolution of human beings is not just a matter of chance according to

evolutionary theory. It is rather a matter of natural selection, which operates according to unchanging principles. If it were just a matter of chance, in which new species randomly popped up for no reason at all, there would be no scientifically-describable principles for the process of evolution. So, let's try to state all this more carefully.

Chanciness does play a role in the theory of biological evolution, in at least three ways. First, there is chanciness associated with genetic mutations that figure occasionally in the production of offspring with new characteristics. Second, there is chanciness associated with the particular combination of genes from the parents that produce the genetic structure of a sexually-produced individual—that is, variation between offspring of the same parents arises largely because of this chancy combination of genes from the parents. Third, when a heritable trait is advantageous to the reproduction of an organism, that does not mean it unfailingly gets passed on to future generations; rather, it just means that the probability of its getting passed on is increased. The individual possessing the trait could get crushed and killed by a falling rock before having a chance to reproduce!

Natural selection operates within the framework of the above sorts of chanciness, and is dependent on the first two types of chanciness. All of which means that there is a sort of “trial and error” method used in natural selection. Nature, so to speak, tries out all sorts of variations produced by chance, and selects slowly and imperfectly for the variations that work out, while discarding the ones that don't. It's a brutal process, this process of selection by trial and error. If you're one of the errors, you may have a miserable time of it. But more about that later. Let's just focus for now on the chancy character of natural selection.

Now I am finally able to articulate more clearly what the religious chanciness objection to evolution might be. If evolution by natural selection is correct, it might have happened that no human species ever emerged—the direction of the evolutionary path might have been different if different earlier life forms had formed different genetic combinations (or if that falling rock had wiped out a crucial link in the chain). The same can be said for other species, but religion, we are assuming, is concerned about the meaning and purpose of human life, so the focus is on the chanciness of human emergence, and what that does to ideas about meaning and purpose. If we imagine that the existence of humans is in the above ways due to chance, rather than to the working out of some divine plan, rather than the result of some intelligence at work in the world's development, rather than the inevitable unfolding of a unifying transcendent force that underlies all that is, then it may seem as though human meaning and purpose is lost, and that the universe as a whole, and human life in particular, is simply the result of a blind trial and error process churning its way along through the ages.

Whether there is a real conflict between evolution and religion here, one might debate. I honestly am not convinced that I have laid out an actual conflict yet, for it seems to me that I have described something more like a feeling of conflict than an actual logical conflict. However, there are some ways that this feeling of conflict can be made more precise to generate an actual conflict, if the religious view is developed in certain

specific ways. For example, if I am right about the trial and error character of evolution through natural selection, then if one's religious view claimed that God created every living thing according to a well-worked-out plan that provided a list of all the species existing at each time, there is a conflict. The conflict cannot be avoided by postulating that God's well-worked-out plan was a plan to let nature engage in trial and error, since as we have noted, such a process might not have resulted in the species that actually developed. You might say that God knew in advance what the process of trial and error would produce, since God knows the whole history of the universe in advance. However, that is not the same as saying that God created the various species according to a list drawn up in advance. In other words, if one has a very specific idea about how God created life forms, then that very specific idea could conflict directly with the theory of evolution. But without that sort of specificity, I believe that the "conflict" with evolution remains more at the level of a vague "sense" of conflict described earlier.

Religious commitment to objective value

We have agreed that one of the defining characteristics of a religious worldview is its commitment to the objectivity of at least some values. Typically, these will be ideas about what sort of life is truly worth living, or ideas about what kinds of behavior are genuinely and objectively right, or wrong. This commitment to objective value can be the basis for another argument that the theory of evolution is in conflict with religion.

Here the problem can be stated very simply: it seems impossible for the theory of evolution to allow for the possibility that objective value exists at all. Why? The theory of evolution does not propose that there is some value to be obtained by natural selection. It is neither good nor bad that natural selection occurs. The emergence of any particular species is simply a fact; it is neither good nor bad. Some species are not more valuable than others. All species simply exist for a time and then cease to exist, once they become extinct. Evolution is a value-neutral theory; it neither approves nor disapproves of any natural development—it simply describes how natural developments occur. Of course, a particular evolutionary biologist may very much care whether the human species continues to exist for the next several generations, but that's just a matter of personal psychology and preference. The theory of evolution itself does not say that it would be a good thing if the human race survives. In short, the theory of evolution is quite value-neutral.

And that is the source of the perceived conflict with religion. There seems to be no source within the theory of evolution on which objective value in the universe could be based. Certainly there is nothing in the theory about objective values having evolved from something. After all, the theory is about the evolution of living organisms, not about the evolution of other things. The theory could talk about the evolution of a mental capacity to appreciate beauty, or to appreciate the force of moral considerations. But those are not objective values—those are, instead, the appreciation for what one might conceive as objective values. Capacities of organisms to perceive or appreciate various

kinds of things can evolve, but objective values themselves seem not to be the sort of thing that can evolve from something else.

So, from the point of view of the theory of evolution, are there objective values of any sort? The theory is silent about that. Objective values play no role in the theory. They do not guide the process of evolution. One might say that if there are objective values, they are irrelevant to the theory.

But does that mean the theory is *hostile* to objective values? Not necessarily; after all, the existence of the planets in our solar system is also irrelevant to the theory of evolution, but that doesn't mean that the theory is hostile to the reality of the planets. So, where exactly is the problem between the theory of evolution and objective values?

I think one can see why there might be a problem if one looks specifically at *moral* values—right and wrong. The typical religious view holds that these values are objectively real. But part of that same viewpoint holds that moral values apply only to humans. When a tiger munches the gazelle, the tiger is not violating any moral precept—the tiger is just doing what comes naturally, and is not subject to moral evaluation. Only humans are so subject. And that is where the problem with evolution comes in. How can we give an evolutionary explanation of the change that occurred when the human species evolved so as to account for why the humans, but not their precursors, are subject to moral values? Again, as before, it appears that the differences between humans and their precursors are not great enough on the evolutionary view to warrant saying that humans are subject to objective morality while other beings are not.

Thus, when people complain that the theory of evolution cannot account for objective value, I think the previous paragraph lays out the best way to understand that complaint as it pertains to moral values. The theory of evolution doesn't have to explain the origin of the values themselves, but it should (from the religious point of view) be able to accommodate the fact that humans are subject to moral values, while other animals are not. Given the small differences between humans and other animals, from the evolutionary point of view, this fact will be difficult to accommodate.

However, when religious people complain that the theory of evolution cannot account for other types of objective value, such as the overall beauty or goodness of the universe, I am much less sympathetic, since I don't see why the theory of evolution should be asked to account for such things. Such things just don't fall within the range of the theory.

Here I part company with Dawkins, for I am not assuming methodological naturalism as he is. Dawkins would presumably be so faithful to methodological naturalism that he would find himself rejecting the idea that there is any rational ground to talk about objective values of any sort, and so there would be direct conflict between Dawkins' view and the idea that the religious view of objective value has rational grounding. Technically, there could still be objective values, as the religious believer claims, but the believer would have no reason to think such values exist. However, in order for Dawkins to maintain this view, he must go beyond science and adopt methodological naturalism

in general, even when operating outside of science. The theory of evolution in biology does not make claims about methodological naturalism. And so, the conflict between religion and Dawkins' views is not actually a conflict between religion and the theory of evolution. It is a conflict between religion and methodological naturalism's being extended beyond science to include all human thinking.

Conflicts between specific religious doctrines and evolution

The preceding sections of this little essay have outlined some areas of generic tension between the theory of evolution in biology and religious outlooks in general. The focus was on central features of religious worldviews, and how those might be in tension with important ideas in evolutionary theory. Next, I turn to a brief list of some specific religious claims that clearly conflict with the theory of evolution. These claims are not part of the general definition of religion, as were the religious views listed above, but are rather important claims specific to certain religious traditions. In dealing with these, the conflict with evolution will be straightforward, and probably avoidable only by modifying or qualifying the religious claims themselves.

Literal readings of specific sacred texts or other creation stories. A literal reading of the Bible's creation stories, or any number of other religious creation myths such as Native American or Hindu myths, will immediately yield any number of contradictions with the theory of evolution. The Bible's first story, for example, has it that the whole process of creating the physical universe took six days. Evolution doesn't work that fast. The Bible's second creation story appears to have the first human before the first plants, and the plants and animals are created before the second human. Evolution can't agree with any of that. One Native American creation myth tells of the birth of the first human on earth as occurring after its mother fell, pregnant, from the sky. Again, that doesn't sound like an evolutionary account. A literal reading of other parts of the Hebrew Bible has led Jews and now some Christians to claim that the universe is less than 6000 years old—not enough time for evolution to take place.

God is the all-loving, all-powerful, all-knowing creator of the universe. This typical Christian doctrine might not be directly in conflict with evolution, but it certainly raises serious questions. Just look at the way evolution actually operates. There is tremendous suffering and brutality in nature, as the various animals struggle to survive. Now, I don't think plants or one-celled organisms suffer, and one might raise questions about starfish, for example, but once one gets to pigs and gazelles, I don't think there is any question about pain and suffering. Is this sort of trial and error design system, in which pain and suffering are commonplace concomitants of evolution, really the design product of an all-loving God who actually had the power to do it all in any way that was even remotely possible, and who knew exactly how it would all turn out? That seems just about impossible to swallow. Evolution does not appear to work in a way that is consistent with such a God.

This problem, expressed perhaps in slightly different form, affects not only Christianity, but also Judaism and Islam.

Death as the Biblical symbol for alienation from God, the result of sin. One central theme of the Bible is the struggle between life and death, with death represented as “the wages of sin”. Death, on this view, comes only after there is sin in the world. But, of course, sin comes only once there are people, since animals and plants are incapable of sin. The implication is that there is no death until after there are people. This is an obvious problem for the theory of evolution, since one can’t have natural selection without millions of pre-human deaths.

I have had religious students present exactly this argument completely seriously to me, concluding that the theory of evolution must be false.

Now, to be fair, this argument may well be avoidable. The first chapter of *Genesis* states that God gave both people and animals various kinds of plants to eat, and this appears to have nothing to do with sin. (Sin doesn’t get discussed in the first creation story.) But eating a plant does cause it to die. So, it looks like there is a problem with my summary of the Bible’s view of death above. Maybe the safe thing is to just focus on human death, and leave plant and animal death to the side. In that case, the Biblical view is more modest: *human* death comes only after there is sin. (And, to be sure, death in the Bible is not just physical death—it’s also spiritual death. However, I think it is clear that when the Bible talks about human death it *includes physical death*.) Limiting the claim about death in this way to human death eliminates the conflict with the theory of evolution, assuming that the first humans sinned.

Again, the moral of this section of the essay is that specific religious doctrines can conflict directly with the theory of evolution. The first version of the theory about death—no death of any sort before sin—does conflict with the theory of evolution, and so my point is made.

Summary reflection

Is the situation hopeless? That is, *must* there be a conflict between the theory of evolution and a religious worldview?

One might think the above arguments are designed to answer these questions in the affirmative. However, that is not the point of the preceding arguments, in my view. Rather, I think the point is somewhat more modest, but still important: there are some serious difficulties to be overcome before a religious worldview can be consistent with the theory of evolution. Some religious doctrines are simply incompatible with the theory of evolution, but that does not mean that *no* religious worldview is compatible. I would put it this way: whether there is a conflict or not may very well depend on what kind of religious view one holds. It might be possible to develop a religious worldview that handles all of the above-described issues. Certainly there are religious people who desire to have such a view, and there are religious thinkers working to develop the details of how it would all go.

Skeptics will claim that it can't be done, that religious worldviews are too rigid to change enough to overcome all the difficulties. But we have historical examples to the contrary. When the standard Christian medieval worldview was challenged by the development of astronomy, showing that the earth was not the center of the universe, the Church initially resisted with all its might, since some very important elements of the Christian worldview of the day rested on the idea of the earth as the central stage for life's play, with God looking down from above, watching. But as we all know, Christianity eventually adapted, and the Roman Church has issued a formal statement saying it was wrong to oppose the scientific developments that led to the controversy. Or, again, when the caste system in Hinduism was exposed as a form of racism, it was rejected by many Hindus, despite the fact that the caste system was justified by appeal to the operation of karma, so that people in the lowest caste deserved to be there because of past offenses. In this case a central Hindu idea—karma—had to be given up or modified in order to avoid justifying the caste system. And yet it happened—not for all Hindus, but at least for more enlightened ones.

The challenges facing religion from the growing evidence in favor of the theory of evolution are severe—as I think the above remarks show. But careful thinking and judicious modification can probably leave religious worldviews at peace with evolution. At least that is my own judgment. Dawkins, of course, would disagree.