Title  Creation by Evolution?

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This is a book by two Latter-day Saint evolutionary biologists who are highly committed to both their faith and their biology. Helped by a movie producer/writer, they present strong arguments for evolution as the mechanism of creation, including humans as well as all other living things. Before embarking on reading the entire book, I first checked to see what references they had made to my own writing; in one such reference, the authors seemed to completely miss the point I was trying to make. Hence I began examining the book further with a bit of skepticism—I was looking for more errors. But as I got into the volume, my attitude toward it became increasingly positive. This is not to say that I agree with everything they say, but the book presents a strong case for evolution in creation and perhaps, above all, provides much food for religious thought. As far as I know, some ideas are truly unique to these authors.

Stephens and Meldrum are well qualified to discuss evolution in the light of the restored gospel. Both are professors at Idaho State University in Pocatello, and both are engaged in research and teach

classes directly related to evolution. Stephens was a bishop at the time the book was published, and Meldrum was a priesthood instructor. Peterson, who is also an active Latter-day Saint, provided perspective from a nonspecialist’s viewpoint. The list of acknowledgments is impressive. The authors have discussed the topic of their book with dozens of others, including Professor Duane Jeffery at Brigham Young University, who wrote the foreword.

The authors discuss the three official statements from First Presidencies on the origin of man, and these are reproduced in an appendix (pp. 209–18). The statements do not necessarily or categorically reject a role for evolution in creation. Other Latter-day Saint authors are also quoted, and while some support evolution, others oppose such a view.

Stephens and Meldrum review the history of the idea that man is not an animal, an idea that might be held by some church members, and then they present rather detailed anatomical, physiological, and psychological evidence that humans have all the characteristics of other animals and are easily classified as primates. Having always believed that humans are anatomically and physiologically part of the animal kingdom, I am weary of this discussion. Do all animals have all the same psychological (mental) abilities of humans, only in lesser degree, as Stephens and Meldrum argue? Well, yes, some animals use tools, exhibit the rudiments of language (e.g., can be taught sign language), and even have some degree of self-awareness and compassion, but what other animal could write a book like this one? Other animals may have creative intelligence (i.e., can solve problems), but the gap between that and human intelligence seems huge. Stephens and Meldrum note that humans truly are unique in one sense because “man, as a spirit, was begotten and born of heavenly parents” (p. 125, quoting the 1909 First Presidency statement).

Another topic to which the authors repeatedly return is the idea that there was no death of any living thing before the fall of Adam and Eve. This old sectarian doctrine does still need much attention. The idea goes back to the period before the restoration of the gospel; Stephens and Meldrum suggest John Milton’s *Paradise Lost* as the
possible origin of the doctrine (pp. 183–84). Yet it has been preached by some prominent Latter-day Saint General Authorities, including Orson Pratt, Joseph Fielding Smith (though not when he was president), and Bruce R. McConkie. With such backing for the idea, it is not surprising that it has sometimes been taught in seminaries and institutes, as well as in some gospel doctrine classes.

Stephens and Meldrum point out that nowhere in scripture does it say that Adam and Eve—let alone all other living things—were created in an immortal state. Rather, after the fall, the tree of life was guarded so that Adam and Eve could not partake of its fruit and live forever—that is, be immortal (Genesis 3:22–24; Moses 4:28–31). If they were to partake of the fruit of the tree of life while they were in the garden, in some way that we do not understand the fruit would have made their bodies capable of living forever. We may not understand how a fruit could produce “eternal youth” in two special people, but we can at least imagine it. But it is impossible for a biologist or paleontologist to imagine how all organisms could avoid death until after the fall. As Adam and Eve ate of the fruit of every tree of the garden, the cells in that fruit would die. And the idea of there being no death also means no reproduction, but fruits are reproductive organs that produce seed. And in the creation story, the Lord commands all living things to bring forth of their own kind—clearly a command to reproduce (e.g., Moses 2:11–12, 20–22, 24–25, 28–30).

The fossils in the earth’s sedimentary rocks are the remains of organisms that lived and died on the earth. If there were no death of any organisms until after the fall, all of these fossils must have been produced in the Noachian flood—and that is what some people during the Middle Ages believed. This idea can be found now among the young-earth creationists. This would mean that all those organisms—for example, dinosaurs and humans—were living on earth at the same time. The ordering of the strata in the earth’s crust just does not fit this

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1. See Orson Pratt, Masterful Discourses and Writings of Orson Pratt (Salt Lake City: Bookcraft, 1962), 356–57; Joseph Fielding Smith, Doctrines of Salvation (Salt Lake City: Bookcraft, 1999), 1:108; and Bruce R. McConkie, Mormon Doctrine, 2nd ed. (Salt Lake City: Bookcraft, 1966), 185.
picture. No traces of humans have ever been found in the same strata as dinosaur bones, for example. I see large quantities of the remains of living organisms that testify to an ancient earth: coal, limestones, dolomites, and diatomaceous earth represent such remains. The diatomaceous earth, for example, consists of microscopic shells of diatoms laid down one cell at a time, a process that would require millions of years to produce the known strata thicknesses (1,500 feet in one location).

But what about that statement in 2 Nephi 2:22 that says that if Adam had not fallen, “all things which were created must have remained in the same state in which they were after they were created; and they must have remained forever, and had no end”? This is the key scripture quoted by proponents of the no-death-before-the-fall doctrine. It is the only scripture that seems to support the doctrine (no scripture in Genesis, Moses, or Abraham does), but that support depends on one’s interpretation of the word state. Was this a state of immortality as some have taught? Or was it some kind of ecological state, perhaps with no development of human civilizations? To assume that state means immortality goes against all the things mentioned above as well as against other ideas, as Stephens and Meldrum point out.

I was very excited by Stephens and Meldrum’s idea that Adam and Eve were not placed on earth as immortal beings but gained their immortality from eating of the tree of life (see pp. 181–83). As far as I know, this idea is unique with these authors. Stephens and Meldrum’s views on the fall and its consequences provide great insight to me.

A strong impression gained from reading the book is that Stephens and Meldrum are convinced that creation involved evolution. Their summary of the principles of evolution by natural selection of random mutations is excellent and convincing. They answer many objections to evolutionary theory such as no transitional forms in the fossil record (many such “missing links” are now known). I see some problems at the level of genes and enzymes (are mutations really sufficient to account for the needed variability?), but it does seem that evolution has occurred over past eons on the earth’s surface.

One question concerns the extent to which God intervened in his creations. For Stephens and Meldrum, the extent of intervention
must be very limited. Natural selection is capable of handling creation almost by itself, they imply, so how can man be created in the likeness and image of God? Stephens and Meldrum present preliminary data (drawn from some of Stephens’s research) that suggest that there are “constraints” during development—that is, evolution may not be as random as many evolutionists have claimed but is rather directional instead, leading to man. I was not convinced by this argument, although I am taking a wait-and-see attitude.

Stephens and Meldrum seem to be saying that God wound things up and then let them play out without his intervention until humans were the result, at which time Adam’s spirit could be introduced into his body. Pushed to its ultimate, this is the doctrine of deism, which says that God started things going, after which the universe ran and now runs like clockwork and will run for the rest of eternity. This philosophy of a clockwork universe (i.e., a purely mechanistic universe) became popular after Newton and others formulated the basic laws of physics. Several of our founding fathers taught it, and Charles Darwin finished The Origin of Species with a paragraph based on this approach. (The paragraph includes: “Life . . . having been originally breathed by the Creator into a few forms or into one . . . [from which] endless forms . . . have been, and are being evolved.”)² Modern physics, especially quantum mechanics, rejects a mechanistic universe, and Stephens and Meldrum would of course agree that God can and did intervene in creation whenever it fulfilled his purposes, but their chapter does smack of deism.

A final short chapter summarizes the Latter-day Saint doctrine of eternal progression as a kind of evolution. It may be a nice analogy, but it can be misleading to someone who thinks that some individual near-ape ancestor itself changed into a human. That is not what the theory of evolution says—only that an individual might differ slightly from its parents such that it had a somewhat better chance of surviving and reproducing than its parents did. As these small changes

accumulated over thousands of generations, new species could gradually be distinguished. (Always, any set of parents produces only its own “kind.”) But “eternal evolution,” as Stephens and Meldrum call it, is a change in individuals from intelligences, to spirit children of God, to mortals, back to spirits, and finally to resurrected beings. This is not evolution based upon mutations and natural selection.

The book is remarkably free of errors, but I did notice a very few. For example, Darwin did not present Wallace’s paper in 1858 (p. 96). Darwin had just buried an infant and did not attend the meeting at the Linnean Society. I was also surprised that there is no mention of intelligent-design creationists, only the flood-geology, young-earth creationists. Intelligent-design creationism started in the mid-1990s, but it was not well known until more recently, which might be why Stephens and Meldrum do not discuss it.

About the authors’ misunderstanding of my writing, which I mentioned at the beginning of this review: I was trying to make the point that similarity in form does not prove genetic descent of one form from the other.\(^3\) There are, as Stephens and Meldrum point out, by now thousands of fossil hominids that could be human ancestors. The logical thing to do is to try to arrange them into “trees” that show how one might have descended from the other (with many generations between the two, of course). But the fact that they have similarities and that the trees may appear “logical” does not prove that the trees actually represent descent through time. Actually, the trees have been changing with almost every new discovery during the past century and a half. But that is another story. I went on to say that if similarity proved descent, then “we would have to conclude that Fords and Chevrolets are genetically related and that 1976 Fords descended from 1975 Fords.”\(^4\) “A little reflection,” according to Stephens and Meldrum, “reveals the fundamental flaw in this analogy, which incorrectly equates cars, that cannot pass on traits, with biological organisms capable of reproduction and transmission of genetic information from one generation to the next” (p. 143). But that was my whole point! I assumed that it was obvious to


\(^4\) Salisbury, *Creation*, 225.
anyone that cars don’t reproduce! I even noted that “each automobile is the product of an act of special creation” (i.e., in a factory). Still, cars can and often do resemble each other, but since it is obvious that they do not reproduce, resemblance is not enough to prove genetic descent.

Paleontologists have no choice but to try to arrange fossils according to similarities in form, but they can never prove that the results of their arrangements really represent what happened. And it doesn’t really matter. The important thing is that arrangements can logically be made, whether the exact arrangements represent history or not. The overall arrangement shows the simplest organisms in the oldest strata and the most complex fossils in the youngest strata. That is what evolutionary theory predicts.

This little story merits discussion because it illustrates what is perhaps a minor problem with Stephens and Meldrum’s book as a whole—they are so busy defending evolutionary theory that it never seems to occur to them that there might still be problems with the theory. Perhaps that is the result of creationist attacks on evolution, especially during the past decade or so. It has put the evolutionists so much on the defensive that they tend to ignore any questioning of proposed evolutionary mechanisms. I agree with the authors that the case for evolution is so strong that many aspects are now well established, but it is shortsighted to imply that all the problems have been solved—and to suggest to young Latter-day Saint students that all the answers are in and that those answers include an evolutionary creation by a deist God.

On balance, Stephens and Meldrum have done a wonderful job of telling the story of evolution in a way that can make much sense to Latter-day Saint readers—even providing thoughtful insights into the restored gospel scriptures. Because of the amazing progress of science during the past thirty years, if I were writing my 1976 book now, it would come much closer to the book written by Stephens and Meldrum—I would take a much less favorable view of the creationist literature than I did then, but I would still point out some problems.