

The Case Against Creationism

In recent months "scientific creationism" has emerged as a force to be reckoned with. Several states have passed, or contemplate passing, laws requiring "creation science" to be taught in schools where evolution is taught. Despite a successful challenge to one such bill in the federal courts, their proponents continue to press the justice of their cause. It is not at all unlikely that a large percentage of the public, very possibly a majority, agree with the creationists to at least this extent: they believe that fairness requires granting the creationist point of view equal time in the classroom. Is this indeed the case? What, exactly, are the creationists maintaining? Does fairness require that we teach "creation science" in our schools?

As a minimal starting point, anyone concerned with the issue needs to understand what the creationists are saying. The first and most obvious point is that creationism goes beyond the idea that there is a God who in some way or other created the universe. Many evolutionists accept the existence of God as creator, and thus atheism is not at issue here. Scientific creationism is a particular set of doctrines, which conflicts directly with evolution. Although individual creationists vary, the core position involves the following claims: (i) The universe, life, and all living "kinds" were created suddenly by a supernatural being. In particular, then, the big-bang theory, theories of the chemical origin of life, and the evolutionary account of the development of orders of living organisms are all incorrect. (ii) The major geological features of the earth, including the structure of the fossil record, were the result of catastrophic processes, most notably a global flood. (iii) The earth and the rest of the universe may be no more than a few thousand years old.

Although a positive doctrine is an important feature of creationism, most of its arguments are directed *against* evolutionary theory. Perhaps the most common argument offered by creationism against evolution is an attempt to discredit the fossil evidence for evolution by pointing to the relative scarcity of transitional forms. However, this is a poor argument, for at least three reasons. First, in order to embarrass evolution, it would be required that evolution *predicts* that there should be numerous transitional fossils. In fact, however, there is reason to believe that major evolutionary change occurs when a *small* population becomes reproductively isolated, and that such major change occurs over a

relatively *short* period of geological time. Thus, on this view, there *should* be a relative scarcity of transitional fossils. The second point is that, nonetheless, there *are* transitional fossils. The therapsids provide numerous links between reptiles and mammals, and *archaeopteryx* is a clear intermediary between dinosaurs and birds. Finally, whatever the problems associated with the fossil record, what we find does not look at all as it would be expected to if God created all varieties of life at the same time. In the very oldest layers, we find only the remains of micro-organisms. Only later do we find soft-bodied animals and hard-bodied creatures appear in still more recent layers. If creationism were true, we would expect the fossil record to have the structure of a well-stirred stew, with trilobites and tigers, dinosaurs and donkeys all side by side. This is anything but what we do find.

Two other common creationist arguments are closely related. One is that the increase in complexity required by evolution is inconsistent with the second law of thermodynamics. However, there are many examples in nature of spontaneous increases in complexity which are completely consistent with thermodynamics. Some of the most striking examples are to be found at the chemical level, a crucial level for evolution. The second argument is that the probability of something as complex as a living organism arising by chance is so low as to render evolution virtually impossible. But evolution is improbable only if one assumes that the processes which resulted in evolution were purely random. In fact, there is no reason to make this assumption. The laws of chemistry do not operate randomly. Without this assumption, the conclusion doesn't follow.

If the creationists' direct attack against evolution fails, they next try to establish that both evolution and creationism are at least in part religious views. They concede that creationism isn't fully a science, but argue that neither is evolution. On the creationist view, the conflict between evolution and creationism is not a clash between science and religion, but between two religious views. And if the state already sanctions the teaching of one religious doctrine, it cannot consistently bar another on First Amendment grounds.

Thus, in a Jerry Falwell-sponsored debate, creationist Duane Gish denounced evolution as an opposing religious view. Although not all evolutionists may be atheists, evolution itself, on Gish's account, is atheistic.

Fossils: An Evolutionary View

For a century after scientists began to realize that fossils represented ancient forms of living things, no clear meaning could be obtained from the accumulating collections. Then, in the middle of the 19th century, the theory of biological evolution linked in a great kinship group all the beings of the past and present. From that time on, biologists have been busy with the task of discovering the lines of ancestry that link the organisms of the present to those of the past.

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The *strata* (layers) of sedimentary rocks are usually piled on each other like pages in a book. In general, the oldest strata are at the bottom and the newest on top. As a whole, the set of rock strata is now thought by geologists to represent about four billion years.

from **Biological Science: An Ecological Approach**, Biological Sciences Curriculum Study (BSCS) Green Version. (Chicago, London, New York, San Francisco: Rand McNally Company, 1973).

"Since evolution is a mechanistic, atheistic theory, it is a basic dogma of agnosticism, humanism, and atheism in general. The one-sided indoctrination of our students in this materialistic philosophy, in the tax-supported schools, in our pluralistic, democratic society, is a violation of academic and religious freedoms." In other words, evolution is the religion of secular humanism.

This really is the nub of the matter. What disturbs creationists most deeply is the threat they see evolution as posing to their whole way of life and their whole moral perspective. For them, evolution can only mean that there was no God to breathe the breath of life into the dust from which we rose, no moral difference between us and our brutish ancestors, and no divine ground for the moral law. As they see it, if there is doubt about some single part of the Bible, there is no reason to believe any of it. Thus they see the teaching of evolution in public schools as a tax-supported attack on their deepest religious convictions.

Occasionally one hears it argued that, properly understood, science and religion cannot conflict. Here, however, we must surely side with the fundamentalists. Some religions do make specific factual claims about the natural world, and whenever this is so, the possibility always exists that there will be a conflict between the claims of the religion and the conclusions reached by our more worldly methods of fact-finding. Here we have just such a case.

Furthermore, it is not at all uncommon nor obviously wrong for school boards and state curriculum commit-

tees to take the attitude that certain subjects are too sensitive to be included in the curriculum, largely because to include them blurs the distinction between what is properly the responsibility of the schools and what should be left up to parents. Suppose, for instance, that a school board decided not to include discussions of abortion or homosexual lifestyles in the curriculum because to do otherwise would involve the school in the business of the home. It is surely not *obvious* that the authorities are wrong.

Now, the creationists are not saying that evolution is too sensitive to be taught. But they seem to be saying that evolution is like abortion and a number of other topics in that to include it in the curriculum is to include material which is of a highly value-charged nature and, in particular, to teach evolution exclusively is to favor one set of values. Thus, if evolution is to be taught at all, fairness requires that the opposing point of view be taught as well.

In this version, the creationists' demand sounds like a moderate one. Furthermore, it is one with which many people will agree. Nonetheless, it seems to me that it is still wrong. Recall that if blood types and the benefits of blood transfusions are discussed in the classroom, what is taught may offend Jehovah's Witnesses' beliefs. Discussions of modern medical science in general may very well lead to conflict with the beliefs of Christian Scientists. Neither group, of course, is pressing either

Fossils: A Creationist View

Creationists believe, which seems very logical, that in the past there were life zones just as there are today. Creationists ask why trilobites couldn't have lived in one life zone at the same time dinosaurs lived in another? It is difficult, in the light of present conditions, to visualize a time when the earth was dominated by fishes, another time by amphibians, and so forth. It is true that in a given area where several periods are presented, the deepest layers generally contain less complex forms than the shallower layers. This could be explained by the fact that most fossil material was laid down by the flood in Noah's time. As the flood waters rose, less complex forms, being less able to escape, would be buried first. More complex and more mobile forms could move to higher ground.

from **Biology: A Search for Order in Complexity**, prepared by the Textbook Committee of the Creation Research Society, John N. Moore and Harold Schultz Slusher, eds. (Grand Rapids, Mich.: Zondervan Publishing House, 1970).

for removal of these subjects from the curriculum or for equal time, but this isn't really to the point. If they were to, we would not be inclined to grant their request. Whether or not one agrees that there are good reasons for keeping discussions of abortion and homosexuality out of the curriculum, one might at least agree that on the face of it there is a distinction between these cases and cases like the medical science one.

The distinction, I suggest, is this. In the cases of abortion and homosexuality, it is virtually impossible to raise the issues without raising questions of personal morality. This is especially clear in the case of abortion. Whatever one's views on this question may be, it is hard to imagine someone maintaining that there is no moral issue here. We may or may not agree that the schools have no business dealing with topics that raise personal moral issues, but we don't need to adopt any special point of view to agree that if these matters *are* the province of the family, then, in particular, discussion of abortion is inappropriate at school.

This is not so for discussions of blood transfusions, not so for discussion of, say, the "germ theory" of disease, and not so for evolution. In all of these cases, it is proper to see the educator as merely presenting the best of secular knowledge, even if we include telling

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students that a good way to safeguard one's health during a polio epidemic is to have a booster shot. A Christian Scientist might see a moral issue here. If disease is a sort of illusion resulting from a breakdown in one's relationship with God, then perhaps it is wrong to take medications. But to see polio inoculation as a moral issue requires not just our common background of moral concepts, but a special set of religious assumptions. Without this special religious perspective, polio inoculation is morally neutral.

The same holds for evolution. From any moderately general point of view, evolution is morally neutral. It is compatible with "pro-life" or "pro-choice" sentiments, liberalism or conservatism—in short, with virtually any particular moral stance. To deny that evolution is morally neutral, one must adopt a special set of religious assumptions, as, indeed, the creationists do. Evolution, then, is *morally* neutral on any broad secular view. And while evolution is in one sense not *religiously* neutral, the same is true of medical science in exactly the same sense.

The creationists often maintain that evolution is the official view of the state, but this is a serious misdescription. If the curriculum of studies in the public schools includes a section on African history in which the death of Haile Selassie is recorded, it does not thereby follow that the state's official position is that Selassie is not Jesus Christ and hence it does not follow that the state is taking sides against the Rastafarians, who believe that Selassie *is* Christ and is still alive. The crucial point about secular knowledge is that it does not presuppose any special religious point of view. It is this, indeed, which constitutes its non-religious nature. By restricting the contents of the public school curriculum to this realm, the state helps keep itself free of religious entanglement. If in addition the state tried to avoid having any statements in the texts which contradicted the teaching of any religion, it would set itself an impossible task. Virtually any claim whatsoever *could* in principle become part of a religion and in practice a great many unlikely ones *do*. More to the point, however, the state would misunderstand its own role if it were to undertake such a program of hygiene. The mandate which the state gives the schools is to teach the best of secular knowledge *whatever* that may be. Thus the state has no stake in the correctness of evolution (or the mortality of Haile Selassie). If scientists eventually reject evolution, and texts are accordingly changed, the "official position" of the state will have altered not a whit.

In light of these remarks, it is worth noting that there is a particular inappropriateness in the "equal time" bills passed recently by several state legislatures. The state has a responsibility to ensure that the curriculum is based on the best of secular knowledge. However, it is obvious that constructing a sound curriculum requires expertise. Legislatures have a duty to enact legislation which will provide for an appropriate mechanism for producing a sound curriculum and to be responsive when the evidence indicates that the mechanism isn't working as it should. However, in voting for "equal time" bills that were not recommended by any curriculum committee nor by any body which could plausibly be thought to reflect the judgment of educators, the individual legislators were simply assuming an expertise which they patently did not possess. If the integrity of the curriculum is to be preserved, it is absolutely essential that legislators not undertake to usurp the role of scholars and educators. This is not to say that those experts are infallible, but it is to say that when legislators take it upon themselves to decide what does or does not constitute science or history or anything else of the sort, they are doing a service to no one.

—Allen Stairs

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