

## PERSPECTIVE

### Creationism, Intelligent Design, and the Environmental Professional

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*"Mr. Bryan, do you know the age of this rock?"*  
—Clarence Darrow

*"Mr. Darrow, I'm more interested in the Rock of Ages than in the age of rocks."*  
—William Jennings Bryan

In the 1925 "monkey trial," attorney and three-time presidential candidate William Jennings Bryan, the "silver-tongued orator," prosecuted John T. Scopes in Dayton, Tennessee, for violating that state's Butler Act. Jennings, who was also a fundamentalist preacher, "created" a controversy that remains relevant to environmental professionals. Most, however, seem unaware of its relevance. Under the Butler Act:

... it shall be unlawful for any teacher in any of the Universities, Normals and all other public schools of the State which are supported in whole or in part by the public school funds of the State, to teach any theory that denies the story of the Divine Creation of man as taught in the Bible, and to teach instead that man has descended from a lower order of animals.

Defended *pro bono* by attorney Clarence Darrow under arrangement with the American Civil Liberties Union (ACLU), Scopes was fined \$100 for teaching evolution theory. Many Americans' familiarity with these events was enhanced by *Inherit the Wind*, originally a Broadway play in 1955, later a film in 1960, a television movie in 1965, again a Broadway play in 1998, and a book in 2000.

The tide against the teaching of evolution turned in 1968, when the US Supreme Court, in *Epperson v. Arkansas*, ruled that the religious purpose of state prohibitions against teaching evolution in public schools violates the US Constitution's Establishment Clause. In response, the terminology of creationism later "evolved" to "creation science" to qualify its subject matter for

inclusion in science curricula. More recently, it has metamorphosed to "intelligent design" (ID) after no "creation scientist" succeeded at demonstrating a scientific content of "creation science." School districts in some 18 US states recently have faced challenges to science curricula that would require inclusion of ID (Holden, 2004).

Intelligent design acknowledges evolution but claims that its result is so well-suited to the needs of organisms and so obviously nonrandom that an intelligent force must guide it. The implied intelligence, of course, is divine. Scientists and religious thinkers generally agree that the scientific method cannot refute religion, although it can test specific religious beliefs, such as whether the earth is a few thousand years old or billions of years old, or whether it was created in seven days or maybe a tad longer. So, should ID be included in public school science curricula as an alternative to evolution via natural selection (Darwinian evolution)? What is the relevance, if any, to modern environmental professionals?

If science cannot refute religion, then the history of the earth really could include implementation of a divine plan for evolution. Perhaps historians could confirm this scientifically, as with carbon dating and other techniques. Should history curricula include such scientific endeavors and should history classes teach science?

I offer two answers. One is that each field has boundaries, so science curricula should exclude religion just as religion and history curricula should exclude science. Another is that each field acknowledges contributions from other fields, so science curricula should acknowledge contributions of religion and history to advancing science, just as religion and history curricula should acknowledge contributions of science to advancing religion and history. A difficulty in the particular case of ID, however, is that it seems never to have contributed to science, especially to advancing science. To the contrary, it has been blamed for (or credited with!) retarding science.

Intelligent design originated from the religious doctrine of separate creation, that is, God's creation of humans in his (or

her) image. This is devastating for environmental professionals, inasmuch as the most basic premise of our field is that managing ecosystems means managing natural, agricultural, and artificial communities in accordance with sound principles of population and community ecology, all of which accept as true the reality of micro- and macro-evolutionary processes as explicated by extensive scientific research. Creationism, however, removes humans from nature, even from the premise that adverse effects exerted by environmental pollutants in field studies and laboratory bioassays can predict what might happen to "separately-created" people exposed to those same pollutants.

In short, environmental regulation and environmental protection as we know them in the US and abroad rely upon the validity of Darwinian evolution as their most basic premise. The same is true of public health regulation and protection, as exemplified by the Food and Drug Administration's criteria of demonstrating safety and efficacy of pharmaceuticals, in part based upon animal bioassays. Animal evidence, under separate creation, is irrelevant to public health and its protection. Acceptance of separate creation invalidates the premise of environmental and public health protection and thereby undermines them. Environmental professionals have an interest in preserving, protecting, and strengthening environmental and public health protection and, therefore, a responsibility to challenge religion when it masquerades as science.

Intelligent design tries to make its religious fundamentalist premise more palatable in two ways. One way is to accept the course of evolution, and even its scientific basis, up to (but excluding) the point of agreeing on the sufficiency of natural selection to account for it. Yet, that is its Maginot line, where it fails in its own defense, for it cannot argue objectively that the design of sharks is intelligent any more than I can counter that the design of penquins constitutes *incompetent design*.

The second way ID tries to make itself palatable in the public policy arena is to claim merely to be another idea in the arena in which all scientific ideas compete. Intelligent design seeks the middle ground

of fair, open-minded consideration. To illustrate, a recent article in *Science Magazine*, under the headline “Dr. Frist Prescribes ID,” quotes Senate majority leader Bill Frist, MD, of Tennessee (the Scopes state), as saying, “I think today a pluralistic society should have access to a broad range of fact . . . including faith . . . [teaching evolution and ID] doesn’t force any particular theory on anyone” (Holden, 2005).

Who among us can deny such a seemingly innocuous appeal to fairness and inclusiveness? Yet, upon scrutiny, some troubling issues are raised. Dr. Frist and I both accept the fact of faith, but he appears to accept faith as a basis of fact. Both Dr. Frist and I accept the need for students to have access to a broad range of information, but Dr. Frist appears to accept the science classroom as a place for faith to be taught. What, indeed, would be taught? It would appear to be that, under ID, the guiding force of evolution, until identified by the

scientific method, must be divine as a default assumption, until such time as science refutes it. . .but, as indicated earlier, such refutation lies beyond science.

Science has suffered from its own tendency to communicate badly, thereby spawning confusion in the public policy arena. Is the “theory of evolution” termed a theory because it really is uncertain? Some erroneously believe that the word “theory” suggests uncertainty, whereas in biology “evolution theory” rests on ground just as firm as “the theory of relativity” in physics, “graph theory” in math, and “probability theory” in statistics. Indeed, these “theories” rest on firmer ground than, for example, evidence used to convict criminals in our highly demanding judicial system. In fact, the word “theory” in science connotes a body of related phenomena united by a nucleus of scientific principles—something that can be studied and that can be advanced via conducting scientific research.

“Theory” does *not* connote an area in which our knowledge is uncertain. If you like certainties, consider these: science dies where ID qualifies as a null hypothesis, and the marketplace will have little use for science (including environmental science) students seeking to advance it.

## References

- Holden, C. 2004. Creationism: Georgia Backs Off a Bit, but in Other States Battles Heat Up. *Science* 303:1268, February 27.
- Holden, C. 2005. Dr. Frist Prescribes ID. *Science* 309:1313, August 26.

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