

## Twilight for the Enlightenment?

**F**or much of their existence over the past two centuries, Europe and the United States have been societies of questioners: nations in which skepticism has been accepted and even welcomed, and where the culture has been characterized by confidence in science and in rational methods of thought. We owe this tradition in part to the birth of the Scottish Enlightenment of the early 18th century, when the practice of executing religious heretics ended, to be gradually replaced by a developing conviction that substituted faith in experiment for reliance on inherited dogma.

That new tradition, prominently represented by the Scottish philosopher David Hume, supplied important roots for the growth of modernity, and it has served U.S. society well, as it has Europe's. The results of serious, careful experimentation and analysis became a standard for the entry of a discovery or theory into the common culture of citizens and the policies of their governments. Thus, scientific determinations of the age of Earth and the theories of gravity, biological evolution, and the conservation of matter and energy became meaningful scientific anchors of our common understanding.

In the United States, that understanding is now undergoing some dissolution, as some school boards eliminate the teaching of evolution or require that religious versions of creation be represented as “scientific” alternatives. “Intelligent design,” a recent replacement for straight-up creationism, essentially asserts that a sufficient quantity of complexity and beauty is by itself evidence of divine origin—a retrogression to the pre-Darwinian zoologist William Paley, who saw in the elegant construction of a beetle's antenna the work of a Creator.

In 1998, I helped the National Academies produce a book entitled *Teaching About Evolution and the Nature of Science*. At the press conference announcing its publication, I was asked if I knew that most U.S. citizens did not believe that humans descended from other forms. I said I did, but expressed a hope that things might change. Well, things changed in the wrong direction: Alternatives to the teaching of biological evolution are now being debated in no fewer than 40 states. Worse, evolution is not the only science under such challenge. In several school districts, geology materials are being rewritten because their dates for Earth's age are inconsistent with scripture (too old).

Meanwhile, President Bush's Emergency Plan for AIDS Relief policies recommend “evidence-based” risk-reduction strategies: abstinence for youth, fidelity for married couples, and condoms recommended only for infected or high-risk individuals, such as sex workers. Failure rates for condoms are commonly quoted, apparently to discourage their use by young people for risk prevention. Mysteriously, the policy doesn't seem able to cite a failure rate for abstinence.

Finally, certain kinds of science are now proscribed on what amount to religious grounds. Stem cell research is said by its opponents to pose a “moral dilemma.” Yet this well-advertised dilemma does not arise from a confrontation between science and ethical universals. Instead, the objections arise from a particular belief about what constitutes a human life: a belief held by certain religions but not by others. Some researchers, eager to resolve the problem, seek to derive stem cells by techniques that might finesse the controversy. But the claim that the stem cell “dilemma” rests on universal values is a false claim, and for society to accept it to obtain transitory political relief would bring church and state another step closer.

The present wave of evangelical Christianity, uniquely American in its level of participation, would be nothing to worry about were it a matter restricted to individual conviction and to the expressions of groups gathering to worship. It's all right that in the best-selling novels about the “rapture,” the true believers ascend and the rest of us perish painfully. But U.S. society is now experiencing a convergence between religious conviction and partisan loyalty, readily detectable in the statistics of the 2004 election. Some of us who worry about the separation of church and state will accept tablets that display the Ten Commandments on state premises, because they fail to cross a threshold of urgency. But when the religious/political convergence leads to managing the nation's research agenda, its foreign assistance programs, or the high-school curriculum, that marks a really important change in our national life. Twilight for the Enlightenment? Not yet. But as its beneficiaries, we should also be its stewards.

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