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A woman condemned by the truth,  
her daughter saved by a lie...

# THE HERETIC'S DAUGHTER

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## The Fact of Evolution

To the Editor:

Nicholas Wade chides Richard Dawkins in his review of “The Greatest Show on Earth” (Oct. 11) for getting “his knickers in a twist” over contemporary creationism, a worldwide campaign of disinformation on which millions of dollars are being spent annually. What would it take to get Nicholas Wade’s knickers in a twist? The claim that condoms don’t prevent the spread of HIV? Or does religious faith excuse any evil deed? If geologists had to confront a similar propaganda campaign against plate tectonics, they would get a little testy too, I imagine, and physicists might grow impatient if they had to devote half their professional time and energy to fending off claims that quantum mechanics is the work of the devil.

What is going on at The New York Times? Why is it so bizarrely respectful of those who doubt evolution? In recent years The Times has published three preposterous Op-Ed articles by evolution-doubters (Cardinal Christoph Schönborn, Michael J. Behe and Senator Sam Brownback). These no more deserved space in The Times than the opinions of flat-earthers or trance-channelers. In the wake of Judge John E. Jones III’s decision in the Dover, Pa., case that intelligent design is a religious viewpoint that may not be taught in public schools, one would think The Times would finally recognize that the intelligent design campaign is a hoax and dishonest to the core, and stop giving it respectability in its pages.

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The writer is the author of  
“Breaking the Spell” and “Darwin’s Dangerous Idea.”

To the Editor:

In his review of “The Greatest Show on Earth,” Nicholas Wade charges that Richard Dawkins is guilty of a philosophical error. According to Wade, philosophers of science divide scientific propositions into three types — facts, laws and theories — and, contrary to Dawkins’s assertions, evolution, which is plainly a systematic theory, cannot count

as a fact. However, contemporary philosophy of science offers a vastly more intricate vocabulary for thinking about the sciences than that presupposed in Wade’s oversimplified taxonomy and in his confused remarks about “absolute truth.” Although philosophers may quarrel with aspects of Dawkins’s arguments on a range of issues, he has a far firmer and more subtle understanding of the philosophical issues than that manifested in Wade’s review.

The crucial point is that, as Dawkins appreciates, the distinction between theory and fact, in philosophical discussions as in everyday speech, can be drawn in two quite distinct ways. On the one hand, theories are conceived as general systems for explanation and prediction, while facts are specific reports about local events and processes. On the other hand, “theory” is used to suggest that there is room for reasonable doubt, whereas “fact” suggests something so amply confirmed by the evidence that it may be accepted without debate.

Opponents of evolution slide from supposing that evolution is a theory, in the first sense, to concluding that it is (only) a theory, in the second. Any such inference is fallacious, in that many systematic approaches to domains of natural phenomena — like the understanding of chemical reactions in terms of atoms and molecules, and the study of heredity in terms of nucleic acids — are so well supported that they count as facts (in the second sense). Many scientists and philosophers who have written about evolution have pointed out that the contemporary theory that descends from Darwin has the same status — it, too, should count as a “fact.” Dawkins is entirely justified in following them.

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The writer is the John Dewey professor of philosophy at Columbia University and a former editor in chief of *Philosophy of Science*, the journal of the Philosophy of Science Association.