Design: Critical deception?

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By Alan I. Leshner

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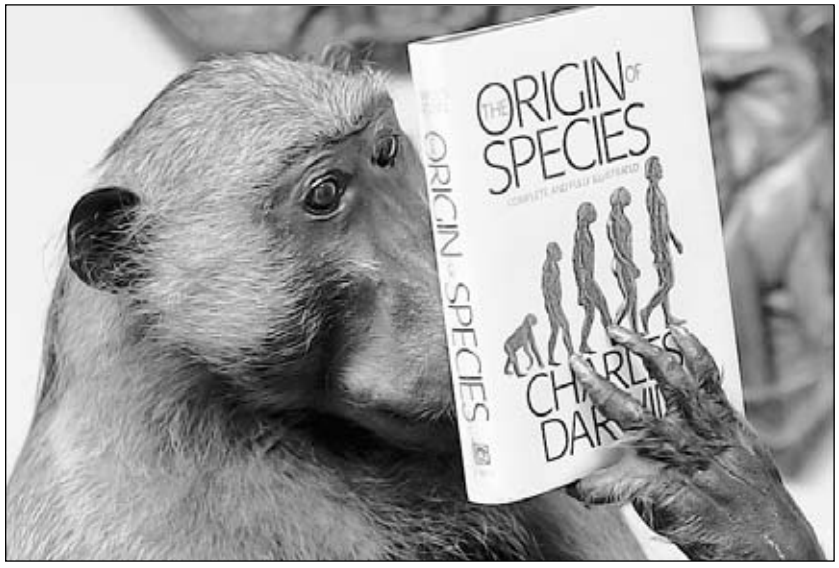
WASHINGTON: Natural selection, the keystone of evolution science, is really a simple concept: The plants or animals that can most effectively adapt to changes in their environments are the most likely to thrive over many generations. Today, as the political campaign season heats up, we can see the workings of evolution in an unexpected locale: among the leaders of the "intelligent design" movement.

In the past year, they have experienced a series of high-profile defeats – in federal court, in legislatures nationwide and on state and local school boards, including the Ohio Board of Education.

Today, in an effort to adapt, they are shifting to a doctrine they call "critical analysis." They downplay intelligent design and the Bible, but seek to validate religious views as alternatives to evolution by requiring that students study the strengths and supposed weaknesses of evolution.

This fall's race for the Ohio state school board will be a testing ground for the emerging approach.

ID advocates who in the past were concerned only with critical analysis of evolution are adding scientific concepts they oppose on religious grounds, including embryonic stem cell research, as subjects where the scientific consensus would come under attack in Ohio's classrooms.



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Although the advocates have crafted their arguments carefully, a critical analysis of their version of critical analysis suggests it's an old product in a new wrapper – and that it poses clear and palpable threats to the education and future of Ohio's children.

To be sure, real critical analysis is the heart of the scientific method. Imagine that a team of scientists comes up with a hypothesis for how cancer cells can be defeated. The hypothesis is researched, tested and vigorously challenged among team members and by outside scientists. As hard evidence accumulates, the hypothesis is proved or disproved.

In this process of discovery, philosophy matters little. An open mind is essential. In the end, only one thing matters: Hard, verifiable evidence.

That process, over the past 150 years, has yielded voluminous evidence for evolution that is accepted without controversy throughout the scientific and medical establishment – in the United States and worldwide.

But critical analysis, as a slogan embraced by the intelligent design movement, turns the scientific method upside-down. Proponents start with their conclusion – that evolution alone cannot explain the origins of humanity – and then construct an argument to undermine evolution. They do no formal experiments to test their hypothesis, and so they have no findings to publish in scientific journals.

They produce no hard evidence. They discover nothing.

That is no surprise. Intelligent design is a religious movement, and religion is a personal matter of faith, a province separate from science. Most mainstream scientists and religious leaders believe evolution does not conflict with their faith, that science and religion can comfortably co-exist.

The trouble comes when intelligent design tries to blur the distinctions.

However scientific their critical analysis may sound, it is not science, but rather a deceptive public-relations campaign designed to create mistrust of science and inject religious ideas into public education. In South Carolina, where critical analysis has been put into the state lesson plan, the movement leader openly has admitted such motives.

Ohio has been the national leader in this campaign. In 2002, it was the first state to adopt standards that called for critical analysis of evolution.

But last year brought two crucial developments: Ohio science leaders offered evidence that misleading and inaccurate elements of the state's critical analysis lesson plan were drawn directly from intelligent design resources. And a federal judge ruled that intelligent design could not be taught alongside science in Dover, Pa., schools; the judge called the critical analysis argument a "sham."

The Ohio school board then took critical analysis out of its lesson plan. But prominent state ID advocates now are expanding their campaign, insisting – incredibly – that critical analysis has nothing to do with intelligent design.

Their effort divides us at a time when we should be united behind efforts to preserve our status as a global powerhouse of innovation.

Science and technology play a vital role in protecting national security, finding new energy resources and curing disease. They are engines of economic renewal and growth.

Science classrooms are where we cultivate the mind-set of discovery and prepare the work force of tomorrow. Those classrooms must be reserved for science.

Rather than confuse students with misleading attacks on evolution and other issues, we need to teach science better than ever to inspire a new generation and secure America's future.