Feature

Why Intelligent Design Isn't Intelligent

Review of: *Unintelligent Design*, by Mark Perakh; 2003; 459 pp.; Prometheus Books (New York); ISBN: 1-5910-2084-0

Reviewed by Mark D. Decker, College of Biological Sciences, General Biology Program, University of Minnesota

As an evolutionary biologist, I am always somewhat vexed by the appearance of each new book aimed at refuting creationism and antievolutionism. After all, evolution *is* the central unifying principle of biology, and it *is* a well-established component of mainstream scientific thinking. I don't see cell biologists constantly having to defend the cell theory or astronomers having to defend the heliocentric model of the solar system. (I do realize, of course, that there are "biblical astronomers" who do claim the Earth is at the center of it all, but even among creationists these folks are viewed as being on the fringe.)

Then I recall those poll results we all hear about from time to time. As an example, the Gallup Organization (1999) reported that 68 percent of those polled favored teaching creationism along with evolution in public schools, and an astounding 40 percent favored *replacing* evolution with creationism. The positions of public school teachers may be similar to those of the general public: a 1990 survey indicated that 40 percent of the science teachers polled believed there were sufficient problems with evolutionary theory to cast doubt on its validity (Eve and Dunn, 1990). There obviously exists a major disconnect between the view of the scientific community and what the general public accepts, and (unfortunately) books like Mark Perakh's *Unintelligent Design* continue to be needed.

In the past year, several books have been published that aim to counter the claims of the latest flavor of creationism, intelligent design (ID), including *God, the Devil, and Darwin: A Critique of Intelligent Design Theory* by Niall Shanks; *Creationism's Trojan Horse: The Wedge of Intelligent Design* by Barbara Forrest and Paul Gross; and *Why Intelligent Design Fails: A Scientific Critique of the New Creationism* by Matt Young and Taner Edis. Although cloaked in the mantle of science, ID is nothing more than the argument offered by the natural theologians of the 1800s: organisms and features of organisms are machine-like in their complexity; human-produced machines are designed; therefore, organisms must also have been designed. The ID movement took off in the mid-1990s with the publication of Michael Behe's *Darwin's Black Box: The Biochemical Challenge to Evolution*. Here, Behe introduced the concept of "irreducible complexity," suggesting that biochemical and physiological systems are so

complex and the parts are so interdependent that they could not have evolved through gradual elaboration (e.g., what good is 1 percent of an eye?). Many biologists have countered the notion of irreducible complexity by demonstrating how Behe's examples of irreducible complexity—running the gamut from mousetraps to blood-clotting mechanisms—could in fact have developed by gradual change.

Unintelligent Design represents a slightly different entry into the increasingly crowded field of anti-ID books. Whereas most of these books are written by biologists and/or philosophers, Perakh is a professor emeritus of physics (California State University, Fullerton) and brings a unique perspective to the discussion. Perakh focuses throughout on the illogical nature of the arguments proposed by ID adherents and on the misuse and misapplication of statistical analysis in ID claims. His position is clear from the start (consider the possible double meaning of the title), and he is generally unrestrained when discussing the ideas proposed by ID advocates.

The first section of the book introduces and analyzes the proposals of three prominent figures in the ID movement, William Dembski, Michael Behe, and Phillip Johnson. Dembski receives the most thorough treatment, because Dembski's published work involves subject areas (probability and information theory) with which Perakh is familiar. Dembski's apparent lack of understanding of basic principles in information theory and physics is discussed, and a major theme of the book is introduced: ID is not scientific inquiry, because the final conclusion, that God, specifically the God of Christianity, has designed life on Earth, is predetermined before any investigation begins. Behe's idea of irreducible complexity is discussed in the next chapter, in which Perakh (a physicist) excuses himself from commenting on the biological aspects of Behe's claims but instead argues that the concept of irreducible complexity is clearly wrong and that complex systems actually tend to be overly complex and would therefore be examples of rather poor design. Johnson receives a fairly scathing treatment as being a "militant dilettante," and Johnson's well-known wedge strategy is renamed the "wedge of arrogance." The discussion and refutation of the ideas of the ID advocates are clear throughout this section, although unless already familiar with the works of Behe and Johnson, the reader may not gain a complete understanding of the exact ideas being refuted.

DOI: 10.1187/cbe.05-02-0071

The book's second section turns to a discussion of a variety of lesser-known figures who have tried to prove the compatibility of the Bible with a scientific understanding of the natural world. As in the previous section, Perakh concentrates on pointing out the problems in these efforts stemming from the authors' basic lack of scientific understanding, their misuse of probability calculations, and the illogical nature of their arguments. In these chapters the book deviates from the first section (and the topic suggested by the book's title), because the various ideas discussed here do not necessarily align with those of ID advocates. Consequently, interest in this section will be confined to those readers who already have some understanding of ID. Perakh's treatment is clear, although more superficial than in the preceding chapters on Dembski, Behe, and Johnson.

The final section of the book is a somewhat odd mélange of chapters on what science is, what probability is, and finally, an extended treatment of recent reports of finding coded messages in the Bible. Perakh states that his discussion of how science operates is idiosyncratic, and he is true to his word. He also can't resist a little political commentary and introduces the concept of "pseudoscience" by spending a couple of pages discussing how Marxism is a prime example. (Perakh once lived in the former Union of Soviet Socialist Republics.) The remainder of this chapter is a somewhat rambling discussion of how science is performed, including the role of models in science, potential errors, and what hypotheses and theories are. Although these topics are germane to the defects in ID, the treatment here is haphazard and unclear, probably especially so to a nonscientist. In fact, I fear this chapter is so incoherent that, after reading it, nonscientists may have even less of an idea of the distinction between science and pseudoscience. I also expected a grand overview of what "bad science" and "pseudoscience" are relative to ID but was disappointed that it never materialized.

Similarly, the goal of the chapter on probability (subtitled "Assorted Comments on Some Uses and Misuses of Probability Theory") is unclear. Perakh does introduce the basics of probability (spending entirely too much time identifying the specific probabilities associated with flipping a coin versus rolling a die), and I'm guessing the average reader would already be comfortable with these concepts. The comments on the cognitive and psychological aspects of probability (e.g., why we are more surprised to get the same

result on several successive rolls of a fair die as opposed to a more "random" pattern) are well taken, but again, specific integration with the earlier content of the book is lacking.

The final chapter deals with claims of prophecies hidden as code in parts of the Bible. This supposed code is revealed by removing all spaces from the original Hebrew text and then looking for messages formed when nonadjacent letters are put together (e.g., by skipping every 10th letter in a passage). Perakh effectively explains the absurdity of these claims and demonstrates that the supposed word of God can be found in a randomly chosen nonsacred Hebrew text (Perakh's choice is *Ziunim Ze Lo Ha Kol*, which he translates as *Screwing is Not Everything*). Although this chapter is interesting and generally relevant, the author devotes too much space to numerous examples of how such "messages" can be found in just about any text and how sensitive the actual message is to the search conditions.

Unintelligent Design is certainly interesting and serves a useful role in the universe of materials on this topic. Part of the enjoyment (at least for an evolutionary biologist) stems from how willing Perakh is to call most of the claims made by ID advocates and others "utter nonsense." At various points Perakh's discussion sinks perilously close to ad hominem attacks (e.g., he titles one chapter "Signature of an Ignoramus"), but he is able to deal with these often outrageous and illogical claims in a civil manner. The book is somewhat verbose and could have benefited from a little editing, both in terms of overall style and in eliminating redundancies.

Although useful, this book may not be the best starting place for those interested in learning the basics of ID and science's response to it. For example, it does not provide a good introduction of the major tenets of ID, and the overall coverage is biased toward the author's expertise in physics. However, the physics orientation of the book makes it an important contribution to the library of resources tackling antievolutionism.

REFERENCES

- Eve, R., and Dunn, D. (1990). Psychic powers, astrology and creationism in the classroom? *Am. Biol. Teach.* 52, 10–21.
- Gallup Organization. (1999). Most Americans support prayer in public schools. <http://www.gallup.com/poll/content/?ci=3730> (accessed 5 April 2005).