Why Scientists Shouldn’t Be Surprised by the Popularity of Intelligent Design

*Perspectives from Psychology*

*The main obstacle standing in the way of the public’s acceptance of evolutionary theory is not a dearth of common sense. Instead, it is the public’s erroneous belief that common sense is a reliable guide to evaluating the natural world.*

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The growing popularity of intelligent design (ID) has left most scientists baffled, even exasperated. From their perspective, the match-up between Darwin’s theory of natural selection and ID would be laughable were it not so worrisome. It pits one theory backed by tens of thousands of peer-reviewed articles and consistent with multiple lines of converging genetic, physiological, and paleontological evidence against an armchair conjecture that has flown under the radar of peer review and has yet to generate a single confirmed scientific prediction. If the contest were a boxing match, the referee would surely have stopped the fight seconds after the opening bell.
Yet, to the dismay of most scientists, large swaths of the American public not only harbor serious doubts about Darwinian theory but believe that ID should be taught in science classes. In a 2005 Gallup poll, 34 percent of Americans said they believed that Darwinian theory was false and 31 percent favored ID as an explanation for the development of species. As of this writing, at least forty states are considering initiatives to include ID in public school science curricula. Early this past November, the Kansas Board of education voted to adopt standards mandating teachers to raise questions about Darwinian theory. Echoing the language of ID advocates, these standards refer to unexplained gaps in the fossil record and other purported challenges to the scientific status of this theory. (Shortly after this article was written, U.S. District Judge John Jones ruled that ID could not be taught as an alternative to Darwinian theory in Dover, Pennsylvania, public schools. It is too early to tell whether this ruling will affect popular support for ID across the country.)

In response to such developments, many scientists have expressed disdain—even ridicule—for believers in ID. Nobel Prize winner James D. Watson, co-discoverer of the structure of DNA, was quoted recently in The New York Times as saying that only people who “put their common sense on hold” doubt evolutionary theory (Wade 2005). Still other scientists have attributed malevolent intent to ID advocates. Expressing bewilderment at the ascendancy of ID among the American public, one of my academic psychology colleagues abroad recently asked me, “What has happened to good sense and decency in the USA?”

Nevertheless, from the standpoint of psychological science, the only thing about ID’s popularity that should surprise us is that so many scientists are surprised by it. Of course, much of the resistance to Darwinian theory is theological, and media coverage of ID proponents has accorded nearly exclusive emphasis to the intimate connection between ID and fundamentalist Christianity. Nevertheless, religion doesn’t tell the whole story.

The other reason for the public’s embrace of intelligent design is its compatibility with intuition. Contra Watson, it is Darwinian evolution, not ID, that is glaringly inconsistent with common sense. Political commentator Patrick J. Buchanan’s (2005) recent statements are illustrative in this regard. Invoking “common sense,” “experience,” and “reason,” Buchanan asked rhetorically, “How can evolution explain the creation of that extraordinary instrument, the human eye?”

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Indeed, from the vantage point of commonplace intuition, it is far more plausible to believe that complex biological structures like the peacock’s tail and elephant’s trunk were shaped by a teleological force than by purposeless processes of mutation and natural selection operating over millions of years. To many laypeople, the latter explanation seems hopelessly farfetched. ID theorists have capitalized on this “argument from personal incredulity,” as biologist Richard Dawkins (1995) terms it, using the sculpted presidential faces on Mount Rushmore as a thought experiment. If an alien visiting the earth were to happen upon these faces, they ask, would it regard them as the outcome of intentional design or of unguided physical processes? The answer is obvious.

The foremost obstacle standing in the way of the public’s acceptance of evolutionary theory is not a dearth of common sense. Instead, it is the public’s erroneous belief that common sense is a dependable guide to evaluating the natural world. Even some prominent scientists and science writers have missed this crucial point. In a widely discussed article, psychologists Joaquin Krueger of Brown University and David Funder of the University of California-Riverside recently urged their colleagues to accord more credence to common sense notions of human nature (Krueger and Funder 2004). And in a New York Times op-ed this past August, science writer John Horgan (2005) called for a heightened emphasis on common sense in the evaluation of scientific theories.

Yet natural science is replete with hundreds of examples demonstrating that common sense is frequently misleading. The world seems flat rather than round. The sun seems to revolve around Earth rather than vice-versa. Objects in motion seem to slow down on their own accord, when in fact they remain in motion unless opposed by a countervailing force.

In my own discipline of psychology, striking violations of our intuitions abound (Lilienfeld 2005). Memory seems to operate like a video camera or tape recorder, but research demonstrates that memory is fallible and reconstructive. Most people believe that shifty eyes are good indicators of lying, but research reveals otherwise. Many people believe that opposites attract in relationships, but research shows that opposites tend to repel. The same goes for scores of other common sense claims regarding human nature, such as the belief that expressing anger is typically better than holding it in, that raising children in similar ways leads to marked similarities in their personalities, that most physically abused children grow up to become abusers themselves, and that the levels of psychiatric hospital admissions, crimes, and suicides increase markedly during full moons.

Of course, none of these demonstrations that common sense is worthless. When it comes to gauging our long-term emotional preferences for people and products, research suggests that we are often better off trusting our gut hunches than engaging in dry, objective analyses of the pros and cons (Gladwell 2005; Myers 2002). Yet when it comes to discerning the workings of the outside world or the three-pound world inside of our cranial cavities, common sense is an exceedingly undependable barometer of the truth.

Ironically, if scientists took the implications of evolutionary theory more seriously, they would understand why. The human brain evolved to increase the probability that the genes of the body it inhabits make their way into subsequent generations. It did not evolve to infer general principles about the operation of the natural world, let alone to understand itself. It also did not evolve to comprehend vast expanses of time, such as the unimaginable tens or hundreds of millions of years over which biological systems evolved. Consequently, it is hardly surprising that many intelligent individuals, like Patrick Buchanan, glance at the remarkably intricate biological world and conclude that it must have been produced by a designer.

To a substantial extent, the fault in the current ID wars lies not with the general public, but with scientists and science educators themselves. Generations of biology, chemistry, and physics instructors have taught their disciplines largely as collections of disembodied findings and facts. Rarely have they emphasized the importance of the scientific method as an essential toolbox of skills designed to prevent us from fooling ourselves. As Alan Cromer (1994) and Lewis Wolpert (1992) have noted, science does not come naturally to any of us, because it often requires us to think in ways that run counter to our common sense (see also McCauley 2000). Mark Twain observed that education requires us to unlearn old habits at least as much as learn new ones. Nowhere is Twain’s maxim truer than in effective science education, which asks us to unlearn our reflexive inclination to uncritically trust our perceptions.

Moreover, scientists and the skeptical community at large have been long been waging the battle against pseudoscience on only a single front. They have treated each dubious claim, whether it be ID, astrology, or the latest quack herbal remedy, as an isolated thinking error to be combated. In doing so, they have forgotten that the popularity of ID is merely one example of a far broader problem, namely the American public’s embrace of pseudoscience in its myriad incarnations. This one-claim-at-a-time approach helps to explain why scientists are losing not only the ID wars, but also the broader war against public belief in pseudoscience. About a quarter of Americans believe that astrology is scientific and about half believe in extrasensory perception despite the virtually wholesale absence of evidence for either assertion. Public acceptance of alternative medicine continues to mount despite controlled studies showing that most popular alternative remedies are ineffective. Slaying each pseudoscientific dragon as it emerges is laudable and at times necessary, but as a long-term strategy against irrationality it is destined to fail.

Indeed, to win the long-term battle against pseudoscience, scientists must look beyond the narrow battles against ID. The real war they must wage is in the classroom. Specifically, scientists need to effect a sea-change in how science is taught at the junior high, high school, and college levels. They must teach students not merely the core knowledge of their subject matter, but also an understanding of why researchers developed scientific methods in the first place, namely as an essential safeguard against human error.

To do so, they must inculcate in students a profound sense of humility regarding their own perceptions and interpretations of the world. They should teach students about optical illusions, which demonstrate that our perceptions can mislead us.
They should show students how their common sense notions regarding the movements of physical objects, like the trajectory of a ball emerging from a spiral, are often incorrect. They should teach students that even highly confident eyewitness reports are frequently inaccurate. Most broadly, they must counteract what Stanford psychologist Lee Ross calls "naive realism"—the deeply ingrained notion that what we see invariably reflects the true state of nature (Ross and Ward 1996).

Scientists may well emerge victorious from the current ID battles. Given that the research evidence is overwhelmingly on their side, they certainly deserve to. Yet as Dawkins (1993) reminds us, ideas can mutate at least as readily as genes. Unless scientists institute a fundamental change in how science is taught, it may be only a matter of time before a new and even more virulent variant of Intelligent Design emerges. Then scientists will again be surprised at the public's uncritical embrace of it, while shaking their heads in disbelief at the average American's lack of common sense.

References