



## ARTICLE

# The Missionary Supposition: Evolution Education and Creationist Culture

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### INTRODUCTION

Americans do not get it. Nearly half of US adults believe that humans were created as is, less than 10 000 years ago (Newport 2012). Those of us who care about evolution education must confront a sobering truth: evolution education does not work. Yet since long before the days of John Scopes, most of us have simply offered more of the same. Evolutionary scientists and science educators, with significant exceptions (Horgan 2012; Long 2011; Meadows 2009; Rosenau 2012), have pinned their hopes on a mistaken idea: For generations, they have assumed that Americans cling to creationist beliefs out of sheer ignorance. Scientists have insisted on the profoundly convincing nature of the scientific evidence for evolution. Mainstream scientists thought they could eliminate creationism's holdouts by simply spreading the word about evolution. But this is not the case. American creationists are often well versed in evolutionary science, sometimes more so than the general public. Yet from the 19th century to the 21st, evolutionary scientists have hoped to spread their evolutionary "gospel" to the unenlightened millions of creationist unbelievers.

Like it or not, the history of evolutionary scientists' attempts to bludgeon their creationist foes into submission bears a sad and striking resemblance to the evangelical impulse among conservative religious creationists. Instead of Scripture, leading scientists have assumed that the sheer weight of scientific evidence for evolution must convert the creationist heathen. In their zeal to heal the benighted nation, these generations of scientists have blundered into the same mistake that bedeviled earlier generations of religious missionaries. They have seen to their chagrin that evidence alone will not convert.

However, unlike most evolution educators, actual religious missionaries have accepted this uncomfortable realization. Among conservative Protestant missionaries, it has become commonplace to acknowledge the following fact: simply sharing an obvious truth with the unenlightened will not produce desired results. Unlike some evolution educators, religious missionaries have long emphasized the need to understand the home cultures of their would-be flocks. Religious missionaries have acknowledged the need to study more than just their own Scriptures. They have trained themselves to learn about those they are trying to reach. Evolution education should never become an exercise in religious conversion, but it is high time for scientists and teachers to notice that not even religious missionaries engage in the naive and blinkered missionary approach still so common among evolution educators.

## EVIDENCE AND ACCEPTANCE

Mistaken assumptions about creationism began at the outset of the modern evolutionary age. As early as 1859, “Darwin’s bulldog” Thomas H Huxley assumed that awareness of the evidence for evolution would quickly and completely convince people of its veracity. Once citizens learned “the facts of the case,” Huxley argued in his 1859 essay “The Darwinian hypothesis,” thinking people would naturally “turn to those views which profess to rest on a scientific basis only” (Huxley 1859:10).

In the United States, popular controversy over evolution only began in earnest in the 1920s. One of the staunchest defenders of evolution in the era of the Scopes trial was geologist and paleontologist Henry Fairfield Osborn. Osborn had made a name for himself in the 1920s as America’s leading voice for science as head of the American Museum of Natural History. In a scathing 1925 attack on creationism, Osborn proclaimed that “The Truth Shall Set You Free” (Osborn 1925, dedication). To Osborn, Darwin was nothing less than a “prophet” of this new Truth (Osborne 1925:7). Evolution, Osborn told famous fundamentalist minister John Roach Straton, was so obviously true that it “may be actually observed in nature by an intelligent child, if the opportunity is afforded” (Osborn 1925:50). The only reason to doubt evolution, Osborn assumed, was sheer ignorance.

Yet creationism did not go away. Despite the dramatic expansion of evolutionary science in the nation’s textbooks beginning in 1960, Americans remained skeptical of scientists’ devotion to evolution ... and scientists remained determined to explain away this widespread skepticism. In 1964, for instance, eminent paleontologist George Gaylord Simpson offered blinkered explanations for the continuing popularity of creationism. Evolution, Simpson insisted, was a glorious and obvious “View of Life”. Simpson derided lingering creationism as mere “irrational prejudice” (Simpson 1964:26). As some children preferred to believe in fantasies such as Santa Claus, Simpson argued, so creationist adults preferred to live in “older worlds” (Simpson 1964:25). The root of creationism, Simpson argued, came from people who violently opposed even the clear explanation of evolution, due to “prejudice, dogma, or superstition” (Simpson 1964:26).

In our day Richard Dawkins has taken up the mantle of Huxley, Osborn, and Simpson. Perhaps most famously in 1989, Dawkins insisted that anyone who did not believe in evolution must be “ignorant, stupid or insane (or wicked, but I’d rather not consider that)” (Dawkins 1989). Throughout his career as evolution’s front man, Dawkins has explained his job as “educating the innocent” (Dawkins 1996:xii), and, in more typical language, as combating the influence of “an exceedingly retarded, primitive version of religion” (Slack 2005). In recent years, Dawkins has expressed consternation that so many teachers seem so friendly to creationist ideas. For instance, one poll of UK teachers found that most did not want to see creationism taught, but yet a strong majority (65%) favored including discussions about creationism in science classes (Ipsos MORI 2008). Why? The only explanation Dawkins could offer is that such teachers must be shockingly “ignorant of science” (Stevenson 2009).

Mainstream scientists tend to make two understandable assumptions. First, scientists assume that once people see the evidence for evolution, they will embrace it. Or, at the very least, once people understand the scientific consensus, they will defer to the authority of professional scientists. Neither of those assumptions holds water. A large number of cre-

ationists are well versed in evolutionary theory. And even when the general public is aware of scientists' preferences, they are not inclined to agree.

### KNOWING ONE'S AUDIENCE

In 2009, as in 1964, 1925, and 1859, there was likely some truth to these science-activists' assumptions. At least some creationists must hold on to religious explanations of the origins of humanity out of stubborn ignorance about the overwhelming scientific evidence for evolution. But more important here is the surprising ignorance of our science "missionaries" about the true contours of creationism.

The most careful studies have demonstrated that creationists are often well informed about the scientific evidence for evolution. Such creationists—and this is the thing that the evolutionary "faith" of some scientists has rendered them incapable of understanding—such creationists simply reject the evidence for evolution. From Huxley through Dawkins, an influential majority of scientists have assumed that mere knowledge of the scientific evidence would lead to acceptance. This simply has not been the case.

Consider the best available evidence. Penn State political scientists Michael Berkman and Eric Plutzer (2010) conducted a large-scale survey of America's high-school biology teachers. With funding from the National Science Foundation, Berkman and Plutzer delved into teachers' beliefs and their educational backgrounds. Among those teachers who teach various forms of creationism—somewhere between one-seventh and one-fifth of America's public-school science teachers—nearly a third had completed a full semester-long college course in evolutionary biology. And more than half had at least a bachelor's degree in science (Berkman and Plutzer 2010:185). These teachers know the evidence for evolution. They just don't believe it.

Unfortunately for scientists and science educators, the views of these creationist teachers reflect the thinking of the general public. As Berkman and Plutzer (2010) note, a slim majority of Americans are aware of the scientific consensus in favor of evolution. Yet even among that 54% majority, a large majority want creationism taught in public schools (Berkman and Plutzer 2010:49). That's right: even those Americans who know that scientists agree on the fact of evolution don't care. They still want creationism in schools. That is a position that is difficult for scientists and their evolutionary allies to understand.

How then, shall we break out of this deadlock? Instead of thinking of creationism as a lack of something, we need to understand it as a powerful and compelling belief system in its own right. This will help us understand evolution education as a complex cultural endeavor, not merely a simple process of exposing ignorant creationist heathen to the Truth of Evolutionary Science.

Hard as it may be to accept, science educators need to take a page from their religious *bête noires*. Christian missionaries these days understand that they must do more than simply plop down in the midst of a non-Christian culture and begin passing out Bibles. Missionaries know that non-Christians are not merely theological blank slates, ignorant of the truths of Christianity and hungry for conversion. Today's missionaries know that attacking existing beliefs as devilish and ridiculous does not yield large numbers of new converts. On the contrary, thoughtful missionaries understand that conversion requires care. Conversion

requires knowledge about home cultures. Conversion requires a long-term cultural process in which both sides share their values and lessons, their hopes and dreams.

These lessons do not come only from “progressive” religious types. Indeed, some of the most fervent calls for cultural understanding come from the conservative evangelical wing of Christian mission work, exactly the same people likely to embrace creationism.

For instance, conservative Christian educator David Harley pulled no punches in his description of earnest missionaries who failed to study host cultures. Harley agreed that such folk amounted to little more than “evangelical toxic waste” (Harley 1995:9). The goal of effective Christian missionaries, Harley insisted, must include “sensitive appreciation to other cultures” (Harley 1995:9).

Similarly, conservative evangelical Protestant missionary educator J Herbert Kane has called it “consummate folly” to engage in missionary work without first engaging in a thorough study of host cultures (Kane 1978:176). Other Christian missionary writers have echoed this call for a focus on a “contextualized indigenous church” (Lingenfelter 1998:13). The only way to succeed in missions, many conservative Christian missionaries believe, is to “learn to cooperate with people who have radically different assumptions about leadership” (Plueddemann 2009:11).

In times gone by, Harley argued, missionaries believed a brief training in Bible studies must be enough to spread the Gospel. Experience had proven, Harley wrote, that without studying host cultures, missionaries floundered. “They experience the pressures of isolation and hostility,” Harley reported. “They see little response to their ministry” (Harley 1995:8).

### **LESSONS FROM THE FIELD**

With a few words translated, that lesson certainly applies to evolution educators. With training only in evolutionary science, teachers are often utterly incapable of teaching creationist students. They feel isolated and besieged, and they certainly see little response to their educational efforts.

For conservative evangelical Protestant missionaries, the need to study and even integrate home cultures does not imply that the evangelical Truth must be watered down. It simply means that cultural sensitivity and familiarity can go a long way toward removing unnecessary roadblocks. Similarly, evolution educators would not need to compromise on the nature of science in order to speak more effectively with creationist students.

Nor does this mean that evolution education must insist on some form of religious conversion. Rather, it only suggests that when evolution educators treat creationists as cultural or intellectual blank slates, evolution education has proven singularly ineffective. In contrast to the assumptions of generations of science advocates from Huxley to Dawkins, creationism is not simply a lack of knowledge about evolution. Rather, in order to engage in more effective evolution education, evolution educators must take a page or two from missiology. We must begin with an understanding that creationism represents a vibrant and decidedly hostile belief system, internally coherent, with a durable set of alternative authorities. In order to teach evolution to resistant students, we must study not only biology and geology, but also history, sociology, and anthropology. If we spend time learning about creationist

culture in addition to mainstream science, we may hope to make a more significant and lasting change in the number of Americans who embrace evolutionary science.

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