

Intelligent Design and the Progress of Science

Charles Darwin, who proposed and popularized the theory of macroevolution by natural selection, once said, “A fair result can be obtained only by fully stating and balancing the facts and arguments on both sides of each question.” This is an astonishing statement, given that many people today seek to defend Darwin’s theory by refusing to consider alternatives. Specifically, many scientists refuse to consider Intelligent Design, a theory which proposes that life was not formed by a random and undirected process but was designed. These scientists assert that there is no evidence against evolution; those who question this orthodoxy are often fired or refused tenure. Many scientists denounce Intelligent Design as antiscience. However, an examination of the concept of science reveals that those who seek to deny academic freedom to Intelligent Design proponents are the real antiscientists. Although Darwin could not explain the origin of species, he could explain how to obtain “a fair result” in science. Modern biologists must follow Darwin’s lead and support academic freedom for all scientists, including supporters of Intelligent Design.

What is science? Philosophers have written whole volumes on this question. Very simply put, the answer relevant to the issue of academic freedom is that science is the search for an improved understanding of the natural world. The philosopher of science Karl R. Popper emphasized that the method scientists use in this search should be characterized by objectivity and willingness to critically examine theories, even their own theories, in an effort to determine which theory is best. Objectivity is recognizing one’s biases and assumptions, not overstating the case for one’s theory, and trying to discover many possible tests that might falsify or corroborate the theory. In short, objectivity is “fully stating and balancing” all the evidence for and against one’s theory.

Popper wrote that we can never know whether a theory is true, but scientists can come closer to the truth by constantly criticizing their theories and trying to falsify them. When scientists discover something that might falsify a theory, this is an opportunity for them to find out more about how the universe works. Science progresses only by fair competition among theories. This means that academic freedom is necessary if science is to progress.

However, scientists frequently are not characterized by this objectivity. Biologists often emphatically state that there is no evidence for design; evolution is as well established as gravity. The evidence reveals that, despite these claims, Intelligent Design cannot be dismissed so easily. There are indeed two sides to this question. For instance, some experiments seem to support the Intelligent Design prediction of front-loading, the idea that biological mechanisms contain advance planning. An example of this is that sponges lack nerve cells – but they have genes which, in more complex organisms, direct nerve formation. Because evolution proceeds by random processes, it predicts that biological mechanisms should not include preparations for future developments. According to Intelligent Design, biological mechanisms should be designed in a way that does not leave future developments to chance. It is certainly not “balancing the facts and arguments” to dogmatically insist that evolution can explain all biological phenomena, even those that appear to contradict it. Intelligent Design offers another possible explanation; to ignore it is to defy the method by which science progresses. If scientists research Intelligent Design, the results can only be beneficial – at least if the goal of scientists is to progress ever closer to scientific truth, rather than to protect their own worldview.

Suppose that someone decided to write a paper based on the idea that the earth is flat and wanted to have the paper published in a scientific journal. All scientists would regard this as extremely absurd. All the evidence indicates that the earth is round; for instance, people have flown around the world in airplanes. Do the defenders of evolution have such evidence against Intelligent Design? Certainly not. Their arguments consist mainly of dogmatic statements, not actual science. With so little bite to their bark, the self-appointed defenders of evolution would better be described as Darwin's Chihuahuas than as Darwin's bulldogs – and perhaps they ought not even be called Darwin's, for Darwin is certainly not the man who trained these Chihuahuas to bark so angrily. Darwin realized the need for academic freedom: proper science is governed by *evidence*, not by dogma or even by majority opinion.

Given their apparent confidence that evolution is true, evolutionists are surprisingly reluctant to consider “all the facts and evidence.” Instead, they often accuse Intelligent Design proponents of trying to sneak religion into science classes at schools. Intelligent Design is not about teaching religion in science classes; it is about the study of design in nature. It is a possible new paradigm for biology. Ironically, while some evolutionists claim that Intelligent Design is all about religion, others complain because it does not identify the designer.

Darwin demonstrated greater intellectual honesty than his modern defenders. In *The Origin of Species*, he considered evidence *against* his theory, not just evidence that supported it. For example, he wrote that the lack of evidence for intermediate forms, organisms that were transitions between species, posed a problem for his theory. Problems like this did not make him reject his theory, because he believed evolution

was the best theory available. Today, though, Intelligent Design presents a good alternative; biologists must be willing to treat it as a valid scientific option.

Darwin also considered what discoveries might falsify his theory, demonstrating the critical attitude Popper said good scientists should have. He wrote that it would falsify his theory if scientists discovered something which could not evolve through successive changes. Today scientists have found several examples of irreducible complexity – which is exactly what Darwin said would falsify his theory. The bacterial flagellum is an example of an irreducibly complex structure. Remove any part, and it could not function as a flagellum. Furthermore, no one has been able to devise an evolutionary method by which the different parts of a bacterial flagellum might have come together to form a flagellum. Biologists greatly admire Darwin; surely they should be willing to follow his lead in acknowledging potential falsifiers of undirected evolution. Instead, they construct the straw man argument that irreducible complexity means that the parts of a structure have no function at all outside that structure. Then they attack this argument. Actually irreducible complexity means that, if any part of a structure is removed, that structure will no longer be able to function *as that specific structure*. This is the case for the bacterial flagellum: it cannot function without all its parts.

True, scientists should not consider a theory falsified until they find that another theory is clearly better. However, if they insist upon closing their minds to all alternative theories, they will have no way to determine whether their theory is truly the best. As Darwin realized, scientists must “fully stat[e] and balanc[e] all the facts and arguments on both sides of each question.” Free competition of theories is necessary to the search for scientific truth, and we cannot have free competition of theories without academic freedom. Let Intelligent Design proponents do research – in the end biology will be all

the better for it, for we will know more about the subject than we did before. The philosopher of science Thomas S. Kuhn emphasized the importance of paradigm shifts in science. Newtonian physics was a good paradigm for a long time, but then it was replaced with Einstein's theory of general relativity. It would have been disastrous had physicists decided that the Newtonian paradigm was the final answer in physics; general relativity opened up new avenues for research, such as the study of black holes, and it even has practical applications. For instance, GPS systems would not work if they were not based on relativistic calculations. In biology today, Intelligent Design offers new possibilities for research; biologists need to accept the possibility of a scientific revolution.

Instead, evolutionists are working to maintain their scientific monopoly. They have even fired or refused to tenure scientists who have questioned the orthodoxy and investigated Intelligent Design; the recent *Expelled* movie highlighted several such cases. Universities have denied these scientists academic freedom in the name of science, yet these actions are contrary to valid scientific procedures – procedures that Darwin himself supported.

What impact does it have on science when scientists refuse to consider alternative theories, upholding one theory as the final answer in scientific truth? If a scientific theory becomes a dogma, the relevant science will degenerate as long as scientists continue to regard that theory as absolute, unquestionable truth. Striving to preserve their dogma, scientists will not permit little details such as actual evidence to get in their way. All evidence must be bent so it conforms to the will of the theory; perhaps scientists will ignore some of the evidence. We see this happening in biology today as scientists assure us that recent experimental results are not instances of front-

loading and therefore do not support Intelligent Design. We see this happening as scientists assure us that the flagellum could certainly have evolved through undirected natural selection – even though they cannot figure out a way this could have happened.

When some scientists refuse to go along with this practice of ignoring the evidence, other scientists can protect the ruling theory only by denying academic freedom to the dissenters. Dissenters are carefully weeded out by being fired or denied tenure. As this process advances, the science increasingly resembles a totalitarian regime. Revising the evidence corresponds to revising history. This regime is run by the majority of scientists rather than by a small group of elites, but that in no way absolves it of its antiscience nature.

At last the science will become simply an organization of people working to preserve a worldview. Of course, they will continue to claim they are doing science – in our society calling an endeavor science greatly increases its respectability. The truth is, though, that when this finally occurs the endeavor is no longer a science. No longer are the people involved seeking to come ever closer to a correct understanding of the natural world. They are seeking to preserve their worldview and ensure that the public regards it as respectable – nothing more.

Fortunately biology has not yet reached this impasse. However, if the denial of academic freedom is not stopped it must ultimately lead to this stagnation. Without academic freedom, we will never know if Intelligent Design is a better paradigm than evolution. Scientists must acknowledge that there is indeed another side to this question; they must be willing to “balance the facts and arguments.”

It will be difficult for academic freedom to be restored, but that is no excuse for doing nothing. It is time for all scientists – and even the public – to take a stand on this

issue. If denying academic freedom becomes unpopular, universities will be less likely to do so. If a large number of scientists decide in favor of academic freedom, it will be very difficult for those who continue to oppose it to make a substantial dent in their number. If biologists continue to deny academic freedom to dissenters, this could impact everyone. What new technology will not be developed if biologists refuse to acknowledge possible theories? We cannot know the cost of the denial of academic freedom, but that does not mean there is no cost. People must realize where the antiscience attitude resides in the Intelligent Design debate: those who seek to deny academic freedom hinder the progress of science and are the true antiscientists. Darwin realized that we must “balanc[e] the facts and arguments on both sides of each question,” yet one would never guess that he said this by considering only the arguments of his defenders. Biologists greatly admire him; defenders of evolution celebrate his birthday every year. Surely the least scientists can do as they honor Darwin is strive to obtain “a fair result” in the manner he specified.