

An essay concerning the controversy

In this essay I will discuss the ongoing controversy on the subject of teaching Intelligent Design (ID) in high school science classes. The objection against teaching ID is simple: it's not science, hence it should not be discussed in the science classes. This is one of the famous conclusions of the *Kitzmiller v. Dover Area School District* lawsuit in the United States. But this controversy is by no means restricted to the US. For instance, the British government has recently come to the same conclusion, saying that ID is based on faith and not on science. And in the Netherlands, when the Dutch minister of education announced that she wanted to allow the teaching of ID, she got overwhelmed by criticism of scientists all over the country who were not only opposed to ID, but more importantly, opposed to be even discussing the matter. As a student of the philosophy of science, I am interested in finding out why there is such a strong opposition against teaching ID, and whether this opposition is justified.

A good philosophical practice is to start such an investigation by defining the used terms. The Discovery Institute, which is the leading ID think tank, defines Intelligent Design as a theory that "*holds that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.*" This definition of ID is filled with all kinds of other terms that could use defining, such as "intelligent cause" and "natural selection". Unfortunately the length of this essay does not allow me to give a proper definition for all these terms. For our purposes it will suffice to give an example of what ID proponents mean with Intelligent Design. Biology students are taught that DNA molecules carry information about the development and functioning of almost all living organisms. The information in DNA is codified similar to how modern digital computer codes work. One interesting question about DNA is: how did this encoded information come into existence? ID

proponents will argue that, just like humans have designed computer code, the code in DNA has been designed by an intelligence as well.

The above example of an ID argument is one of the most well known and typical ID arguments. If we look at this simplified argument from a common sense point of view, we can already come to some startling conclusions. First of all, the argument seems to be scientific. The exact definition of science has been debated for centuries, and still is under debate, but from the position of the common human, talk about DNA and the origin of information within DNA seems to be “science-talk”. Secondly, the argument is quite compelling. That means, it seems as if the argument is correct. It’s a fact that humans are intelligent designers that can design encoded information, and intuitively it seems like ID is a better hypothesis to explain codified information than the alternative, which is necessity or chance, or a mix of both. Finally, it seems that the argument does not include any specifically religious components. Of course the conclusion that a intelligent designer is responsible for the encoded information in DNA seems to suggest a very powerful entity which is responsible for creating all life on this planet. But this argument doesn’t entail that you should become Christian, or Jewish, or Muslim. It in fact doesn’t entail any specific religion at all, nor does this argument produce any new kind of religion. Obviously some religious people will use this argument to their own advantage, just like some religious people have used the Big Bang theory to their own advantage, but that did not make the Big Bang theory a religious phenomenon.

Hold on for a moment. The criticism against ID is that it is unscientific and religious, but I just concluded that one of the most famous ID arguments seems to be clearly a scientific matter with no religious components. In fact, all arguments presented by ID proponents, whether biological, cosmological or philosophical, have the exact same structure. In all cases,

they conclude that a phenomenon in nature must have been intelligently designed because of specific elements within this phenomenon that either can only occur when designed or which are best explained as being designed. If this is the case, then why do so many scientists, and we are talking here about the majority of all scientists, agree that ID is not science and should not be taught in the class room? And why do they use arguments which seem to be blatantly wrong?

There are a couple of good answers to these questions. Firstly, I must confess that there actually is religion hidden in the ID arguments. It must be noted that the already mentioned Discovery Institute seems to be a Christian organization. Most, though not all, of their fellows are religious. And most importantly, as we have seen the ID hypothesis allows some kind of superior Intelligence to interfere in nature; an Intelligence which is easily identified with the Judeo-Christian God. So in short, it seems that the theory of ID is religiously motivated.

I think this is the part where the entire world stumbles upon. Entire volumes are written on the subject of ID scientists being creationists, of them wanting to bring theocracy back to life, and of them wanting to use the class room as a way to spread the Word of God. And I submit that it is a good question whether religiously motivated theories have a place in the science class room. But we shall see that there actually is no real problem in allowing such theories in the class room. The reason is simple, as we have seen the theories themselves are not religious by nature, its only the motivation which we can identify as religious. But the motivation is just the thing which in the end is inconsequential to science. Isaac Newton was a religiously motivated scientist, clearly believing that God has intelligently designed everything, and that through doing science he was uncovering God's handiwork. But the motivation of uncovering God's handiwork does not make Newton's theories any less scientific. The same goes for

other religious scientists in the past, and my guess is that this is also true for religious scientists in the present. The scientific method does not allow personal motivation to interfere with good science. Although there has been a lot of criticism on the scientific method lately, and it is by no means clear what the scientific method exactly is, we can at least see it in action in the instance of ID. Although they appear to be religiously motivated, it seems that they have succeeded in crafting their hypothesis without using any religious elements, as we have seen earlier.

There is another important objection to teaching ID which I have not discussed yet. Not only do a lot of scientists agree that ID is not science, but they also agree that ID is not true. This is somewhat strange. I would expect a scientist who says that ID is not science to come up with arguments why ID is not science and leave it at that. But very often I encounter texts that start by arguing that ID is not science and then continue to discuss the various substantive arguments that ID proponents make and discard them. These ID adversaries note for instance that the information in DNA could be the result of necessity and chance and don't have to be designed. Some scientists even go on and show how they think necessity and chance could account for the information in DNA. To use the philosophical term, it seems that these adversaries are trying to *falsify* the ID hypothesis that they disagree with. Falsification is one of the foundations of scientific discourse. A lot of scientists agree that a good scientific theory must be falsifiable. So by trying to falsify ID these adversaries actually show that the ID hypothesis is falsifiable and thus help to show that ID is science! It amazes me that a lot of scientists fall into this fallacy without noticing that they are contradicting themselves.

Although the 'truth' in this matter is not fully known yet, we can at least conclude that there are way more ID adversaries than ID proponents. There are a lot of scientists who believe that

necessity and chance is the cause of almost everything in the natural world, versus only a handful of ID scientists. I would not say that the fact that more scientists are anti-ID than pro-ID is an argument against ID. As the philosopher Bertrand Russell stated: "The fact that an opinion has been widely held is no evidence that it is not utterly absurd; indeed, in view of the silliness of the majority of mankind, a widespread belief is more likely to be foolish than sensible." Thus the argument that ID is false because it has such a small amount of proponents, is not justifiable.

ID adversaries note that given the fact that evolution (and thus necessity and chance) is currently the overarching scientific theory, and ID, even if true, only focuses on parts of the theory of evolution, it would be unwise to teach ID in the science class. I think this is a good point. I remember having been taught Newtonian physics for years in high school. Only when I took some advanced physics courses at my university I started to understand that Newtonian physics produce an incorrect view of the world. But it would not be feasible to start off teaching physics courses in high school by discussing the theories of relativity and quantum mechanics. Those theories are way too advanced. Same goes for philosophy, you start off with learning about the ancient and medieval philosophical issues before you get to the contemporary, advanced discussions. I would thus argue that before you can present the criticism of ID, students first need to know what evolution is, or they will not understand ID's criticism. Luckily the Discovery institute and other ID proponents are not suggesting to completely replace the theory of evolution, it still needs to be taught, but as Darwin states himself: "A fair result can be obtained only by fully stating and balancing the facts and arguments on both sides of each question". Evolution and ID try to answer the same question using the same facts but different hypotheses. This is the core of great science, and the fact

that neither theory is yet complete but still has gaps allows for additional research to strengthen, or falsify, either of those theories.

I have shown in this essay that most objections against teaching ID in class rooms are not substantive but based on conflicting world views rather than real arguments. The ID hypothesis is quite new in its current form though, so it should rather be mentioned as a side note after having discussed evolution thoroughly. That way, as Darwin stated himself, all the facts have been set out, and if a student wants to learn more about ID, he is free to do additional research himself.