Philosophy 1100 – Introduction to Ethics

Lecture 4 – Skepticism concerning Science

The following question was posed in Lecture 3, on survival of death:

Question 12

Do you agree or disagree with the following view?

"While scientific theories are usually based upon the evidence, some theories – such as the theory of evolution – are accepted even though they are not well supported, simply because of their anti-religious implications."

A. I strongly agree with that statement.

B. I'm inclined to agree with that statement.

C. I am uncertain about this, or I want to pass on this question.

D. I'm inclined to disagree with that statement.

E. I strongly disagree with that statement.

It emerged that about a quarter of the class either strongly agreed, or were inclined to agree, with the view that there are some scientific theories that are not supported by good evidence, but which virtually all scientists in the relevant area of science nevertheless accept because those theories have irreligious implications.

Religion, Science, and the History of Science

In this lecture, I want to indicate, at least briefly, why I think that such skepticism concerning the grounds that scientists have for beliefs that negatively impinge upon religion is not justified.

There are various ways in which one might examine the question of whether the above view of scientists is plausible. My approach will be to consider the history of the development of what I think are the most relevant sciences – namely, physics, geology and paleontology, psychology, and biology. I shall argue that when one does this, there are excellent reasons for thinking that in those areas, scientific views that have a negative bearing upon some religious beliefs have come to be accepted by scientists simply because of they have strong evidential support, and not because the scientists inn question have some bias against religion.

1. Physics

1. If one goes back to, say, the time of Isaac Newton (1642-1727), what one would find, I think, is that the religious views of physicists in those days did not differ very significantly from those of ordinary people.

2. Newton himself was very religious, and devoted much of his life to theology. Thus, Newton held that "God is known from his works", and left behind four

million words on theology. Thus one scholar (Stephen David Snobelen) has claimed that, Newton was one of the greatest lay theologians of his age.

3. Physics today, however, is incompatible with Biblically-based estimates of the age of the Earth, and an overwhelming proportion of physicists holds that the Earth is about 4.6 billion years old, and the universe much older.

4. What accounts for this change? If physicists in Newton's day were about as religious as other people, how is it that virtually all physicists today accept theories that conflict with a fundamentalist view of the Bible?

5. There is excellent evidence that the Earth and the universe are very old. For example:

(a) There is excellent evidence that uranium-238 has a half-life of about 4.5 billion years, and this together with facts about the proportion of uranium-238 and its decay products found in rocks provides exceptionally strong grounds for concluding that the Earth is about 4.6 billion years old.

(b) Galaxies are moving away from each other, and one can, by measuring the red shift, determine the speed at which they are doing so. This, in turn, together with estimates of the average distance between galaxies, enables one to work out how long the process of expansion of the universe has been going on. That leads to the conclusion that the universe is several billion years old.

2. Geology and Paleontology

1. Geologists, by studying the Earth, noticed that there were different layers (or strata) that contained the fossils of different types of animals, and they also noticed that these strata were ordered in a certain way, regardless of what part of the Earth one looked at.

2. It was also found that there were fossils – such as dinosaur fossils – that did not correspond either to any living animals, or to any descriptions of animals that are found in historical documents.

3. It was also found, for example, that the layer that contains dinosaur fossils does not contain any human fossils. So there is excellent reason for thinking, for example, that dinosaurs did not overlap with humans.

4. These findings are inconsistent with the story of creation in *Genesis*. We are told, for example, that Adam named all of the animals.

5. These results were arrived at before the time of Darwin, so they were not influenced in any way by the Theory of Evolution.

3. Psychology

1. If one goes back in time, psychology was initially done by philosophers – such as Plato and Aristotle in the case of the ancient Greeks, and then, much later, by philosophers such as René Descartes (1596-1650). Most of those philosophers believed that humans involved some sort of immaterial mind or soul, although there were a few exceptions, such as Thomas Hobbes (1588-1679), who were materialists.

2. Why, then, is it that very few psychologists today believe that humans have immaterial minds or souls? What accounts for that shift?

3. Again, as in the case of physics, and in the case of geology and paleontology, what has led scientists working in the area of psychology to conclusions that conflict with the views found in many religions are simply certain empirical findings.

4. Especially crucial, in particular, have been discoveries concerning the location of psychological capacities in different regions of the brain – though, as I sketched earlier in this lecture, there are a multitude of relevant factors.

4. Biology

1. At the time of Darwin (1809-1882), there was, I would think, very little difference between the religious beliefs of the vast majority of biologists and the religious beliefs of ordinary people.

2. Darwin himself accepted the idea that species had been created by God.

3. When did Darwin change his mind, and why? The answer is that the observations he made during the period from 1831 to 1836 when he served as naturalist aboard the H.M.S. Beagle led, first, to his seeing that there were any f acts that were completely unexplained by the view that species had all been created by God, and secondly, to his discovery of a theory that could explain those facts.

4. When Darwin published his book “The Origin of Species" in 1859, there may have been only one other biologist – namely, Alfred Russel Wallace – who accepted the idea of evolution. But over time, the vast majority of biologists came to accept the theory of evolution.

5. If the religious views of scientists working in biology did not differ, in 1859, from those of ordinary people, what explains the subsequent adoption of the Theory of Evolution, if not the fact that the evidence for it was very strong?

6. If the evidence for evolution is not very strong, what accounts for the fact that very many religious people accept it?

7. Similarly, if the evidence for evolution is not very strong, what accounts for the fact that the Roman Catholic Church has decided that accept acceptance of evolution is not incompatible with the teachings of the Catholic Church?

In short, when one considers the history of biology, there appears to be very strong evidence both against the view that there is not really strong evidence for the Theory of Evolution, and against the view that the reason that scientists accept it is because of its anti-religious implications.

5. Summing Up

When one looks at the history of science – be it physics, or geology, or paleontology, or psychology, or biology – what one finds does not support the

idea that scientists accept theories that have anti-religious implications precisely for that reason.

On the contrary, what one finds is that the theories in question came to be accepted because of the strong empirical evidence supporting those theories.