

# Science and Presuppositions

by

Charles Mosley

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“Science covers the broad field of knowledge that deals with observed facts and the relationships among those facts.” Worldbook Encyclopedia Volume 17 c. 1991 page 191

What we can know from science? Science comes from a Greek word meaning knowledge. In our society Science is considered by many as the repository of authoritative knowledge. It has a high cultural authority<sup>1</sup>. Thomas Huxley, writing in 1887<sup>2</sup> noted that this popular status within our society had been achieved because of the many benefits the application of scientific discoveries had brought about. In his day Huxley could cite the advances of the Industrial Revolution. Today we point to advances in communication, as well.

These advances came about because scientific methodology discovered phenomena that could be reliably repeated. This was accomplished through rigorous use of a method consisting of observations, development of hypothesis about relationships to explain the observations (phenomena) , and tests to determine the predictive value of the hypothesis. If the hypothesis had high predictive value they could be used to make useful applications of the phenomena and even make new discoveries.

Philosophers have long noted that science rests upon a set of presuppositions, a view of the fundamental nature of reality, if you will. Applying these presuppositions to observed facts, suggested relations between these observations are put forward. The suggested relations are the hypothesis of the scientific method. This means hypothesis attempt to explain things in light of assumed realities.

Over the years many approaches to developing hypothesis have been employed. This includes modeling<sup>3</sup>. The model development requires asking questions to determine factors that will be the basis for which data to use in constructing the model. In this case a direction for the

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<sup>1</sup> This concept is mentioned by Dr. John Lennox in “The Testimony of Science” in footnote below.

<sup>2</sup> The Progress of Science <http://aleph0.clarku.edu/huxley/CE1/ProSci.html>

<sup>3</sup> David J. Glass and Ned Hall, Cell 134, August 8, 2008 ©2008 Elsevier Inc ; pgs 378 -371 [http://ac.els-cdn.com/S0092867408009537/1-s2.0-S0092867408009537-main.pdf?\\_tid=5d502da4-e5c0-11e2-8786-00000aab0f26&acdnat=1373062693\\_87b7a94da9a9e2f7de711db130cf5ddc](http://ac.els-cdn.com/S0092867408009537/1-s2.0-S0092867408009537-main.pdf?_tid=5d502da4-e5c0-11e2-8786-00000aab0f26&acdnat=1373062693_87b7a94da9a9e2f7de711db130cf5ddc)

question or questions must be decided, while other directions are not pursued. Another approach called the paradigm shift was analyzed by Thomas Kuhn, in his 1962 landmark book, "The Structure of Scientific Revolutions". Karl Popper's position that a legitimate hypothesis must be falsifiable was an early 20<sup>th</sup> century criterion.<sup>4</sup>

Regardless of what frame work is used to propose relationships among observed facts the issue of presuppositions can't be escaped. What I mean by presupposition is the unquestioned starting point. We start our reasoning, making connections, from some point. That starting point can affect the range and authority of our conclusions.

*Dr. Massimo Pigliucci, Chair of the Philosophy Department at City University of New York, Lehman College, observes regarding hypothesis, " ... there is no way to conclusively prove a hypothesis correct, because there is always the possibility that a new set of observations will disprove it. The bad news is that, unbeknownst to most scientists, philosophers have also made a very compelling argument that hypotheses cannot be decisively disproved either. Falsification doesn't work, because one can always tweak the hypothesis enough to accommodate the initially discordant data, or question some of the ancillary hypotheses, or even question the accuracy of the data itself. (This is not as far fetched as it may seem given the complexity of the machinery used nowadays to produce scientific data, from particle colliders to genomic sequencers.)"*<sup>5</sup>

Dr. John Lennox, an Oxford professor, speaking of the radio show "Let My People Think with Ravi Zacharias" on March 02, 2013<sup>6</sup>, noted that there is no basic incompatibility between faith in science and faith in God. He pointed out that since ancient times there have been two great positions regarding the material universe. One termed materialism, is that the material universe is all that exists. The material world is self existent. The second termed theism is that the material universe is insufficient to itself. There is a cause to the material beyond itself. Understanding the ancient issue makes it clear that each position regarding the material universe is saying where the regression of explaining relationships ends, and sufficient agency is assumed to exist.

Science is about looking at natural facts, that is to say material things, and finding explanations of the relations among those things. This does not mean the explanations are true in the absolute sense, it means they can be used to make predictions. This leads us to the presuppositions that are used to formulate scientific explanations. One writer explains, "General presuppositions are necessary conditions of the whole scientific enterprise. There are, at least,

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<sup>4</sup> <http://philosophyfaculty.ucsd.edu/faculty/rarneson/Courses/popperphil1.pdf>

<sup>5</sup> [http://philosophynow.org/issues/74/Hypotheses\\_Forget\\_About\\_It](http://philosophynow.org/issues/74/Hypotheses_Forget_About_It)

<sup>6</sup> <http://www.oneplace.com/ministries/let-my-people-think/player/the-testimony-of-science-part-1-of-2-327125.html>

four of them. The first is the existence of a natural world with a consistency which is independent of our will. The second is the orderly character of this world. The third is the contingency of the natural order. And the fourth is the human ability to know this natural contingent order. The entire scientific enterprise would be impossible without these presuppositions, which cannot be proved within science itself.”<sup>7</sup> Put another way scientists, assume an orderly world, with effects and causes, which is external to themselves and which they can examine and explain to others, but they cannot prove this assumption. If a circumstance arises where these

Understanding the above helps us to understand the limitations of science. It will be clear that, while science has attained a great deal of cultural authority, it is not adequate as a source of all valid or knowable truth. The fact that it has certain presuppositions demonstrates this.

A further observation is that some things are beyond science, that are claimed as science. Evolution, creation, and history in general being cases in point. The presupposition of replication can't be applied in each of these knowledge areas. Also the induction approach is forward looking from a scientific view point, it does not assure that what is predicted always or even occurred in the past. Indeed the inductive approach uses (assumes the ability to adequately observe the past) to predict the future. For instance the landscape features around Mount St. Helen, if someone “willing forgets” about the volcano explosion, might be concluded to be the result of erosion over hundreds, if not thousands of years of erosion. Similarly the deductive approach is dependent on the premises, and missing or faulty premises increase the likelihood of errant conclusions.

A consideration of the preceding observations makes it clear that science is useful, but it is not all knowing. For instance how can science prove that the past has been uniform or that the future will be. How are even historical events replicated in their historical context, even if they are part of trends. If miracles or other discontinuous events occur then it is outside the scope of science to prove or disprove the event. It may be confirmed by reports or as an alternate explanation under a different set of presuppositions.

Upon this realization, it seems that science can't avoid the tinge, if not outright embrace of religion. For instance why can nature be said to be orderly. Is it so because it is or because an orderly agent has designed it so? If the universe has competing Gods how can we anticipate order. If all comes by chance how do we anticipate. These are all questions that look to the basic nature of reality. A decidedly religious undertaking. What or who is the true agency of

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<sup>7</sup> Articulating science and theology: presuppositions and implications of science  
Mariano Artigas

Communication presented in the *Sixth European Conference on Science and Theology (ESSAT VI)*,  
Cracovia (Poland), March 26-31, 1996  
Unpublished text.

<http://www.unav.es/cryf/articulatingsciencieandtheology.html>

our existence. Can we conceive that what exists today would not in some degree be related to that agency?

What it seems science is attempting through an inductive process is find that agency acting? This of course involves a lot of assumptions regarding the currency of that agency. Religion uses a more deductive approach saying that the evidence points toward that agency, whether in the past or future. This can be by starting with the agency, as science has done in its presuppositions, interpreting facts assuming this agency, or by trying to observe particulars and then postulating more and more grand causes until we reach the "Great Cause", which is the great search for the "Great Unity".

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