

How the Christian Worldview Grounds Modern Science

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When embarking upon a long trip, the route you end up travelling may be determined by the first turn. In a similar sense, the entire direction of the modern scientific enterprise follows from the answers given to the most fundamental questions of what science is and how it should operate. Since the dawn of the discipline of natural science, different views have emerged as to the role played by objectivity, rationality, paradigms and worldviews. In the end, though, it is the Christian worldview that is able to provide adequate grounding for scientific pursuits.

Del Ratzsch appeals to three characteristics upon which he argues that any definition of natural science must be based: the empirical, the objective and the rational.¹ He then incorporates those into a working definition.

A natural science is a theoretical explanatory discipline that objectively addresses natural phenomena within the general constraints that (1) its theories must be rationally connectable to generally specifiable empirical phenomena and that (2) it normally does not leave the natural realm for the concepts employed in its explanations.²

However, even this definition implicitly includes various necessary presuppositions. For example, before any journey of scientific discovery may be embarked upon, a scientist must first assume that nature is intelligible, that it is uniform and that information we gather from observable entities may be extrapolated to learn something of unobservable entities.³

Even once these presuppositions are accepted, however, questions still remain. For example, the traditional view popular from the seventeenth to mid-twentieth centuries held that

¹ Del Ratzsch, *Science & Its Limits: The Natural Sciences in Christian Perspective* (Downers Grove, IL: Intervarsity Press, 2000), 13.

² Ibid.

³ Ibid., 14-15.

science could guarantee objectivity when the scientist collected and organized data free of all prejudices. Empiricality was protected by relying solely upon the empirical data. Finally, rationality was assured so long as practitioners relied exclusively on the use of induction.⁴ Positivists took these traditional principles even further. As Ratzsch explained, positivism amounted to “an attempt to reduce all knowledge to scientific knowledge, all truths to empirical, scientific truths and all methods of knowing to empirical, scientific methods.”⁵

Against this strict view emerged the thought of Thomas Kuhn and to greater degree the postmodernists. Kuhn’s conception of science was based upon the notion of “paradigm,” a standard which (as explained by Ratzsch) “contained not only theoretical postulates but also presuppositions about the world that those postulates were to fit, about how they ought to fit that world, about the proper procedures for trying to make them fit and criteria for judging when such attempts were or were not successful.”⁶ Kuhn believed that the individual components of one paradigm do not stand in one-to-one relationship with the components of any other. Thus, a person whose thought is aligned with one paradigm will be incapable of grasping all of another.⁷ However, while our knowledge was inevitably gained through the lens of a paradigm, Kuhn still believed that an independent reality existed which was immune to subjective inclinations.⁸

⁴ Ibid., 18.

⁵ Ibid., 28.

⁶ Ibid., 41.

⁷ Ibid., 48.

⁸ Ibid., 50.

Postmodernists have taken Kuhn's views even further, not only contending that we cannot get at an objective picture of reality, but such a reality may not even exist.⁹ We can only understand reality through language, itself a socio-cultural construct. Language is inherently laden with the hierarchies, power structures and prejudices of the culture which created it.¹⁰ If a socially constructed mechanism is the only means by which we can understand reality, then we can never arrive at any objective truths that are not tainted by that socio-cultural construct.

The positivist and postmodern extremes both have inherent difficulties. The positivists relied upon the "verifiability criterion of meaning," i.e., "no statement is even meaningful unless either it is in principle possible to empirically verify it (or at least to test it) or else it is 'analytic.'"¹¹ But the criterion cannot satisfy its own standard. Postmodernists claim we cannot arrive at an objective understanding of reality, but that statement itself implicitly claims to be an objective understanding of reality. Most modern views of science lie somewhere in between.

For example, most modern philosophers of science recognize that our perspectives at least in part contribute to the manner in which we conceive our conclusions.¹² They also accept that the resolution of scientific disputes is not purely a matter of "rote, mechanical processes" as claimed by the positivists but involves the application of certain values, as had been argued by Kuhn.¹³ Our choice of theories is influenced by more than just the empirical. Our background

⁹ Ibid., 55.

¹⁰ Ibid., 54.

¹¹ Ibid., 28.

¹² Ibid., 58.

¹³ Ibid., 61.

beliefs play a role as well.¹⁴ However, regardless of the influence that is exerted by our background beliefs, there is still a central core of perceptions that we are able to share with our fellow humans, making cross-paradigm dialogue and evaluation possible.¹⁵

Because worldview is recognized as an appropriate element of the scientific endeavor, Christians should feel free to embark upon the scientific mission from within the realm of their Christian worldview. After all, it is the Christian, not the secular worldview that can ground the foundational assumptions of science. If the universe is the result of God's creative act, i.e., the work of a rational mind, then we would expect it to be intelligible and uniform. Further, a Christian worldview opens the door to explanations of the data that are not available to the naturalist, and this allows for a more robust scientific inquiry.

The history of philosophical thought as to the definition, presuppositions and framework of natural science has gone from one extreme to the other, eventually settling into a middle ground. Traditionally, objectivity and rationality were seen as mandating complete independence from background beliefs. With Kuhn and the postmodernists, the pendulum swung to the other extreme, sometimes going so far as to claim metanarratives completely controlled our perceptions and that objective reality may not exist. Today, most philosophers of science agree that our background beliefs play a role in shaping our evaluation of theories, but there is still a core of perceptions that are equally available to everyone. Therefore, modern science should have a place for the Christian worldview as an interpretative framework. When compared with its competitors, it provides a superior foundation and enables the scientist to consider options that would not otherwise be open.

¹⁴ Ibid., 66.

¹⁵ Ibid., 67.