

## **An Evangelical Scientist Rescues Methodological Naturalism<sup>1</sup>**

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Reasons to Believe

### **Abstract**

Among many evangelicals, methodological naturalism (MdN) is maligned as an undue commitment to naturalism and a tack taken only to exclude intelligent design or creation arguments from scientific discourse. Many antagonists of MdN argue that strict MdN as the only valid methodology for conducting research should be abandoned. As an evangelical Christian and a research scientist in molecular and cellular biology, I will argue that this criticism is misguided and counterproductive to science and to the science-faith discourse. I believe the harsh position against MdN results from a series of misunderstandings: (1) misunderstanding the difference between methodological naturalism and metaphysical naturalism, (2) misunderstanding the proper demarcation of science and scientific pursuits, (3) equivocating science with human reasoning and human rationality, and (4) neglecting a robust Christian theology that entails methodological naturalism as the proper methodology for scientific research and demarcation of scientific pursuits. These misunderstandings lead some Christians to make an unnecessary call to redefine science and contribute to an anemic view of Christian theology. I will argue that properly understanding and demarcating science within its sphere sovereignty and its constraints of methodological naturalism is the appropriate way to access God's revelation in creation and ground a Christian apologetic for research scientists.

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## The Challenge

Is it inconsistent for someone who follows Jesus and believes in miracles like his resurrection and who is engaged in scientific research to embrace methodological naturalism (MdN) in the pursuit of their work? Many Christian scholars contend it is. Yet, many professionals engaged in scientific research insist that MdN is the *only* appropriate methodology for conducting their research.

I will make my case as an evangelical Christian who believes in strict MdN for conducting scientific research (both in design and implementation of experiments) by arguing that others reach this tension over MdN—from both sides—by *conflating critical concepts*. I will identify these concepts, distinguish critical differences, and argue for MdN on the basis of those definitions and distinctions and by offering a coherent Christian theological basis for doing so.

## Defining Methodological Naturalism

In 1982, Paul de Vries coined the term “methodological naturalism” when he was faculty and founder of the Center for Applied Christian Ethics at Wheaton College. De Vries, currently president of the New York Divinity School, described MdN saying, “The natural sciences are limited by method to naturalistic foci. By method they must seek answers to their questions within nature, within the non-personal and contingent created order, and not anywhere else. Thus, the natural sciences are limited by what I call *methodological naturalism*” (emphasis mine).<sup>2</sup>

Many argue for strict MdN in order to rule out alternative definitions of science that open the doors of science to such things as the Intelligent Design (ID) movement or religious creation claims. Yet, in accordance with de Vries definition, I, as others have done, will argue for strict MdN due to the nature and limitations, or proper demarcation, of science itself.

## Distinction of a Methodology from a Philosophical Commitment

First, one should make clear that methodological naturalism is not the same as *metaphysical* (or philosophical) *naturalism* (PhN). Part of the problem that leads many to reject the claims of MdN as the appropriate means for science is that they do not make this distinction. *The distinction between the two is critical*. New Testament scholar Michael Licona, donning a professional historian’s hat, offers a helpful and brief distinction between the two:

Metaphysical naturalism is sometimes confused with methodological naturalism. The latter is the process by which a scientist or historian looks for a natural cause of an event. Although she does not rule out the possibility of a supernatural

2 Quoted by Keith B. Miller, “The Misguided Attack on Methodological Naturalism,” in *For the Rock Record: Geologists on Intelligent Design*, ed. Jill S. Schneiderman and Warren D. Allmon (Berkeley: University of California Press, 2009), 123.

cause, she limits herself only to consideration of the natural. Metaphysical naturalism goes further, claiming that everything has a natural cause. Supernatural causes are *a priori* ruled out as possibilities. Although little difference exists in practice between methodological naturalism and metaphysical naturalism, the latter is guided more by the metaphysics of the practitioner.<sup>3</sup>

The language Licona employs and his concluding statement in particular are telling. In describing MdN he says, “She limits herself only to the *consideration* of the natural” (emphasis mine). And in comparing methodological and metaphysical naturalism he says, “*little difference exists in practice between [the two]*” (emphasis mine).

Although Licona lumps the scientist and historian together, in regard to science (although not history), it would be beneficial to tweak Licona’s definition to, “She limits herself only to the *examination* of the natural.” This is an important distinction because it allows a clearer differentiation between one’s methodological and metaphysical commitments as one looks for a natural cause of an event.<sup>4</sup> If one insists on using “consideration” instead of “examination,” then one begins to conflate the two. (This conflation is due to another confusion I will address a bit later in my argument.) One could also avoid conflating a methodological approach with a philosophical commitment to naturalism by adding the qualifying phrase, “in her experimentation.” Importantly, either of these suggested changes affirms an inherent demarcation of the nature of science itself. Much of the tension over MdN, unfortunately, persists because of a failure to faithfully understand the demarcation of science.

## The Demarcation and Nature of Science

This brings us to my second point, understanding the demarcation and nature of science. Science is a set of processes or assays employed for examining natural phenomena—those involving matter, energy, space, and time. Thus, science has limits. Some current limits are dynamic and will be pushed further and further out into currently unknown areas as technology and instrumentation become more sophisticated. For this reason, we may never be able to pinpoint some boundaries of science’s limits. But this fact does not negate the reality that science has limits, some of which are definite and innate to science itself. For example, scientific

3 Michael R. Licona, *The Resurrection of Jesus: A New Historiographical Approach* (Downers Grove, IL: IVP Academic, 2010), 142 n. 28.

4 Another possible solution is to abandon the terminology of *naturalism* in one’s methodology altogether, e.g. substituting *methodological subsidiarity* as suggested by Graham Cole in his address to the 2018 Dabar Conference. Borrowing concepts from Michael Polanyi, *The Study of Man* (Mansfield Center, CT: Martino, 1959), 30–31, Cole suggests the work of research science occurs in one’s focal awareness, describing natural phenomena, while one’s philosophical commitments are entailed in one’s subsidiary awareness.

methodologies cannot ultimately differentiate philosophical claims regarding the nature of reality. Science will never be able to differentiate between a philosophical commitment that states, “All that exists is matter and energy,” and one that claims, “There are things that exist that transcend matter and energy and physical laws and entities.” Science cannot differentiate between these two because scientific experimentation and inquiry are constrained to examine only natural phenomena that occur within the material realm of reality. *We have to be faithful to understand and employ science for what it is.*

Experimental science or the natural sciences are performed through direct observations and measurements with or without specialized instrumentation. Physical phenomena are observed, data captured, variables regulated, and data re-collected. Doing science entails physical measurements of physical phenomena. It is essential to the scientific process that the investigator control variables to sequester and identify causal relationships. We scrutinize the physical regularities of nature, its cause-and-effect relationships, identify laws that account for properties and activities of various natural phenomena and build models (real or conceptual) about how nature works through scientific processes. Science is a systematic activity for identifying physical properties and mechanisms that underlie links of natural cause-and-effect relationships. The rigors of our scientific investigation of nature have led to great success and gains in reliable knowledge of how things work.

### **Advantage—Natural Science**

The natural sciences fare better in respect to gaining systematic knowledge in their spheres of inquiry in comparison to the humanities or social sciences in that the objects of inquiry in the hard sciences lend themselves to a more precise study of such properties and mechanisms. As my philosophy colleague puts it, “Science is the best way to know things that science is suited to study.” Or sometimes, “Obtaining knowledge about the nature of reality is easier in the natural sciences than in the humanities and social sciences.” This is true because science is well suited to study natural phenomena and has had great success in prediction and application. This success has led to a *preeminence* of science in the pursuit of knowledge, but all the more reason to be careful to realize that science has limits—both definite and innate as well as indefinite and dynamic. If we fail to recognize this, we may extrapolate science beyond its limits or conflate it with something else.

So, to my second point, it really is a misunderstanding or misappropriation of science and its methodologies that suggests Christians should not employ methodological naturalism in all scientific design and experimentation. But it is also a grave misunderstanding or blind spot to think that because science cannot address

a particular phenomenon, it is *unreasonable* or *irrational* to consider the phenomenon as data in evaluating competing theories.

### Conflating Science and Knowledge

*Here lies another critical distinction.* Science is not, despite its etymological root, equivalent to knowledge. Scientific inferences and human reasoning are not synonymous; yet they too are frequently conflated. Statements or arguments contextualizing something as scientific are often made due to a preeminence of science and scientific theories in contemporary societies. If something is scientific we are likely to give it more credence. Additionally, people often erroneously label claims or conclusions as “scientific” while failing to recognize philosophical naturalism at work. Philosophical naturalism masquerades as scientific reasoning by distorting or extrapolating science beyond its limits, stating that that which is being determined scientifically is all that there is in reality. This is a philosophical conjecture, not a scientific conclusion or statement.

The conflation of science and knowledge and more often of scientific reasoning and human reasoning is pervasive. The definition of science debated between ID advocates and opponents regarding the 2007 Kansas Science Standards exemplifies this: “Science is a human activity of systematically seeking natural explanations for what we observe in the world around us.”<sup>5</sup> ID advocates, seeking inclusion of intelligent design theories in science education, tried to change the language by replacing “natural” with “logical” rendering, “Science is a human activity of systematically seeking logical explanations for what we observe in the world around us.” This is an unfortunately poor definition of science, and the proposed fix by ID advocates is no better.

Rendering the definition of science as the “explanation for what we observe,” like Licona’s use of “consideration,” employs language that could represent stepping outside normative empirical science into interpretations driven by philosophical biases. As Alvin Plantinga puts it, “Explanation is a slippery notion and a complex phenomenon.”<sup>6</sup> Although science involves explanations and model building, we must recognize that in the process of abductively reasoning to best explanations, philosophical views are imported into the process.

Scientific inferences are a subset of human reasoning and can be used in support of naturalistic *or* theistic narratives. Furthermore, scientific reasoning is not a restriction to be put on all human reasoning. In other words, our reasoning to best *explanations* is not limited to *consider only* scientifically derived inferences.

Let’s consider an example.

5 Miller, “Misguided Attack” in *For the Rock Record*, 118, see also p. 137 n. 1.

6 Alvin Plantinga, “Methodological Naturalism?,” *Origins and Design* 18.1 (1997).

## **Human Reasoning and a Proper Demarcation of Science**

If I put you in the hypothetical situation: that of an observer who knows only this, a full-grown, living box turtle is balanced and stuck on the top of a fence post of a barbed wire fence. You will almost certainly rule out various explanations as to how the turtle got there. It did not climb the fence post. It did not climb the barbed wire. It was not left there by a predator. It did not fall from any cliff or rock. It was not launched there by a well-timed and perfectly positioned earthquake or meteorite strike. In fact, based on strong inferences of past experience, your most reasonable explanation is that some prankster picked up the turtle and placed it atop the post. This is not a scientific explanation, but it is a rational one. Even though you may approach the likelihood of possible explanations through experimental design and implementation, scientific testing will get you only so far. Collect turtles, attempt to have them climb the post or wire. Observe only failed outcomes. Create earthquake (EQ)-like conditions in a scenario where a fence post and turtle are exposed to such conditions. Increase intensity and vary durations of EQ conditions to see if you can ever launch the turtle to the position atop the fence post without disrupting it from that position once attained. Run the experiment 50 times, 500 times. Observe only failed outcomes.

At some point, human reasoning will intervene and suggest that your scientific inquiries might be futile. Although you have not yet falsified the theory that a non-human explanation is possible, human reasoning will lead one to a confident (but not necessarily certain) conclusion that the turtle was placed there by a person. Your confidence in your explanation is very high even in the absence of direct evidence that any such prankster exists or has been seen in the area. Scientific observations contributed to your conclusion, but they were not the sum of the data considered in abductively reasoning to the best conclusion or theory as to how the turtle arrived atop the fence post.

The lack of absolute certainty in your conclusion creates a problem but also opportunities. The problem is that one may never exhaust one's commitment to find a naturalistic explanation for a phenomenon. One may find practical reasons for abandoning further investigation, but often the strong intuition of some researchers leads them to persist and succeed where others may have long ago abandoned experimentation. Ultimately the individual in the research community is the only one that can determine when enough is seemingly enough. The opportunities invite us to maintain intellectual humility in all pursuits of truth about reality—about what we do and don't, can and can't know, and to recognize and articulate that science is not equivalent to rationality or human reason. Science is conducted by rational minds, and experimental findings contribute to human reasoning and determinations about the nature of reality. But science provides only

one set of tools for examining human nature, human experience, and the nature of reality.

Human rationality and reason are not constrained to consider, imagine, or intuit only those things that can be scientifically confirmed or described. In other words, human reasoning is not synonymous with scientific determinations. Employing scientific methodologies, we generate data for consideration, but fitting that data to a model necessitates reasoning within an underlying worldview. Human reasoning is employed in scientific experimentation and determinations, but human reasoning is not limited to consider only the scientifically verifiable. Interpretation and model development require more than the scientific data alone.

As Gerald Rau puts it, “Interpreting data requires logical inferences to: pass judgment, offer explanations, build models, and submit conclusions. Empirical evidence cannot stand alone in the process of science nor in any endeavor to understand the world in which we live.”<sup>7</sup> In other words, science does not explain anything; *scientists* explain things. And scientists employ experimental findings, human reasoning, *and* philosophical commitments to make explanations.

Another way to consider the distinction between scientific determinations and philosophical commitments is to understand that all scientific explanations are naturalistic, but not all naturalistic *explanations* are necessarily scientific. Naturalistic explanations that describe specific mechanisms, regularities, and relationships of cause and effect in the natural world are scientific, but many more may be just naturalistic storytelling employing non-descriptive naturalistic place holders (e.g., “punctuated equilibrium” or “emergent property”) to link data and render a naturalistic inference or best explanation. Recognizing this is extraordinarily important, especially if the true nature of reality includes an immaterial or supra-natural realm.

One other problem in separating a methodological from a metaphysical position in rendering explanations is that if one adopts the position of philosophical naturalism, one is left with little but methodological naturalism for making sense of reality. For this reason, many Christians and non-Christians mistakenly think that MdN favors philosophical naturalism, but that’s not true.<sup>8</sup> Methodological naturalism is neutral. It flows and follows from a proper understanding of science from within a Christian theology as well as (or better than) from a philosophical commitment to naturalism.

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7 Gerald Rau, *Mapping the Origins Debate: Six Models for the Origin of Everything* (Downers Grove, IL: IVP Academic, 2012), 25.

8 Paul Draper, “God, Science, and Naturalism,” in *The Oxford Handbook of Philosophy and Religion*, ed. William J. Wainwright (Oxford University Press, 2005), 299–300.

## Christian Theology Provides Robust Grounding for Methodological Naturalism in Science

Christian theology supports methodological naturalism within the sphere of scientific studies of nature. It is the Creator and creation story of the Abrahamic faiths that accounts for the uniformity, regularity, and intelligibility of the universe. A rational creator accounts for the rationality of nature. Nature is not self-explanatory; nature itself needs an explanation. Its origins must be eternally existent or began to exist through the mediation of some being or force that transcends nature. The laws of physics and mathematics reliably concord with our comprehension of the universe and this need not be. As Einstein once said, “The most incomprehensible thing about the universe is that it is comprehensible.”<sup>9</sup> Furthermore, the regularity of nature provides for all scientific inquiry; without it science as a discipline would fail. The rationality of the natural order concords far better with creation by a rational entity than with creation by unguided forces.

As evangelicals, we believe that the heart of the gospel message is that the Creator God desires restored relationship with all people made in his image. Because reconciliation is desired, God has made abundant revelation. Our Creator God has self-disclosed truth through revelation in nature, and in Scripture, and ultimately in the God-man, Jesus Christ. It is our shared endeavor as evangelical scholars, across our various disciplines, to unpack God’s revelation in all of creation for all of humanity. As Abraham Kuyper puts it, “No one brain, one genius, one talent is given the ability to understand the fullness of *the Word* in creation, but all people together have the task of making this comprehension possible” (emphasis original).<sup>10</sup>

It is therefore impeccably reasonable to think that God delights in our scientific discoveries, in our growing understanding and acknowledgement of his glory in the elegant and intricate creation. As Proverbs 25:2 states, “It is the glory of God to conceal things, but the glory of kings [and scientists] is to search things out” (RSV).

This verse makes it clear that God did not create just for creation’s sake. He created for the glory of the revelation of his majesty and greatness. Truly, nature is richly endowed for our good and ongoing discovery. The regularities and reliability of physical and chemical laws allow for our continued exploration of the extravagance and glory of creation. It is our Creator who has endowed creation in such a way as to not only reveal himself to us but to supply us with a means to flourish and care for creation better. It is the apologetic of the evangelical

9 Albert Einstein, *Ideas and Opinions: Based on “Mein Weltbild,”* trans. Sonja Bargmann (New York: Bonanza, 1954), 292.

10 Abraham Kuyper, “Common Grace in Science,” *Abraham Kuyper: A Centennial Reader*, ed. James D. Bratt (Grand Rapids: Eerdmans, 1998), 445.



Christian scientist to highlight evidences of the extravagant and loving God of the Christian gospel in each new discovery. Indeed, there is no field of study, no academic discipline, no aspect in all of creation that does not fall under the sovereignty of God. As evangelical scholars, it is our joy to discover the truth of the gospel through various methodologies in various fields of study, including the natural sciences.

## Conclusion

In still another unnecessary area of tension between Christians and scientists, I offer a way forward that benefits both groups. By de-conflating methodological and philosophical naturalism and recognizing the limitations and proper demarcation of science, researchers are free to pursue knowledge of underlying cause-and-effect mechanisms and relationships through scientific experimentation constrained by methodological naturalism. Methodological naturalism is the proper approach in design and experimentation where the integrity of research science may be pursued within its sphere sovereignty according to its limitations.

Embracing scientific discoveries as one source of data for consideration, we clear the ground for human reasoning where philosophical commitments and statements may be rightly identified and owned by their respective holders. As we foster dialogue, we should cease striving to make all human reasoning fall under the constraints of scientific reasoning, which may lead to an empiricist and positivist position that perhaps few of us might wish to defend or espouse.

When we wisely and humbly acknowledge the limitations of scientific inquiry and pursuits, it is reasonable and rational—within a worldview not constrained by philosophical naturalism—to conclude that the mind, if not also the hand, of one who transcends and orders nature has been at work. A robust Christian theology calls the scientist and all scholars to develop rigorous apologetics as we study and uncover the complexities and fullness of God's revelation. It is not inconsistent for a Christian to pursue science according to strict methodological naturalism. On the contrary, it is a good and beautiful place to stand and live in the humble pursuit of truth in science and in faithful theology.