

## The Many Inadequate Justifications of Methodological Naturalism

Robert A. Larmer\*

Received: 24 May 2018 / Accepted: 4 September 2018

*Abstract:* Contrary to proponents' claims, methodological naturalism is not metaphysically neutral. Consequently, its acceptance as a practice requires justification. Unfortunately for its advocates, attempts to justify it are failures. It cannot be defended as a definition, or a self-imposed limitation, of science, nor, more modestly, as an inductively justified commitment to natural causes. As a practice, it functions not to further scientific investigation, but rather to impose an explanatory straitjacket.


*Keywords:* Ad hominem fallacy; nomological science; historical science; supernatural agency; inductive generalization; Robert Pennock.

### 1. Introduction

In 1983, Paul de Vries, a philosophy professor at Wheaton, a conservative Christian liberal arts college, advocated the practice of what he termed 'methodological naturalism' in relating scientific and religious

---

\* University of New Brunswick

 Department of Philosophy, University of New Brunswick, 19 Macaulay Lane, Carleton Hall 211, Fredericton NB, E3B 5A3, Canada

 [rlarmer@unb.ca](mailto:rlarmer@unb.ca)



beliefs.<sup>1</sup> His claim was that, as a matter of method, scientists, whatever their metaphysical beliefs, should always posit a natural cause for any event that takes place in the natural world. Since then, proponents, both secular and religious, insist that adopting such a method in no way commits one to any specific metaphysical position, since science is naturalistic only on the level of its methodology (MN), but is neutral with respect to metaphysics. Thus, given its presumed metaphysical neutrality, methodological naturalism provides a way in which science can be pursued by those with differing world-views.

The presumed insulation of methodological naturalism from any kind of metaphysical commitment is an illusion (Larmer 2003, 113–30). What one thinks to be the nature of reality cannot be neatly separated from the methods one uses to investigate it.<sup>2</sup> If, for example, one believes that there exist,

---

<sup>1</sup> Numbers writes that the term

‘methodological naturalism’ seems to have been coined by the philosopher Paul de Vries, then at Wheaton College, who introduced it at a conference in 1983 in a paper subsequently published as “Naturalism in the Natural Sciences,” *Christian Scholar’s Review*, 15 (1986), 388–396. De Vries distinguished between what he called “methodological naturalism,” a disciplinary method that says nothing about God’s existence, and “metaphysical naturalism,” which “denies the existence of a transcendent God.” (Numbers 2003, 320, Note 2)

Davis, however, notes the earlier use of the term, most notably by Edgar Brightman.

<sup>2</sup> Burt, commenting on the presumption that methodology need have no links to metaphysics, notes that

There is no escape from metaphysics, that is, from the final implications of any proposition or set of propositions. The only way to avoid becoming a metaphysician is to say nothing [...] If you cannot avoid metaphysics, what kind of metaphysics are you likely to cherish when you sturdily suppose yourself to be free from the abomination. Of course, it goes without saying that in this case your metaphysics will be held uncritically because it is unconscious; moreover, it will be passed on to others far more readily than your other notions, inasmuch as it will be propagated by insinuation rather than by direct argument [...] The history of mind reveals pretty clearly that the thinker who decries metaphysics will actually hold metaphysical

or may possibly exist, mental states which play a causal role in determining bodily behaviour, it makes no sense to adopt methodological behaviourism, since its adoption guarantees the development of psychological theories in which mental states either do not exist or play no causal role in such behaviour. Only if one has already established beyond reasonable doubt that mental states do not exist or, if they do exist, play no causal role does it make sense to insist on methodological behaviorism as a prerequisite of developing psychological theories. To insist on its employment in the absence of compelling reasons for disbelieving in the existence of mental states or their causal powers is to beg the question of whether its adoption is justified. Similarly, if one has not established beyond reasonable doubt that supernatural agents do not exist, or, if they do, they never intervene on natural processes, does it make sense to insist that explanations of physical events must restrict themselves to natural causes.

A further reason to question the easy acceptance of methodological naturalism is that there is no clear way to demarcate science from non-science.<sup>3</sup>

---

notions of three main types. For one thing, he will share the ideas of his age on ultimate questions, so far as such ideas do not run counter to his interests or awaken his criticism. [...] In the second place, if he be a man engaged in any important inquiry, he must have a method, and *he will be under a strong and constant temptation to make a metaphysics out of his method, that is, to suppose the universe ultimately of such a sort that his method must be appropriate and successful* [...] Finally, since human nature demands metaphysics for its full intellectual satisfaction, no great mind can wholly avoid playing with ultimate questions [...] But, inasmuch, as the positivist mind has failed to school itself in careful metaphysical thinking, its ventures at such points will be apt to appear pitiful, inadequate, or even fantastic. (Burt 1932, 224–26, emphasis added)

<sup>3</sup> The failure of the demarcation quest to provide a litmus test between ‘science’ and ‘non-science’ is generally acknowledged in the literature. This should come as no surprise, since, as John Earman notes, “it does not much matter what label one sticks on a particular assertion or an enterprise; the interesting questions are whether the assertion merits belief and whether the enterprise is conducive to producing well-founded belief” (Earman 2000, 3). A recent attempt to defend the possibility of such a litmus test is (Pigliucci and Boudry eds., 2013).

Not only do proposed demarcation criteria prove inadequate, they are typically employed polemically as discrediting devices, as “*machines de guerre*” (Laudan 1996),<sup>4</sup> whereby one can dismiss an opponent’s position as ‘unscientific’ and thus unworthy of being taken seriously. Thus, for example, the arguments made by intelligent design theorists are routinely dismissed without serious examination, on the grounds they are deemed ‘unscientific.’<sup>5</sup>

It is clear, therefore, that proponents of adopting methodological naturalism need to justify their insistence that scientific investigation must never take into consideration the possibility of a supernatural cause of observed phenomena. This, as we shall see, is no easy task.

## 2. Proposed justifications of methodological naturalism

- (1) *The motivations of those questioning methodological naturalism are suspect.*

Those questioning methodological naturalism as a prerequisite of science are frequently dismissed on the basis that they are ‘creationists.’ Unfortunately, such dismissals equivocate on the term ‘creationist’ to the extent that it comes to mean anyone who questions the acceptance of methodological naturalism. If, however, one takes the term ‘creationist’ in its more usual

---

<sup>4</sup> Laudan goes on to comment that “many of those most closely associated with the demarcation issue have a hidden [...] (and sometimes not so hidden) agenda of various sorts” and that “if we [...] stand [...] on the side of reason, we ought to drop terms like ‘pseudo-science’ and ‘unscientific’ from our vocabulary; they are just hollow phrases which do only emotive work for us” (Laudan 1996, 344, 349).

<sup>5</sup> Such a strategy may be rhetorically effective, nevertheless it is logically fallacious. As Stephen Dillely remarks

mere terminological labels do not change epistemic properties. Just as theists cannot lower the epistemic plausibility of [naturalist] hypotheses merely by deeming them ‘arrogant bluster’ so naturalists cannot lower the epistemic plausibility of God hypotheses by labeling them ‘unscientific.’ As an epistemic matter, each rival hypothesis must be evaluated on its evidential and conceptual merits. (Dillely 2010, 136).

use as referring to those who believe the earth is less than 20,000 years old, then it is clear there are many critics of methodological naturalism who are not creationists, and indeed not even theists.<sup>6</sup>

More fundamentally, such a justification fails, since it is clearly a case of the *ad hominem* fallacy. Whatever the motivations of those questioning methodological naturalism what should really be at issue is the arguments they present. If one wants to show that Richard Dawkins views on evolution are mistaken one must examine his arguments and not simply observe that he finds evolution an attractive theory on the basis that it provides a materialist origins story. Similarly, if one wants to dismiss critics of methodological naturalism one must do it by showing their arguments to be mistaken, rather than questioning their motives.

(2) *Science in principle excludes any recognition of the supernatural.*

Many proponents of methodological naturalism insist that, by definition, science cannot ever contemplate the existence of supernatural causes. Robert Pennock insists that methodological naturalism is “a scientific ground rule” (Pennock 2011, 184), that is to say, “as a point of method science does not countenance appeals to the supernatural” (Pennock 2011, 185).<sup>7</sup> On such a view, methodological naturalism constitutes a necessary, though not sufficient, condition of scientific investigation, and thus serves to at least partially demarcate science from other disciplines.

There are at least two reasons to reject such a justification of methodological naturalism. First, in the absence of argument as to why science must exclude recognition of the supernatural, it amounts to an arbitrary stipula-

---

<sup>6</sup> See, for example, (Monton 2013).

<sup>7</sup> A variation on this strategy is to insist that if the postulation of a ‘supernatural’ cause for a physical phenomenon became necessary, then that cause must be conceived as natural, since, by definition, the supernatural is “unknowable by means of scientific inquiry” (Forrest 2000, 14). She insists that “such confirmation would only demonstrate that this newly verified aspect of reality had all along never been supernatural at all” (Forrest 2000, 25). This, of course, empties the terms ‘natural’ and ‘supernatural’ of all content, since even God, understood as the ontologically distinct, and creator, *ex nihilo*, of all other entities, would in such circumstances have to be conceived as ‘natural.’

tion. If one wants to claim that science prohibits ever recognizing a supernatural cause then one must provide reasons why this is the case, not simply define such an embargo into existence.

Second, demarcationist proposals are notorious for failing to provide necessary or sufficient conditions to distinguish science from other disciplines.<sup>8</sup> Making the important distinction between what may be termed ‘nomological’ science and ‘historical’ science further compounds the difficulty inherent in such an enterprise. Paul Draper notes that

scientists engaged in nomological science formulate laws, models and other interesting if-then generalizations, often testing them by experiment and prediction, and making inductive generalizations based on observable data. In historical science, on the other hand, not all causal explanations fit the covering law model and many hypotheses about the past cannot be falsified and cannot be tested by prediction or experiment. Instead, they are judged on their simplicity, their fit with general background knowledge about the world, and their ability to explain specific known facts. What all this shows is that methodological naturalism cannot be adequately defended by describing something called *the* scientific method then arguing that it cannot be applied to the supernatural. For more likely than not, the method described will be characteristic of nomological science, while appeals to the supernatural would naturally be used to answer historical questions. (Draper 2005, 290)

(3) *Supernatural causation implies a chaotic universe.*

Not infrequently, advocates of methodological naturalism, attempt to justify its acceptance by claiming that taking seriously the possibility of supernatural agency implies a chaotic universe. They maintain that taking seriously such a possibility implies that “God may simply [...] zap anything into or out of existence [...] in any situation, any pattern (or lack of

---

<sup>8</sup> Del Ratzsch makes the point that “definitional attempts [to justify methodological naturalism] are *prima facie* problematic for the simple reason that no one actually has a completely workable definition of science (nor even necessary and sufficient conditions), and that proposed definitions have been historically unstable” (Ratzsch 2004, 441).

pattern) of data is compatible with the general hypothesis of a supernatural agent unconstrained by natural law” (Pennock 2001, 89). “We cannot live simultaneously in a world of natural causation and of miracles, for if one miracle can occur, there is no limit” (Lewontin 1983, xxvi) and “at every instant all physical regularities may be ruptured and a totally unforeseeable set of events may occur” (Lewontin 1983, xxvi).

Aside from the deep conceptual confusion involved in suggesting that choosing a certain methodology determines whether in fact the universe is chaotic, several criticisms are in order as concerns this attempted justification. First, it is generally recognized that science originated, developed, and took place in a Western European Christian intellectual environment. As Del Ratzsch notes,

science works only in a very particular sort of reality and only with a very particular sort of conception of reality. The requisite picture—of a comprehensible, intelligible, uniform, predictable, even beautiful cosmos which can in principle make sense to finite minds like ours when observed via perceptual faculties like ours—is a picture of a cosmos structured like a *creation*. Although details are disputed, that Christian doctrines of creation and of divine voluntarism provided a hospitable matrix for science is not in dispute.

At the very least, it is historically clear that belief in the reality, of supernatural causation did not hinder the development of science.<sup>9</sup>

Second, it does not follow that admitting the reality of supernatural agency would imply that ‘anything goes,’ that on the hypothesis of theism God is liable at any moment to zap anything into or out of existence.” What God freely wills will be accordance with his nature and not simply arbitrary or irrational. As Evan Fales comments, “it does not follow from the fact

---

<sup>9</sup> Ratzsch notes that,

It is not necessarily irrelevant that it was not until nature was looked at as a product of design—i.e. as a creation—that science itself really got off the ground. Blanket stipulative prohibitions (definitional or otherwise) against *exactly* that initiating intuition would seem to demand extraordinary justification. (Ratzsch 2004, 443)

that God is a free agent that His purposes and behavior (including the occasional performance of a miracle) cannot be made intelligible or studied in systematic ways” (Fales 2010, 5).

Third, those maintaining the reality of supernatural causation offer criteria by which phenomena best understood as requiring a supernatural cause as opposed to a natural cause can be identified.<sup>10</sup> One may wish to dispute whether these criteria are effective, but the fact that they are proposed and that supernatural causation is advocated in the realm of ‘historical’ as opposed to ‘nomological’ science, makes clear that openness to the possibility of supernatural causation does not commit one to abandoning belief in an orderly universe, amenable to human investigation.

- (4) *Allowing for the possibility of supernatural causation is a ‘science-stopper.’*

Defenders of methodological naturalism often make the claim that taking seriously the possibility of supernatural causation is a ‘science-stopper.’ It is argued that at the psychological level scientists will become lazy and liable to abandon the search for natural causes for phenomena, and at the conceptual level that explanations in terms of supernatural causes are not falsifiable. Warnings abound that any openness to considering a supernatural cause will bring the scientific enterprise to a grinding halt.<sup>11</sup>

Once again, there are reasons to question such an assumption. We have already noted that belief in the reality of supernatural agency did not hinder scientific development.<sup>12</sup> We have also noted that the postulation of supernatural causation typically occurs regarding ‘historical’ rather than ‘nomological’ science.

---

<sup>10</sup> See, for example, (Larmer 2014, 79–87).

<sup>11</sup> Pennock claims that if “supernatural explanations are permitted [...] all empirical investigation beyond the purely descriptive could cease, for scientists would have a ready-made answer for everything (Pennock 2001, 90).

<sup>12</sup> Ratzsch notes that,

neither science or scientists may be vulnerable to the temptations of intellectual sloth as presumed. Indeed, the history of science would suggest that the risks are not that great *on precisely this point*. His-



Neither is it the case that once proposed, or even accepted, that supernatural explanations cannot be challenged or discarded. Competing explanatory hypotheses are hardly unknown to science. To take a case in point, the fact that biological entities exhibit the informational patterns typically associated with intelligent agency, and that scientific investigation tends to emphasize the inadequacy of solely natural causes to account for the genesis of such structures, in no way implies that research cannot, or is not likely to, continue regarding the possibility of demonstrating that a plausible naturalistic account of such origins can be given.<sup>13</sup> If such a plausible account emerges then it will constitute reason to reject an explanation in terms of supernatural agency.<sup>14</sup>

---

torically, no disaster such as that darkly suggested by Pennock occurred. In fact, if the history of science told by *critics* of teleology, creationism, intelligent design, and the like is accurate, during the 19<sup>th</sup> century previously entrenched supernatural design explanations *lost* the scientific battle to mere fledgling naturalistic explanations—hardly what one would expect if merely allowing currently *disenfranchised* supernatural design explanations into the conversation were likely to destroy current mature and robust natural science. (Ratzsch 2004, 441)

<sup>13</sup> Ratzsch observes that,

claims that design theories threaten the utter ruin of science [...] [are] less than wholly persuasive [...] Despite the popularity of such claims, I have not seen the slightest hint of even a presumptive example within the last several *centuries* where some design-friendly theory has challenged a ‘proper’ scientific theory and managed to displace, or even a case where some scientifically improper design theory which has (‘unfortunately’) already been in place within science has itself survived the challenges of legitimate science, thereby destroying legitimate scientific progress. (Ratzsch 2004, 138)

<sup>14</sup> Dembski comments that,

If it could be shown that biological systems that are wonderfully complex, elegant and integrated [...] could have been formed by a gradual Darwinian process [...] then intelligent design would be refuted on the general grounds that one does not invoke intelligent causes when undirected natural causes will do. In that case Ockham’s

Further, the insistence that it is never permissible to posit a supernatural cause for a physical event means that if such causation in fact takes place it can never be recognized. Unless one is prepared to defend metaphysical naturalism on an independent basis,<sup>15</sup> acceptance of methodological naturalism as essential to the pursuit of science requires that one understand science not as committed to pursuing the truth about reality, but rather as to pursuing the best natural explanation that can be formulated of a phenomenon.<sup>16</sup> Thus, acceptance of methodological naturalism requires that, no matter how implausible a naturalistic explanation for the origin of life might be it will be taken seriously so long as it is only slightly less implausible than competing naturalistic explanations. Even if life did originate through supernatural agency, and even if it bears the characteristics of things we know to be intelligently designed, acceptance of methodological naturalism prohibits ever contemplating such an explanation.<sup>17</sup> Similarly,

---

razor would finish off intelligent design quite nicely. (Dembski 2004, 281)

An anonymous reviewer has criticized me on the basis that Dembski's theory of detecting design is 'wrong-headed.' I am puzzled by this criticism, since this, my only reference to Dembski, deals with a different point entirely.

<sup>15</sup> Emphasis must be placed on there being justification of metaphysical naturalism independent of any prior acceptance of methodological naturalism. On pain of begging the question, it will not do first to accept methodological naturalism, and then insist that, since there is no evidence of supernatural causes, that belief in metaphysical naturalism is justified on the ground of Occam's Razor. For a more complete explication of this point see (Dilley 2010) and (Larmer 2003).

<sup>16</sup> Proponents of methodological naturalism have the logical option of conceiving science antirealistically. Taking this option, however, removes any possibility of objecting to claims of supernatural intervention on the grounds that such claims are unscientific. I am not aware of any advocates of methodological naturalism who are antirealists concerning science.

<sup>17</sup> Ratzsch notes that,

If (perhaps for overwhelmingly good reasons) science is restricted (even just methodologically) to 'natural' explanatory and theoretical resources, then if there is a supernatural realm which does impinge upon the structure and/or operation of the 'natural' realm, then the world-picture generated by even the best science will unavoidably be

methodological naturalism prohibits ever recognizing an event, no matter the context and circumstances in which it occurs, as a miracle.<sup>18</sup> Thus, if convinced that Jesus did in fact rise from the dead, a consistent methodological naturalist must presume the event does in fact have a natural explanation.

- (5) *Theological considerations require there be no supernatural intervention in nature.*

Methodological naturalism is sometimes defended on explicitly theological grounds. These take the form of assertions that the perfection of God implies that His purposes in the world must be accomplished exclusively—perhaps in the case of the more conservatively minded an exception being made for ‘salvation history’<sup>19</sup>—by means of secondary created causes. Nature, it is asserted, is fully-gifted and any supernatural intervention by God in creation would be coercive and inconsistent with God’s perfect love.<sup>20</sup>

There are at least two reasons to see such theological justifications as carrying little weight. First, even the most cursory examination reveals that they are question-begging and employ rhetorically loaded language. We are informed that “the notion of God [as] [...] meddling with matter, [...] is offensive [...] it would be a very poor sort of god who created a universe

---

either incomplete or else wrong on some points. Unless one assumes philosophical naturalism (that the natural constitutes the whole of reality) that will be the inescapable upshot of taking even mere methodological naturalism as an essential component of scientific procedure” (Ratzsch 2002, 4)

(I am grateful to the anonymous referee who brought this quotation to my attention.)

<sup>18</sup> For a defense of the traditional conception of miracle as a supernatural intervention in nature see (Larmer 2014, 7–46).

<sup>19</sup> Any such qualifications require some principled reason why methodological naturalism *must* be applied in one area of investigation, but not in another. The issue should be whether some events are best explained in terms of supernatural causation. If this is the issue, then it will not do to insist a priori that such explanations *must* be restricted to ‘salvation history.’

<sup>20</sup> See, for example, (Van Till 2002, 114).

that wasn't right and then tinkered with it at later stages" [Davies 2012, quoted in (Ratzsch 2001, 198, Note 19), emphasis added], and that "a God who uses the openness of his created universe [...] to insert additional causal events from time to time into that universe to produce particular events or trends [...] would be a meddling demigod, a moral monster, and a contradiction of himself" (Jenkins 1987, 63).

Reasons, however, why God's perfection requires no supernatural intervention in the natural order are noticeably lacking, as are arguments why such interventions should be understood as meddling or tinkering.<sup>21</sup> One is expected to accept that belief in supernatural intervention in nature necessitates viewing God as either a moral monster or a bumbler, who, not getting things right the first time, must adjust an ill-thought out plan in an *ad hoc* manner. The possibility that God at times acts directly within creation, that inorganic chemicals were never intended to have the capacity to self-assemble into living entities, is ruled out a priori, with no need to consider actual empirical evidence.

Second, such justifications are inconsistent with their proponents' claim that methodological naturalism is metaphysically neutral. The methodology they insist upon is grounded in their metaphysical commitment to a non-interventionist God. Far from being metaphysically neutral, it is an out-working of their deistic or semi-deistic view of God's relation to creation, that, is to say, their insistence that God be viewed as acting exclusively, or almost exclusively, through the instrumentality of secondary material causes.

(6) *Methodological naturalism is inductively justified.*

Philosophically astute proponents of methodological naturalism, both theists and non-theists, have increasingly tended to defend it not as necessarily constitutive of doing science, but as based on a well-evidenced

---

<sup>21</sup> An anonymous reviewer made the point that the fact that such reasons are not given does not mean that they do not exist. Fair enough, but such reasons must be given if the objection is to be taken seriously. If, and when, they are, then the force of such reasons can be evaluated. Even in such a case, they would have to be weighed against the empirical evidence for divine intervention.

inductive generalization that proves fruitful.<sup>22</sup> Writing from a Christian perspective, Patrick McDonald and Nivaldo Tro, are happy to agree that methodological naturalism is not an essential or definitional aspect of science, that there “are no clear a priori reasons to exclude the supernatural from science; [rather, it is] an empirically validated methodology and as such should be honored unless and until a better framework comes to the fore” (McDonald and Tro 2009, 203). Similarly, metaphysical naturalists Maarten Boudry, Stefaan Blancke, and Johan Braeckman reject the conception of methodological naturalism as an intrinsic limitation of science, defending it “as a provisory and empirically grounded attitude of scientists, which is justified in virtue of the consistent success of naturalistic explanation and the lack of success of supernatural explanations in the history of science” (Boudry et al. 2010, 227).

This of all the proposed justifications of methodological naturalism is the most promising. Nevertheless, it is far from convincing. First, at the level of actual practice, methodological naturalism functions not so much as a provisional inductive generalization helpful in guiding scientific investigation, but rather as an absolute prohibition on ever taking seriously the possibility of supernatural causation.<sup>23</sup> Richard Lewontin’s comment regarding intelligent design and his “willingness to accept claims which are against common sense” (Lewontin 1997) is revealing. He writes,

it is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but on the contrary, that we are forced by our a priori

---

<sup>22</sup> Elliot Sober in his (2011) comments that

arguments against introducing the claim that God exists into scientific theories have often been *in-principle*; they attempt to show that this postulate *necessarily* prevents science from reaching one of its goals [...] The argument I would offer is more modest. Naturalistic science has been a success [...] The modest defense I would offer of methodological naturalism is simply this: *if it isn't broken, don't fix it.* (Sober 2011, 375)

<sup>23</sup> An anonymous reviewer sees this point as feeble. With respect, I disagree. Questions of how methodological naturalism is employed are relevant to its presumed justification.

adherence of material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door. (Lewontin 1997)

Fundamental explanatory virtues such as simplicity, coherence, scope, etc. serve to adjudicate competing explanations, whether they be natural or supernatural, without any need to invoke methodological naturalism as adding some further necessary criterion.

Second, and more importantly, the inductive generalization which is presumed to justify methodological naturalism is far less secure than generally portrayed. This is so for several reasons. First, at a historical level, there are many factors which explain the move away from theories of supernatural agency, that, is to say design inferences. Many of these “are scientifically irrelevant, and to the extent that they drove the history, to that extent the history too will be irrelevant” (Ratzsch 2005, 128–36). Further, it seems fair to observe that the rejection of present day design inferences should be based on present day science. By way of analogy, Ratzsch notes that

were one attempting to show that phlogiston theory really should not be resurrected within present science, one surely would not have to rely on reference to difficulties raised a couple of centuries back. If phlogiston theory is indeed dead, we’d better be able to develop a case out of present science for thinking so. If we can’t then present science is in extraordinarily deep trouble. (Ratzsch 2005, 136)

Second, as has been noted, appeals to supernatural agency are not typically found regarding how things work, but rather how they come to exist in the first place. Questions of the origin of the universe and its apparent fine-tuning and questions of the origin and development of life are questions of ‘historical’ rather than ‘nomological’ science. It is in these areas of scientific investigation that one encounters appeals to supernatural agency, which is to say, design inferences.

Once this distinction is made, the success that ‘nomological’ science has had in finding natural causes of phenomena cannot automatically be

taken as providing a strong inductive argument for adopting methodological naturalism in historical sciences. The fact that turtles are easy to catch hardly provides warrant for thinking that cheetahs will be easy to catch, and the fact that natural explanations in nomological science have enjoyed great success, scarcely warrants the assumption that explanations in terms of natural causes in historical science will enjoy the same degree of success.

Indeed, any inductive argument regarding cosmological and biological origins seems to be on the side of design inferences. A little over a century ago it was possible to view the universe as eternal and the structure of living cells as relatively simple. This is no longer so; the more we know the harder it is to avoid positing design regarding origins. Our best cosmology points to our finely-tuned universe coming into existence without any natural cause.<sup>24</sup> Similarly, although structures that manifest redundant order, e.g. crystals, or simply complexity, e.g. mixtures of random polymers, are easily found in nature, none of them exhibit the specified complexity, that, is to say, information that exists in DNA, RNA, and proteins. Such structures recalcitrantly resist explanations in terms of any known natural causes, so much so that James Tours, one of the top-ranked chemists in the world, is prepared to say in his 2016 Pascal Lecture “The Origin of Life: An Inside Story” that there presently exists no naturalistic account of life’s origin that is even faintly plausible (Tours 2016).

It is important in this regard to realize that the argument does not commit the fallacy of *ad ignorantium*. The inference to supernatural agency is based not simply on the repeated inability of scientists to produce plausible natural explanations in these areas, but on the fact that the phenomena being investigated display characteristics that, in our experience, are the product of intelligent agency. As Stephen Meyer notes,

the inadequacy of proposed materialistic causes forms only part of the basis of the argument for intelligent design. We also *know* from broad and repeated experience that intelligent agents [...]

---

<sup>24</sup> See, for example, (Spitzer 2010, 13–74). Also, (Craig and Sinclair 2009). An anonymous referee asks whether these sources consider quantum gravitational theories. The answer is yes.

---

produce information-rich systems [...] Experience teaches that whenever large amounts of specified complexity or information are present in an artifact or entity whose causal story is known, invariably creative intelligence—intelligent design—played a role in the origin of that entity. Thus, when we encounter such information in the large biological molecules needed for life, we may infer—based on our knowledge of established cause-and-effect relationships—that an intelligent cause operated [...] [the argument] asserts the superior explanatory power of a proposed cause based upon its proven—its *known*—causal adequacy *and* based upon a lack of demonstrated efficacy among the competing proposed causes. (Meyer 2009, 376–77)

Further, there are scientific disciplines where design inferences are routinely made. Archeologists, for example, are willing to identify primitive tools precisely on the basis that what they are looking at bears the type of structure we know to be produced by intelligence, and the SETI project is looking to see if there are signals from space that exhibit a pattern requiring intelligence to explain. These appeals to design appear to be accepted because they are not presumed to challenge a naturalistic account of how conscious intelligent agents originated.<sup>25</sup> It is only when the design would have to be attributed to a supernatural intelligent agent that the design is judged to be only apparent and not genuine.

This, however, is to ignore the fact that the question of whether an object is designed, that, is to say the product of intelligent agency, is distinct from the question of the designer. If one goes to a faraway planet and finds symbols on a cliff face that turn out upon inspection to demonstrate the impossibility of trisecting the angle and doubling the cube, one will have no hesitation in identifying that mathematical proof as the result of intelligence, even if one has no idea as to the identity of the agent responsible. Given that the recognition of intelligent design is logically prior to the question of the designer's identity, it will not do to reject what appear to be instances of design on the basis that, if recognized as

---

<sup>25</sup> Anyone familiar with contemporary philosophy of mind and what naturalist philosophers term the 'hard problem of consciousness' will realize it is very far from clear that any plausible naturalistic account of consciousness can be given.



genuine, they constitute evidence for a supernatural designing intelligence.<sup>26</sup>

### 3. Conclusion

I have argued that methodological naturalism, contrary its proponents' claim, is not metaphysically neutral. I have further argued that its acceptance as a practice requires justification. Unfortunately for its advocates, attempts to justify it are failures. It cannot be defended as a definition or a self-imposed limitation of science, nor, more modestly, as an inductively justified commitment to natural causes.

Its rejection, however, in no way prohibits scientists from searching for natural causes of physical phenomena. The issue is not whether it is legitimate to look for natural causes of phenomena, but rather whether science must or should in all circumstances confine itself to attempted explanations in terms of natural causes, no matter how inadequate such attempted explanations prove. Whether in science or other endeavors, one needs to be

---

<sup>26</sup> An anonymous reviewer has objected that “the idea that design can somehow be ‘detected’ [...] while completely abstracting from the identities and characteristics of particular designers, strikes me [...] as wrongheaded.” Three points are in order. First, the reviewer provides no response to the example I give. Second, the recognition of a pattern that is analogous to those produced by intelligent agents such as ourselves—e.g. the recognition that biological entities contain numerous sophisticated machines—is evidence that the designer’s nature is not completely foreign to our own. Third, insofar as recognition of biological design might plausibly be thought to provide an argument for God, the theistic hypothesis is not silent concerning God’s character. As Draper, no friend to theism, comments,

moral perfection is built into the theistic hypothesis. Because we are not entirely in the dark about the preferences of such a being (at least other considerations held equal) some facts about nature are more probable on theism than on metaphysical naturalism [...] Furthermore, building moral perfection into the theistic hypothesis does not make that hypothesis ad hoc if [...] God’s moral perfection is made likely by other attributes that are plausible attributed to a personal ground of being. (Draper 2005, 295)

free to go where the evidence leads. If the best explanation for some events or structures is direct supernatural agency then science needs to be able to have access to it. Any methodology which precludes such access acts not to further scientific investigation, but rather to place it in an explanatory straitjacket.

### References

- Boudry, Marteen, Stefaan Blancke, and Johan Braeckman. 2010. "How Not to Attack Intelligent Design Creationism: Philosophical Misconceptions about Methodological Naturalism." *Foundations of Science* 15: 227–44.  
<https://doi.org/10.1007/s10699-010-9178-7>
- Burt, Edwin Arthur. 1932. *The Metaphysical Foundations of Modern Physical Science*. 2<sup>nd</sup> edition, revised. London: Routledge and Kegan Paul.
- Craig, William Lane, and James D. Sinclair. 2009. "The Kalam Cosmological Argument." In *The Blackwell Companion to Natural Theology*, edited by William Lane Craig and James Porter Moreland, 101–201. London: Wiley-Blackwell.  
<https://doi.org/10.1002/9781444308334.ch3>
- Davis, Ted. 2012. "Science and the Bible: Intelligent Design, Part 3." Available at <https://biologos.org/blogs/ted-davis-reading-the-book-of-nature/science-and-the-bible-intelligent-design-part-3>. [Accessed February 22, 2018.]
- Dilley, Stephen. 2010. "Philosophical Naturalism and Methodological Naturalism." *Philosophi Christi* 12 (1): 118–41. <https://doi.org/10.5840/pc20101218>
- Dembski, William. 2004. *The Design Revolution: Answering the Toughest Questions about Intelligent Design*. Downer's Grove, Illinois: InterVarsity Press.
- Draper, Paul. 2005. "God, Science, and Naturalism." In *The Oxford Handbook of Philosophy of Religion*, edited by William Wainwright, 272–303. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195331356.003.0012>
- Earman, John. 2000. *Hume's Abject Failure*. Oxford: Oxford University Press.  
<https://doi.org/10.1093/0195127382.001.0001>
- Fales, Evan. 2010. *Divine Intervention: Metaphysical and Epistemological Puzzles*. New York: Routledge and Kegan Paul.
- Forrest, Barbara. 2000. "Methodological Naturalism and Philosophical Naturalism: Clarifying the Connection." *Philo* 3 (2): 7–29.  
<https://doi.org/10.5840/philo20003213>
- Jenkins, David. 1987. *God, Miracle, and the Church of England*. London: SCM.
- Larmer, Robert. 2003. "Is Methodological Naturalism Question-Begging?" *Philosophia Christi* 5 (1): 113–30. <https://doi.org/10.5840/pc2003518>
- Larmer, Robert. 2014. *The Legitimacy of Miracle*. Lanham, Maryland: Lexington.

- Laudan, Larry. 1996. "The Demise of the Demarcation Problem." In *The Demise of the Demarcation Problem*, edited by Michael Ruse, 337–50. Amherst, New York: Prometheus Press.
- Lewontin, Richard. 1983. "Introduction." In *Scientists Confront Creationism*, edited by Laurie R. Godfrey, xxiii–xxvi. New York: Norton.
- Lewontin, Richard. 1997. "Billions and Billions of Demons." *The New York Review of Books*, January 9, 1997. <https://www.nybooks.com/articles/1997/01/09/billions-and-billions-of-demons/>. [Accessed June 15, 2017.]
- McDonald, Patrick, and Nivaldo Tro. 2009. "In Defense of Methodological Naturalism." *Christian Scholars' Review* 38 (2).
- Meyer, Stephen. 2009. *Signature in the Cell*. New York: Harper Collins.
- Monton, Bradley. 2013. "An Atheist Defence of Christian Science." *European Journal for Philosophy of Science* 5 (3): 43–54.  
<https://doi.org/10.24204/ejpr.v5i3.218>
- Numbers, Ronald L. 2003. "Science without God: Natural Laws and Christian Beliefs." In *When Science and Christianity Meet*, edited by David C. Lindberg and Ronald L. Numbers, 265–86. Chicago: University of Chicago Press.  
<https://doi.org/10.1093/acprof:oso/9780195320374.003.0003>
- Pennock, Robert T. 2001. "Naturalism, Evidence, and Creationism: The Case of Phillip Johnson." In *Intelligent Design, Creationism and Its Critics: Philosophical, Theological, and Scientific Perspectives*, edited by Robert T. Pennock, 77–98. Cambridge, MA: MIT Press.
- Pennock, Robert T. 2011. "Can't Philosophers Tell the Difference between Science and Religion? Demarcation Revisited." *Synthese* 178 (2): 177–206.  
<https://doi.org/10.1007/s11229-009-9547-3>
- Pigliucci, Massimo, and Maarten Boudry, eds. 2013. *Philosophy of Pseudoscience—Reconsidering the Demarcation Problem*. Chicago: University of Chicago Press.
- Ratzsch, Del. 2001. *Nature, Design and Science*. Albany: SUNY Press.
- Ratzsch, Del. 2002. "Design Theory and Its Critics: Monologues Passing in the Night." *Ars Disputandi* 2: 1–16.  
<https://doi.org/10.1080/15665399.2002.10819755>
- Ratzsch, Del. 2004. "Natural Theology, Methodological Naturalism and 'Turtles All the Way Down'." *Faith and Philosophy* 21 (4): 436–55.  
<https://doi.org/10.5840/faithphil200421448>
- Ratzsch, Del. 2005. "Intelligent Design: What Does the History of Science Really Tell Us." In *Scientific Explanations and Religious Belief*, edited by Michael G. Parker and Thomas, M. Schmidt, 126–49. Tübingen, Germany: Mohr Siebeck.
- Sober, Elliot. 2011. "Why Methodological Naturalism." In *Biological Evolution: Facts and Theories. A Critical Appraisal 150 Years after The Origin of*

- Species*, edited by Gennaro Auletta, Marc LeClerc, and Rafael A. Martinez, 359–378. Rome: Gregorian Biblical Press.
- Spitzer, Robert J. 2010. *New Proofs for the Existence of God*. Grand Rapids, Michigan: Eerdmans.
- Tours, James. 2016. The Origin of Life: An Inside Story. Available at [https://www.youtube.com/watch?v=\\_zQXgJ-dXM4](https://www.youtube.com/watch?v=_zQXgJ-dXM4). [Retrieved June 11, 2017.]
- Van Till, Howard. 2002. “Is the Creation’s Formation Economy Incomplete? A Response to Jay Wesley Richards.” *Philosophia Christi* 4 (1): 113–18.