Battlegrounds of Natural History: Naturalism

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Abstract

cientific creation battles the worldview of naturalism at the level of Scientific fact and theory, but crucial battlegrounds are also found in the foundational concepts that shape the method and direction of science. One of these is summarized by the term "naturalism." This debate is hindered by equivocal terminology, presuppositional inconsistency, and the use of secular premises by some Christians—typically from a desire to "triangulate" between biblical creation and atheism. Science is the child of Christianity, but enduring secular distortions have succeeded in convincing most people that naturalism is one and the same with science, and that it is legitimate to extrapolate from the scientific method to atheism. Those core distortions are protected by ancillary arguments; chief among them, a strategy of diverting Christians with arguments regarding the reality or possibility of miracles and with accusations of "god-of-the-gaps" reasoning. In response: (1) metaphysical naturalism is invalid because it fails logical truth tests, (2) methodological naturalism is an unnecessary accretion to basic attributes of science historically derived from Christian theology, and (3) the ancillary issues are defused by sound reasoning. The key to addressing the concept of naturalism in its totality is the recovery and application of the traditional Christian doctrine describing God's providential relationship with creation.

Introduction

Many Christians are confused by attacks on their faith from science—in particular by the claim that the very method of science is an antitheistic proof. These attacks are subsumed under the name "naturalism," even though that term is used equivocally. This paper will unravel its distinct meanings and then evaluate its major arguments against orthodox

Christianity. We will then show that sound theology alone provides a clear, consistent basis for science. This is the first of a series of articles that will address foundational arguments about natural history's assumptions and methods.

This analysis is important because natural history was an early and effective avenue of attack on the church and it remains a redoubt of secularism. It is upheld by at least six fundamental errors

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Figure 1. George Gaylord Simpson (1902–1984) was one of the foremost evolutionists of the twentieth century.

that have been widely accepted as true, and that set it at odds with Christianity (Figure 2). Though enumerated by evolutionist George Gaylord Simpson (Figure 1), they are axioms requiring clarification for anyone seeking truth in nature and in history.

This series will examine each of these six errors. All are falsified by Biblical truth, properly applied. Because these topics sweep across metaphysics, epistemology, science, history, theology, and natural history, our treatment is cursory but hopefully helpful.

The initial topic, naturalism, presents formidable difficulties. First, it is probably the most culturally persistent of the six. Second, both the term and its underlying concepts are used equivocally. Third, the rules of debate are defined by secular premises. Fourth, it is an emotional argument, as illustrated by the spate of recent books pitting atheists against Christians (e.g., Dawkins, 2006a; Hitchens, 2007; Harris 2004, 2006; vs. Day, 2008; D'Souza, 2008; Keller, 2008). Fifth, distinctions between the traditional scientific method and "methodological naturalism" have been blurred. Sixth, Christians have been diverted by red herrings—miracles

BATTLEGROUND	SIMPSON'S DEFINITION Basic postulate of science; supernatural excluded from scientific explanation by definition.	
naturalism		
actualism	Synonym of "uniformitarianism" in Lyellian sense. Present processes only options for past explanation.	
historicism	Problems and procedures coming f consideration of state of Earth and cosmos over time.	
evolutionism	Historical model or theory of life as changing directionally and irreversibly in the course of descent.	
mode of history	Fuzzy gradualism; catastrophes occubut not sudden, great, and worldwide	
methods of scientific history	Historical inferences are scientific as long as they are based on actualism, naturalism, and evolutionism.	

Figure 2. Six foundations of modern natural history as noted by Simpson (1970).

and accusations of "god-of-the-gaps" reasoning. Finally, Christians hostile to a creationist perspective unfortunately reinforce secular errors by seeking an impossible compromise between two irreconcilable contraries.

Untangling these knots requires cutting through historical misinformation about the origin of science—it was not an exercise in gaining freedom from superstition but the well-organized hijacking of the Christian enterprise by Enlightenment "freethinkers." Even now, centuries later, many Christians do not understand the extent of the deception in popular secular fables and often uncritically accept secular premises. These, in turn, hide the equivocation that takes the form of a sliding scale

between naturalism as a method and naturalism as a worldview—similar to the strategy confusing "uniformity" and "uniformitarianism" (Reed, 1998a). Secular thinkers advance the worldview until challenged, and then piously claim to be merely adhering to the scientific method.

This is more than a defensive tactic; it provides the basis for arguing an inevitable link between science and atheism. Christians have fallen for this over and over because we fail to see the unstated premise of positivism, the idea that science rules the realm of truth. Whenever we grant science the power to dictate truth outside its legitimate boundaries, "methodological" naturalism expands unimpeded into a full-fledged worldview.

Given the persistence of this secular sliding scale, it would be foolish to see it as accidental—it is a deliberate weapon against Christianity (Adler, 1992). This is not new; Stark (2003) noted the same ploy was used by many Enlightenment savants. As a result, secular propagandists have turned science to the "dark side" for many years, despite its Christian roots (Glover; 1984; Hooykaas, 1972, 1999), and have then used "dark-side" science to bolster their worldview.

Ironically, it is the hubris of new atheists that has recently alerted Christians who are not creationists. They have finally begun to grasp what Henry Morris (1974) noted long ago, and have responded forcefully, if incompletely, to the claims of the new atheists. Even so, they often do not acknowledge that creationists have led the way, providing the most consistent arguments—a reasonable state of affairs since, after all, science ultimately rests on the Biblical doctrine of creation.

In response, we will divide and conquer. First, we will refute the worldview of naturalism. Thanks to its inherent contradictions, this is not a hard task. The more difficult challenges are to separate methodological naturalism from the method of science and stop the

misguided pursuit of the red herrings of miracles and "god-of-the-gaps." All of these efforts require precise thinking. For example, many confuse the worldview of naturalism with metaphysical materialism (Figure 3). It is a subtle distinction, but worldviews are more than metaphysics, and we cannot afford to ignore secular epistemology (positivism) or the secular philosophy of history (actualism).

This paper will first describe and evaluate "metaphysical naturalism" and then do the same to "methodological naturalism." After then dismissing arguments against miracles and "godof-the-gaps" accusations, we will show how the recovery of the biblical doctrine of providence offers a positive basis for reintegrating science into its parent worldview of Christianity.

Metaphysical Naturalism Two Views of the Road to Metaphysical Naturalism

Metaphysical naturalism is at least as old as Greek atomism, and was routinely rejected from Plato to the Enlightenment. However, it resurfaced as a distinctive post-Christian secularism during the Enlightenment, when antitheistic intellectuals turned to science, and then

Context	Definition	
WORLDVIEW	Comprehensive view of reality, spanning theology, philosophy, science, history, etc. Materialist, positivist, and uniformitarian.	
METAPHYSICS OF MATERIALISM	Assumption of atheism; ultimate reality is matter or energy changing through time by random, inherent processes.	
LIMITED METHOD OF SCIENCE	Domain of science is natural phenomena; style of investigation is empirical, open, testable, and cooperative.	

Figure 3. Distinct definitions of "naturalism" showing basis for modern errors of equivocation.

used it to mask their worldview (Stark, 2003). We explore two perspectives on this transformation. The first focuses on method (Figure 4) and the second on theology (Figure 5).

Early scientists developed a self-consciously Christian method to investigate phenomena while avoiding theological and philosophical tangles. They understood that science was limited and contingent, with axioms upheld by Scripture (Glover, 1984; Hooykaas, 1972, 1999; Klevberg, 1999; Lisle, 2009; Reed, 2001; Reed et al., 2004). Their genius was in drawing distinctions between practical and theoretical—without separating the two—that relegated axioms to the background (Figure 4A), allowing unimpeded scientific inquiry (Glover, 1984).

While science could be distinct in practice, it remains inextricably linked to theology because theology justifies its presuppositions. For example, theologians teach that God was free to create according to His desires, unconstrained by external rational principles. This drove an empirical method; if we want to understand nature, we rely on inductive investigation, not deductive philosophy. This approach marks modern science (Glover, 1984). Many examples could be cited, but the principle is the same— "religion and science not only were compatible; they were inseparable" (Stark, 2003, p. 3, emphasis added).

Figure 4B illustrates the first step toward error. Carelessly assuming what had been explicit, thinkers began to see the practice and theory of science as separate. Epistemic theory was messy; practice was stunningly successful. How could one argue with steam engines? But downplaying the theoretical opened the door for it to be dismissed by the proto-positivism of the eighteenth century (Figure 4C). Science came to be seen as an autonomous arbiter of truth, mostly because it seemed so productive compared to philosophy and theology. Its results were clearcut and precise. The Bible went from being the founda-

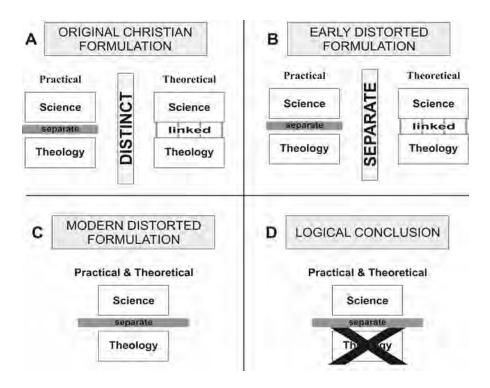


Figure 4. Progression to metaphysical naturalism. A. Christian thinkers distinguished the practical and theoretical relationship between theology and science to prevent metaphysical argument from intruding into practical investigations. B. The growing success of science and growing disunity in philosophy led to a separation between practical science and its theoretical foundations. C. Following Kant's critique, science was seen as autonomous, both in practice and theory. D. The logical conclusion of that position is that theology is meaningless in the pursuit of objective truth.

Progression	DESCRIPTION	TIME PERIOD Medieval - Reformation	
Providence	God upholds Creation by His constant, immanent power, "Not a sparrow falls"		
Natural Law	God is rational, immutable, infinite, and eternal. Therefore, His mode of upholding Creation is predictable and rational.		
Invariant Natural Law	Emphasis on science grows; links to theology weaken. Success of science leads some to believe "laws" are both natural and invariant.	Enlightenment	
Absolute Natural Law Naturalism as worldview excludes theology and first order philosophy. Science is path to truth; thus it is essential that nature and her laws are absolute.		1800s - present	

Figure 5. Progression from methodological to metaphysical naturalism from a theological perspective on God's relationship to nature.

tion of science to being the focus of its critical assessment. Of course the logical conclusion (Figure 4D) was that both theology and God were unnecessary. Humean skepticism and Kantian rationalism permanently detached God from the physical world. Because the Christian worldview still permeated Europe, the axioms of science were assumed to be true by "common knowledge" rather than logical demonstration.

Another way to examine this progression from Christian to secular science is by the change in how people saw nature's relationship to God (Figure 5). Science was born in the medieval university system (Hooykaas, 1999; Stark, 2003), and its theoretical underpinnings grew out of the "fruitful failure" of scholasticism (Glover, 1984). Everyone knew that God ruled the world by His providence, whether He acted directly or used indirect means. As science began to develop, its practitioners found a helpful shortcut—the regularities of providence became "laws of nature." It was easier to attribute the acceleration of falling objects to the constant force of gravity than to the intricate workings of divine providence.

Classical science sought to unveil universal principles governing motion, chemical interactions, and biological classification. Science discovered principles, but the assumed regularities were a function of God's making and ruling nature. However, it is easier to ignore theological points.

Science's success was its undoing. Newton's synthesis convinced people that science was autonomously powerful, bringing a practical clarity that contrasted sharply with the tangled debates of theologians and philosophers. Descartes' method of doubting everything reinforced the dismissal of authority, and Locke's tabula rasa encouraged an unrealistic view of man's objectivity. Soon, natural law was decoupled from God's rule and care, becoming progressively more invariant and absolute.

In time, opponents of the church seized science and distorted it for their own ends. Theology no longer chugged along in the background; it was dismissed as irrelevant. Deism kept a figurehead creator, but once it imbued nature with self-perpetuating laws, the creator withdrew. Nature was no longer the domain of God's immanence, where everything was a "wonder" (Hooykaas, 1999) but simply a grand playground for man's scientific genius. In retrospect, it seems incredible that Christianity was so easily dismissed, but the historical reality remains.

Why there should have been a fading at this time of just those aspects of the Christian intellectual tradition that were most relevant to the new science—and not only relevant to it but congenial to it—is an intricate historical problem to which no adequate answer can be given here. The fact itself is beyond question and of the greatest importance in the intellectual history of Western culture (Glover, 1984, p. 97, emphasis added).

Deism was the bridge to atheism. Modern atheism and its worldview of naturalism first co-opted science and then used science to co-opt culture. Nature and its "laws" were absolute; there was no need for the "God hypothesis." Enlightenment strength coincided with a weak church, and the result was our modern secular culture.

This was the grand age of science, when it seemed to the leading scholars of the humanity that the sure road to understanding all things had finally been discovered in science and its Rosetta stone, the scientific method (Bauer, 1992, p. 34).

Scientists continued to use Christian axioms, but lost their theological basis and made sure everyone else did too by creating a mythology that pictured science as a secular force freeing mankind from religion.

Atheism was equally at home at the Bastille and at Oxford, and developed

a link between science and politics (Buffon/Robespierre; Marx/Stalin; Nietzsche/Hitler) that illustrated its "will to power." Lip service soothed the church while secularism eviscerated Christianity. Those Christians who saw and opposed this trend were silenced or ignored, often by other Christians (Mortenson, 2004). Humanistic optimism peaked in the nineteenth century; philosophers like Hume, Kant, and Hegel joined scientists like Lyell and Darwin to "emancipate" mankind from God. Man was in the driver's seat, and the road ahead looked smooth.

But potholes of reality hit Europe in 1914 and just got larger over the rest of the century. The wonders of technology were offset by world wars, communist brutality, and the nuclear age. Then the philosophers jumped ship; the postmodern rejection of truth has brought us to the point where science seems anachronistic, and philosophers of science question whether there is even such a thing (Bauer, 1992). Utopia is out; apocalypse is in.

G. G. Simpson: A Milepost on the Road from Damascus

Secular arrogance still reigned in midtwentieth-century America, ignoring rumblings from philosophers like Sartre and Camus. Scientists were treated like the pope—they could as oracles speak about everything from ethics to eternity. George Gaylord Simpson represented the spirit of that age, and thus it is worth examining his comments on the relationship of science and theology. Simpson (1970, p. 61) stated:

Naturalism is a basic postulate of science as now almost always construed, a necessity of method and procedure in science regardless of what theological or philosophical stand may be taken on it.... If only on heuristic grounds, scientific explanation must not invoke the supernatural, nonnatural, noumenal, or any other preternatural factor.

This quote readily captures the deceptive mind-set of secularism. He begins by invoking naturalism as simply a part of science, "a necessity of method and procedure," but he does not explain why it is necessary. Once on the slippery slope, he slides along, stating that scientific explanation must not invoke theology or metaphysics. Newton and Darwin might both have agreed with those words, but would have had quite different ideas about what they meant. Ironically, Simpson ignored the fact that claiming the independence of science from metaphysics is itself a metaphysical assertion.

Simpson is correct that the proper domain of science is natural phenomena. But since modern secular culture does not allow a reality outside of natural phenomena, the result is the overweening belief that science, not religion, is the doorway to truth. Theology and philosophy are adjuncts that serve subjective human needs. The whole "bait and switch" strategy of naturalism the method and naturalism the worldview is predicated on that autonomy. Simpson may sound eminently reasonable, but is actually quite dogmatic.

That is why the initial Christian response had to recognize the problem—the reality of naturalism as a competing worldview. Only then was it possible to change the rules of the debate by forcing atheists to define their terms and defend their presuppositions (Lisle, 2009; Reed, 2001). Allowing the mechanistic method of science to drive people to a mechanistic worldview by invoking an implicit positivism is *the fundamental error* of modern science.

Simpson (1970) underscored his view in his discussion of Hutton's deistic geotheory (cf. Reed, 2008; Reed, J.K. and P. Klevberg. 2011. The genre of geotheory: past and present. *CRSQ* 48(1):20–32), which insisted that physical phenomena have operated through time by innate natural processes.

Given the system of the earth, which, however or whenever it came to be,

had been cycling for uncountable aeons, Hutton was very definite that its operation excludes the preternatural. That aspect of what later came to be called uniformitarianism in a broad sense was particularly objectionable to theologians (Simpson, 1970, p. 48).

It still is. Sadly, even Simpson's faulty analysis was more careful than that of many of his peers. Less thoughtful atheists insist that God plays no role in science because there is no God. How do we know that there is no God? By science, of course! The circularity of this argument never seems to penetrate their hidebound bias. Science is their faith. How else are we to explain the ranting of Dawkins (2006b)?

The enlightenment is under threat. So is reason. So is truth. So is science, especially in the schools of America. I am one of those scientists who feels that it is no longer enough just to get on and do science. We have to devote a significant proportion of our time and resources to defending it from deliberate attack from organized ignorance. We even have to go out on the attack ourselves, for the sake of reason and sanity.

It is Dawkins who has abandoned reason and sanity. Similar citations could be multiplied. Less vitriolic atheists may be more polite but still have the same goal, to crush Christianity. Gould's (1997) "NOMA Solution" is a prime example of smiling at your foe while slipping a stiletto into his vitals (cf. Reed, 1998b).

But Simpson's generation was the last hurrah of the great Enlightenment scam because its façade was ripped apart by modern creation science. The reason creationists evoke oceans of vitriol is because they have the temerity to use *science* against secularism. For two centuries, the shoe had been comfortably on the other foot. In the eyes of "high church atheism" (Day, 2008), creationists committed the most heinous sin.

Scientists—supposedly advocates of naturalism—had become traitors, making *scientific* arguments for "religious superstition."

Atheists rage in response to an attack on their secular *faith*. Simpson wrote more dispassionately than Dawkins, perhaps because in 1970 no one imagined that creationists could actually breach the citadel of the neo-Darwinian synthesis. Dawkins and P. Z. Myers react quite differently today, having seen the ravages inflicted on their religion. Naturalism, as a worldview, is cornered and dangerous. Its defeat is a primary concern of all Christians.

How to Defeat "Metaphysical" Naturalism

Though it is heartening to see more Christians respond to the new atheism, it is disheartening that many of their arguments are incomplete, inconsistent, and misdirected. They are incomplete because they do not address many of the false premises of secularism, such as positivism. They are inconsistent because they do not link confidence in truth to the integrity of the Bible. They are misdirected because, with few exceptions, they keep looking for compromises to save science rather than trying to wrest it back to its legitimate home.

In spite of these shortcomings, there is a range of work by Christians objecting to naturalism: from the winsome logic of C. S. Lewis to the thoughtful theology of Francis Schaeffer, to the pointed philosophy of men like Gordon Clark and Alvin Plantinga, and, finally, to the apologetics of creation science and intelligent design. Without rehashing all of the arguments, suffice it to say that it has become obvious that when modern atheists confront informed Christians, they invariably lose the debate.

Unfortunately, most contemporary apologetics fall short. In order to defeat naturalism, its relationship to both physics and metaphysics must be clearly defined. For a long time, its advocates were able to use science to divert deeper inquiries. But as a worldview, it has a distinct metaphysic, epistemology, and even a philosophy of history. Most Christians attack peripheral manifestations in ethics, politics, religion, and the social sciences—in other words, the contemporary cultural consensus. But it is necessary to get to the heart of the matter with logical assaults on its most foundational axioms. When Enlightenment savants stole science from Christianity, they began juggling a live grenade because the presuppositions of science are Christian. For example, Glover (1984, pp. 84–85) noted:

Nominalists and voluntarists already were aware of regularity and order in the world.... The historical fact is that scientific interest was stimulated in them, and they were free to make the limited, piecemeal studies of the physical world which have been the hallmark of modern science and the way to its great accomplishments.

Therefore any attack on Christianity by means of *scientific* arguments is inherently contradictory. For example, science requires that nature can be understood, that man transcends nature and can be a neutral observer "outside the system," that uniformity is valid, and that truth is real. None of these can be justified by science, but all of them are by Christian theology. Even something as prosaic as the assumption that science can lead to truth arose from the Christian confidence that God's truth is manifested in what He made.

These inconsistencies (Figure 6) and the strategy for using them were described by Reed (1996a, 1996b, 1998a), Klevberg (1999), and Reed et al. (2004). More recent explanations are provided by Lisle (2009) and Sarfati (2010). Even Christians opposed to creation and those advocating intelligent design have realized this (e.g., D'Souza, 2008; Pearcy and Johnson, 2008). Logic and

ELEMENT	DESCRIPTION	JUSTIFICATION
Empirical & Inductive	Nature is investigated by observation and experimentation. No rational principal underlying phenomena.	God was absolutely free to create as He wished. Therefore, we understand it by looking at what He made, not by seeking a controlling principle.
Rational	Nature and the rules governing its operation will be rational. It will "make sense."	God is rational and wise. Therefore, creation will reflect those attributes. "Thinking God's thoughts after Him."
Cooperative	Disparate men can work on disparate details with the confidence that their work will all fit together.	Unity of truth depends on its unitary sourceGod. Bits and pieces of truth are still true.
Man, the scientist	Men can understand nature, standing outside the system as an objective observer. Failure to understand is an incentive to keep working, not give up.	Man, created in God's image, transcends nature. Dominion implies the capacity to comprehend what God has made.
Uniformity	Nature operates by regular principles that transcend time and space. "Laws" apply throughout the cosmos and time and are thus predictable.	God is immutable, infinite, and eternal. These attributes lead to the expectation of uniformity in what He made.

Figure 6. Examples of essential elements of science that are justified only by Christianity.

reason are effective at all levels (Day, 2008) but are deadliest when turned on presuppositions.

Despite this gaping hole in their logic, many Christians are distracted by secular natural history. They cannot emotionally accept the concept of a young earth, and incorrectly view a lengthy prehuman prehistory as a conclusion of empirical study rather than an assumption. However, Rudwick (2005) showed that deep time was the position of intellectuals *prior* to any of the so-called evidences of long ages, such as the geological timescale or radiometric dating. Prehistory was merely the manifestation of the prior secular rejection of God—primarily of His work of providence. Prehistory is thus linked to metaphysical naturalism and is dragged down by problems in its parent worldview. It is worth noting that the modern understanding of history also rests on Christian theology (Clark, 1994; Reed, 2000) in justifying axioms of linear time, uniformity, and the importance of history.

If the presuppositions of naturalism are justified only by Christianity, then contradiction is demonstrated and naturalism as a worldview is formally invalid. It is upheld only by the faith commitments of its devotees and by cultural inertia—an ironic reversal of the Enlightenment. With the prop of science gone, all that is left for atheists is wishful thinking. Because they cannot justify it through reason, they enforce it through tyranny (Bergman, 2008). For years, atheists have claimed that science is congenial to their materialistic, positivistic worldview. But what they like to present as the ultimate romance is more accurately described as intellectual rape.

Methodological Naturalism

Having finally woken up to the reality that naturalism is a failed worldview, a number of theistic scientists have rejected its metaphysical approach. However, they often do not follow the train of logic far enough. Like the Israelites, they are not "destroying the high places" (e.g., 1 Kings 22:43). One of today's "high places" is "methodological naturalism." Many Christians see it as a way to reject atheism while escaping the equally unpalatable (to them) option of biblical creation. Though cast as nothing more than the method of the early scientists, we cannot ignore either the historical links between the two "naturalisms" or the cultural effects of 200 years of secularism. Given the vastly different mindset (cf. prologue of Wells, 1993), it is not surprising that methodological naturalism has become something Newton would never accept.

Only a brief overview of the secular concept is necessary, since it is so prevalent in science and culture. However, Christian responses to methodological naturalism bear more scrutiny.

Secular Methodological Naturalism

For secularists, methodological naturalism is the logical extension of their worldview. Scientists ignore God because He does not exist. The method of science has been perverted into a gateway to atheism, as Simpson's quote documents. He separates science from theology or philosophy, and claims naturalism is a necessary assumption of science. As we noted, this stems from the view that science is the autonomous door to truth. Secular scientists agree with Simpson because it is congruent with their faith, and because they have been conditioned by education and training.

Some disagree with Simpson for various reasons. From Kuhn (1962) down to the present, there has been a strong critical reaction to the simplistic view of science generally taught today as the scientific method. Some question whether there even is a scientific method (Bauer, 1992), while others question whether the failure of demarcation criteria (Hogan, 2010; Laudan, 1983) means that science cannot even be adequately defined. Cultural inertia and public education have left the public with the antiquated confidence of Simpson, but

postmodern subjectivism, the politicization of research, and the neo-Luddism of environmentalism are valid threats to the scientific enterprise.

One major reason for public skepticism is the divorce of science from ethics. Methodological naturalism emphasizes the separation of science from religion, vet only religion can provide ethical imperatives to guide difficult choices. Shallow pragmatism cannot. Secular ethics have failed, and the terror of science in the hands of the powerful is one lesson from the twentieth century that has taken root. The same medical advances that can save large numbers of people can also be used to kill them, and secularists have not built an encouraging track record of valuing human life and liberty (Bergman, 2002; Day, 2008).

Despite attempts to convince the public that there is no difference between modern methodological naturalism and the traditional method of science, that idea cannot stand close analysis. Pioneer scientists, such as Newton, did not see science as autonomous nor completely separated from philosophy and theology. They did not dismiss God as the ultimate cause of

phenomena. There can be no other reading of their work (e.g., Morris, 1988).

Methodological naturalism forces uncomfortable questions for theistic scientists, including:

- Why does the Christian worldview have no apparent relevance to science?
- Why does the scientific method lead many people to conclude Christianity is false?
- Why must we ignore God to have science?
- Why does the method of science outweigh the goal of truth?

These issues are addressed by Christian thinkers in several ways.

Christian Views of Methodological Naturalism

Although all Christians by definition oppose metaphysical naturalism, they are strongly divided about naturalism as a method of science. Confusion among Christians often results from lingering positivism, opposition to creation science, and an inability to distinguish science from history. Poe and Mytyk (2007) claimed that the term "methodological naturalism" was coined by philosophy

professor Paul de Vries of Wheaton College in 1986, although the concept was discussed in some depth by Glover, 1984, by Simpson, 1970, and many others much earlier.

De Vries committed an error that remains common. Rather than redeeming science from naturalism, he tried to sanctify naturalism in the scientific method. This mistake was repeated by Poe (2008), and in both cases they were driven by a perceived need to "triangulate" biblical creation and atheism. They are certainly not alone in the mistaken view that methodological naturalism is the "golden mean" between those two "extremes," and their error is twofold: (1) it assumes the creationist position is wrong at the outset, and (2) it ignores that man's relationship with God is always presented as an either/or choice (e.g., Matthew 12:30), not a sliding scale. Also, as we will see, it is not necessary.

There appear to be two major Christian approaches to methodological naturalism outside of traditional biblical orthodoxy (Figure 7): those of complementarians and theistic scientists. Unfortunately, there are creationists who inconsistently fall into both these camps,

ISSUES	COMPLEMENTARIAN	THEISTIC SCIENCE	TRADITIONAL BIBLICAL
"God-of- the-Gaps"	No gaps in causal fabric; thus, natural explanation precludes God.	Real gaps in causal fabric are "filled" by God's direct intervention in nature.	Straw man; man's finitude guarantees limits of knowledge
Methodological Naturalism	Strong support of methodological naturalism	Weak support; science has dual aspect: 'Duhemian' and 'theistic.'	Traditional method of science is not identical to meth. nat. Issue is truth, not method.
Structure of Knowledge	Level playing field; at times tilted towards science.	Level playing field; distinct worldviews have distinct science.	Bible superior to man's knowledge; sets boundaries and justifies science.
God & Nature	Semi-deistic view of reality.	Strong on doctrine of Creation; weak on doctrine of Providence.	God intimately involved in world; manifested by works of Creation & Providence.

Figure 7. Three ways in which Christians approach science and its method, based on Moreland, (1997); Plantinga (1997); Poe and Mytyk (2007); and this paper.

embracing methodological naturalism. In contrast, we assert that the traditional biblical view is true because (as we will show below) methodological naturalism is not one and the same as the attributes of science, and because of problems in both complementarian and theistic science approaches.

Complementarianism

This view is common currency among progressive creationists and theistic evolutionists. Poe and Mytyk (2007) list supporters as including Bube, Van Till, Miller, and many others. In many ways, it is indistinguishable from the secular view of methodological naturalism; it simply refuses to push the logic of ignoring God from science into a more general worldview. Complementarians also embrace a vague, yet pervasive positivism.

Poe (2008) traces the complementarian view to Francis Bacon's definition of science, in spite of his unrealistic optimism regarding human neutrality and objectivity. Complementarians argue that science requires the presumptions of purely natural causes for physical processes, primarily in reaction to "godof-the-gaps" accusations by secularists (Moreland, 1997). This assumes that "natural" causes are, in fact, purely natural. In claiming this, and in asserting the absence of "gaps" in the causal fabric, they default to a semi-deistic view of nature (at best) and a level playing field between science and religion. This dovetails with Horton's (2008) assertion that much of modern evangelicalism is actually therapeutic deism. The deistic view encourages the error of thinking that science is the only legitimate mode of inquiry into Earth's past.

Creationists are not immune from these tendencies. Because the modern creation movement began as an attack *within* science, there remains a tendency by some to think that creation and the Flood can be explained scientifically ... as witnessed by a proliferation of "Flood".

models." We suspect that confidence in methodological naturalism would go hand in hand with a view that natural history is a facet of natural science. For example, Brown (2008, p. 116) described his approach to natural history:

To explain scientifically an unobserved event that cannot be repeated, we must first assume the conditions existing before that event. From these assumed starting conditions, we then try to determine what should happen according to the laws of Physics.

But the Bible explicitly teaches that God works in nature through both primary and secondary causes; thus defaulting to "laws of Physics" at best ignores one aspect of God's actions.

Theistic Science

Some Christians have recognized the dangers of the slippery slope between methodological naturalism and its metaphysical doppelganger. Glover (1984) traced the historical progression. Plantinga (1997, p. 143) called methodological naturalism "provisional atheism." He and others like Moreland (1997) and Meyer see several fundamental problems with the complementarian view. We will focus on Plantinga's (1997) argument, because it avoids the convolutions of Moreland (1997) or the attempt by Potter (1999) to introduce unnecessary new categories; i.e., "parascience" and "ultrascience" into the discussion.

Plantinga's basic rationale for "theistic science" comes from the reality of spiritual warfare. He recognizes the essential tension between worldviews and asserts that Enlightenment atheism tries to cover its tracks.

According to an idea widely popular ever since the Enlightenment, however, science ... is a cool, reasoned, wholly dispassionate attempt to figure out the truth about ourselves and our world, entirely independent of ideology, or moral convictions, or religious or theological commit-

ments.... But many other areas of science are very different; they are obviously and deeply involved in this clash between opposed worldviews (Plantinga, 1997, p. 143).

He notes three arguments for methodological naturalism. The first, the "faith vs. reason meme of the Enlightenment" is easily dismissed.

One root of this way of thinking about science is a consequence of the modern foundationalism stemming from Descartes and perhaps even more importantly, Locke. Modern classical foundationalism has come in for a lot of criticism lately.... And since the classical foundationalism upon which methodological naturalism is based has run aground, I shall instead consider ... [other] reasons for accepting methodological naturalism (p. 145).

The second is Ruse's argument that it is true by definition. Plantinga asserts that it fails on three fronts: (1) the demarcation problem (cf. Hogan, 2010), (2) atheism's inability to justify natural law, and (3) a suspicion that the solution is more complex than mere semantics.

He then addresses the third argument—"functional integrity"—by reference to Van Till.

Now Van Till suggests that God does nothing at all in the world *directly*; only creatures do anything directly. But no doubt Van Till, like any other theist, would agree that God directly conserves the world and all its creatures in being; he is directly active in the Big Bang, but also in the sparrow's fall.... And no doubt Van Till would also agree (on pain of infinite regress) that if God does anything in the world indirectly, he also does something directly: presumably he cannot cause an effect indirectly without also, at some point, acting directly.... Perhaps his idea is that God created the universe at some time in the past (acting directly at that time) but since then he never acts directly

in the world, except for conserving his creation in being, and miracles connected with salvation history.... What is the warrant for supposing God no longer acts directly in the world? (Plantinga, 1997, p. 146).

Why do some Christians advocate this deistic framework? Plantinga (1997, p. 147, emphasis his) suggested that, "there is a different and unspoken reason for this obeisance to methodological naturalism: *fear and loathing of Godof-the-gaps theology.*" Moreland (1997) echoed that observation. Plantinga (1997, pp. 148–149, emphasis his) then criticized that mind-set.

Indeed, the whole *interventionist* terminology—speaking of God as *intervening* in nature, or *intruding* into it, or *interfering* with it, or *violating* natural law—all this goes with God-of-the-gaps theology, not with serious theism.... Indeed, the whole God-of-the-gaps issue is nothing but a red herring in the present context.

Having argued against methodological naturalism, Plantinga attempts to promote a dualistic model with two distinct kinds of science— "Duhemian science," named for the early twentiethcentury historian of science Pierre Duhem (cf. Glover, 1984), and "theistic science," or "Augustinian science." Duhem recognized science as subordinate to metaphysics but was practically segregated to protect it from "metaphysical squabbling" and to ensure that it is a universal pursuit common to all men. That is much closer to the reality of the seventeenth century than "methodological naturalism" (Figures 4 and 5). Both Plantinga and Poe (2008) argue that science is about preserving objectivity, not furthering naturalism. But Clark (1994, p. 245), noted the impossibility of neutrality:

> There is also an element within every paradigm that Kuhn says is "arbitrary." When this element is seen in past periods of science, it is called "myth." However, it is no

doubt present within contemporary paradigms without being recognized as mythical or erroneous.

This is problematic because:

Many of the best scientists work their whole lives without ever seriously questioning the truth of the presuppositions their work rests upon. This must certainly be part of the reason why so many scientists insist dogmatically upon the truth of a naturalistic worldview while that worldview remains nothing more than a philosophical position outside the reach of scientific verification or falsification (Clark, 1994, p. 246).

He blamed it on education and training:

We can see from this that what takes place in the training of scientists is a very thorough conditioning process.... And the over-arching metaphysical aspect of today's paradigm is hands down that of naturalism. It is impossible to conceive that that conditioning process does not result in a tremendous amount of absorption of naturalistic thinking by the scientists in training (Clark, 1994, p. 249).

At this point, theists have two alternatives: recapturing science from secularism or Plantinga's call for a distinct Christian enterprise, called "Augustinian science," operating in parallel with "Duhemian science." The former would be science based overtly on Christian metaphysics, and each science would have its own sphere.

So there is little to be said for methodological naturalism. Taken at its best, it tells us only that Duhemian science must be metaphysically neutral and that claims of direct divine action will not ordinarily make for good science.... Perhaps we should join others in Duhemian science; but we should also pursue our own Augustinian science (Plantinga, 1997, p. 151).

This is closer to traditional science than the complementarian view because it recognizes the shortcomings of methodological naturalism. Plantinga's strength is seen in the weakness of his opponents, for example, Krause (1997). Krause offered four objections to Plantinga, ranging from weak to silly (i.e., blaming the Enlightenment on Christian intransigence; cf., Stark, 2003 for a rebuttal).

Moreland (1997) also argued against the complementarians but fell into the trap of arguing from secular premises. He claimed reality is a natural fabric with ontological causal gaps that point to God's direct intervention. Science is thus the process of identifying God's work in nature by pinpointing these gaps.

One way this commitment [to theism] can appropriately enter the practice of science is through various uses in scientific methodology of gaps in the natural world. These gaps are essential features of direct, immediate, primary divine agency properly understood (Moreland, 1997, p. 2).

As expected, one reason for his wrong turn is his failure to differentiate between history and science in natural history investigations.

The goal of natural science is to study the spatiotemporal natural world of matter and energy and seek natural explanations for the physical properties, behavior, and *formative history of the physical universe* (Moreland, 1997, p. 3, emphasis added).

Brand (1996, 2006) approached these issues as a creationist. He blamed the growth of the worldview of naturalism on science's progressive explanation of what were once considered mysteries. Glover (1984, p. 94, emphasis added) disagreed:

It is, therefore, one of the *supreme ironies of modern culture* that this mechanistic method should have given rise early in its history to a mechanistic metaphysics that ne-

gated its basically nonmetaphysical nature.

Brand (1996, p. 25) then repeated secular propaganda.

The progress of the last two centuries tells us that naturalism has resulted in scientific progress. Whether or not we agree with the tenets of naturalism, it is unreasonable to say that naturalism is not an effective paradigm.

But naturalism cannot be an effective paradigm because there has been a tremendous inefficiency represented by the staggering amount of research wasted on its false ideas—evolution, geological history, extraterrestrial life, etc. Brand (1996, p. 26) was skeptical of solving the argument between the different Christian views: "Can the concepts of naturalism or interventionism be tested? The answer in both cases is no." Actually, both can—but by *logical* truth tests, not scientific ones.

In 2006, Brand expanded his discussion, introducing three models of science and religion. These included:

- No relationship between science and religion. Science provides truth; theology does not. Brand rejects the positivist tunnel vision of science, noting that it is a search for objective truth, not a game won by methodology.
- Science and religion are parallel but separate. Both provide truth, but science can critique religion while religion cannot return the favor. This view is popular with many Christians because it avoids overt naturalism as well as open conflict with the scientific establishment. Brand rightly argues that these Christians fail to understand both inherent weaknesses in science and sin's noetic influence.
- Interaction between science and religion. Both are sources of truth and should interact.

Brand rejected the first two and argued for the third. He made an im-

portant point in calling for science and religion to cooperate in the quest for truth. His figure 2 summarizes his views on integrating the two domains.

Although Brand made many good points, he appeared to place science and Christianity on a level playing field. This view is supported neither by history nor logic. In both cases, we see that science is contingent upon theology, and therefore subordinate to it. Secular positivism and its accompanying arrogance are not resolved by making Christianity the epistemic equal of science; it is, instead, inferior. This does not mean that it is not a powerful approach to truth in the physical realm. Clearly it is. That power should make us less, rather than more, contemptuous of the means by which it is justified.

Although the theistic science views of Plantinga and Moreland and the interactive model of Brand are all improvements on the complementarian view, they do not heal all the injuries of Enlightenment secularism. As we will argue below, that can only be done by uprooting its pervasive memes about the nature of science, history, and theology. Only a return to traditional biblical orthodoxy can accomplish this task. However, before we discuss the solution, we must address the red herrings of miracles and the "god-of-the-gaps" accusation.

Miracles and God-of-the-Gaps: False Dilemmas

Far too often, Christians react to naturalism like linebackers responding to a play-action fake. We shed blocks and stone the running back ... only to discover that he doesn't have the ball—it is in the hands of a receiver dancing in the end zone. Arguments about miracles and "god-of-the-gaps" reasoning are important but tend to be the running backs that allow unaddressed presuppositions of naturalism to score against Christianity. We lose when secularists define the rules. Instead, we must force them to

defend their axioms (Lisle, 2009; Reed, 2001; Reed et al., 2004). The most useful aspect of discussions of miracles and "god-of-the-gaps" reasoning is in the way they illustrate the need for a new strategy.

Miracles

Unbelievers have always argued against miracles because miracles certify revelation, obliging obedience. Modern secular arguments are typically traced to Hume (1977) who deemed miracles impossible because an empirical approach to knowledge required repeatability to confirm physical relationships. Or as Flew (1997, p. 49) noted:

The basic propositions are, first, that the present relics of the past cannot be interpreted as historical evidence at all unless we presume that the same fundamental regularities obtained then as still obtain today.

Enlightenment secularists seized on Hume's arguments and attacked the possibility of miracles. Christians have answered in books and articles too numerous to cite here. Very few, however, have defended miracles by challenging the contradictory assumptions of secularists, specifically with regard to uniformity (Reed, 1998a). As a result, many Christians seem embarrassed by the subject, and seek to keep miracles and science as far apart as possible. For example, Young and Stearley (2008, pp. 462–463) claimed:

We suggest, however, that God is economical with miracles and that he has employed them mainly in the service of redemptive history.... Arbitrary, unobserved miracles performed during the work of creation would have had absolutely no impact on people and would not serve to confirm the presence of God or the pronouncement of the word because no one was there to observe them.... Biblical miracles like the virgin birth, the resurrection or Jesus' walking on water were powerful signs to the observers to confirm the

divinity of Christ but such miracles have no bearing on the daily practice of scientific geology. Such miracles have no effect on historical reconstructions of the Earth's past, nor do they affect the laws of physics or the course of chemical reactions.... What would be a problem, however, is the introduction of arbitrary or capricious miracles with no compelling reason from the biblical text for assuming their existence. Assuming such miracles would make the pursuit of historical sciences more problematic.

Reed (2010a) noted a litany of errors in this statement. Rather than developing a better theology of miracles, Young and Stearley (2008) only show that fear of, and compromise with, secular arguments lead to retreat and further compromise.

The answer to secularists about miracles is both negative and positive. First, the negative answer is to challenge the assumptions on which the secular case is built. Once they are shown to be contradictory, then the case falls apart. For example, Geisler (1997, p. 84; brackets added) answered the argument from uniformity as follows:

If this assumption is correct ... one should not believe in the historicity of any unusual events from the past (since none are repeatable). Likewise, even historical geology is unrepeatable in practice, since the fossil record was formed only once and has not been repeated. So also is the history of our planet unrepeatable. Yet it has happened. Hence, if Flew [and Hume are] right, the science of geology should be eliminated, too!

Positively, Christians should argue that miracles fall within the domain of theology, not science, because miracles are God's direct causing of particular effects according to His will. Science, properly defined, deals *only* with the *normative* workings of providence, or what

is commonly called "natural law." For that reason, scientific arguments against miracles are ultimately non sequitur.

God-of-the-Gaps

Weinberger (2008) presented a good summary of the "god-of-the-gaps" debate and recognized that theistic compromise with naturalism gives the argument its power.

To maintain the acceptance of both [science and Scripture], conventional wisdom dictates that Scripture be separated from science. As I have attempted to show, it is precisely this separation that *created* the inconsistencies of theistic religion-and-science discourse. Into the void left by the absence of biblical history was inserted the deistic god-of-the-gaps (Weinberger, 2008, p. 125).

Brand (1996, p. 13) noted other problems:

In reality the logic in the "god-ofthe-gaps" concept was naïve and implies that if we can understand how something works, God does not have any part in it. A further implication is that if God is involved in some process, that process does not function through nature's laws.

At the risk of getting ahead of ourselves, a return to the traditional doctrines of Creation and Providence negates the power of this secular argument. Orthodox Christianity has always taught that God's interactions with His creation fall under two distinct categories. These are summarized, for example, by Question 14 of the Westminster Larger Catechism (emphasis added):

Q. How does God execute his decrees?

A. God executes his decrees in the works of *creation* and *providence*, according to his infallible foreknowledge, and the free and immutable counsel of his own will.

These two classes of God's works are united in their Author's eternal,

infallible wisdom and will. But they are not one and the same, and one way of distinguishing them is by reference to causality. God's work of creation is distinct from any "natural" processes that we observe today in that it was done by the immediate, unique power of God (Genesis 1). Thus, like miracles, the study of origins is the domain of theology or metaphysics. The real "gap," and one that swallows all of naturalism's theories, is the attempt to argue from science what science can never explain. For example, the big bang theory starts with a number of assumptions about reality, as well as initial conditions of space, time, matter, and energy. None of these can be justified by science, other than being necessary to make the theory "work." That is not science; it is speculation. Only Christianity can justify both the assumptions and the initial condition (God) sufficient to explain the cosmos, and although the argument is subject to truth tests of logic (cf. Sproul et al., 1984), it is ultimately one of theology.

Regarding creation, accusations of "god-of-the-gaps" reasoning fail because there were no ontological "gaps." That is because God directly created the cosmos according to His will and design. There are epistemological gaps because humans are finite, but there is no special argument benefiting secularists in noting that self-evident truth. Furthermore, Christians have fewer "gaps" in their knowledge thanks to divine revelation of truth outside human experience. Creation exhibits a direct link between cause (God) and effect (cosmos) not subject to science. Since two millennia of Christian apologetics have shown it to be a reasonable, consistent, and powerful explanation, the accusation that we employ "god-of-the-gaps" reasoning fails. Scripture's power in this regard is seen in the hesitancy of people like James Hutton to debate origins; he tried to ignore it by setting it outside the bounds of his geotheory. It was an error for the church to not call him on that point, just as it re-

mains an error for the church to not call cosmologists on the same weakness of the big bang or any cosmogonic theories.

Is the "god-of-the-gaps" argument a problem for inquiry apart from the miracle of creation? No-thanks to God's other great work of providence. Once again, causal gaps are eliminated because cause is unified in God's will. Despite secular attempts to separate causality in creation from God, He is no less immediate to, or responsible for, the history of the world than for its origin. God's work of providence does not exclude His prerogative to choose to work immediately and directly. However, by revelation we understand that He chooses to maintain the natural order in predictable regularities using secondary causes. But God is God; nothing precludes His direct, immediate causing of anything at anytime in any place... hence, the argument against miracles fails.

Ironically, the assertion that science is even possible comes from the same source that confirms that science will not be able to explain everything. It is a fallacy to preclude miraculous works out of hand (like Hume), because God is both a necessary and sufficient cause for any true miracle, and the absence of miracles thus demands the absence of God. It is "catch-22" for secularism: if God is absent, then the axioms of science cannot be justified, but if He is present, then His direct or even miraculous works are always potentially present. It will not do to accept a nebulous substitute for the hard reality of divine providence—typically the "god" of deism. God is not limited by men or nature; He does as He chooses.

God is not causally irrelevant, as secularists wish; nor is He causally removed, as some Christians assert. Instead, He is immediately involved in every motion of every quark in the universe. Science is possible only by reference to the theological distinction between primary and secondary

causation (Sproul, 1989). God's use of secondary causes—built-in regularities in the properties of matter and their relationships—as the normative means of accomplishing His will—only certifies His efficiency; it does not remove Him from the equation. Thus, the worst nightmare of the secularist is real. God is omnipresent—sparrows do not fall nor do bosons transmit force apart from His will. As Weinberger (2008) noted, once our presuppositions revert to orthodox Christianity, the whole "god-of-thegaps" argument becomes moot, if not ridiculous. There are no "gaps" in God's will, which is the ultimate causal force behind everything that comes to pass, whether caused in nature mediately or immediately.

Another error in the debate is confusing metaphysics and epistemology. Secularists begin by defining "gaps" as failures in our *understanding* of particular causal nexi (epistemology), but they then leap right into real causality in nature (metaphysics). Sadly, many Christians allow themselves to become trapped in trying to explain the inexplicable workings of causality in the physical world (as opposed to assuming causality and explaining the resulting phenomena).

The whole argument can be boiled down to the simple statement that people do not understand as God does—a point made by theologians across the millennia. All the noise and bluster comes down to the amazing insight that the finite cannot comprehend the infinite. In modern parlance ... Duh! The false premise behind this silly argument is that science and only science can ultimately comprehend the infinite. This is indefensible, and thus any argument along these lines is spurious. That Christians continue to wrestle with it is an embarrassment.

Providence: the Solution to Secular Pollution

The main point of this paper is that the orthodox understanding of providence negates the need for methodological naturalism, just as the doctrine of creation negates metaphysical naturalism. Providence provides a better Christian explanation for science and nature than those offered by the complementarians or advocates of theistic science.

To understand providence, we must understand the terms used by theologians on one hand and philosophers and scientists on the other. Sproul (1989)

DISCIPLINE	TERM	DEFINITION
Philosphy	Primary Causality	God's act of creation God's ongoing sustaining of universe
Theology	Immediate Works	God's direct action to accomplish His will
Philosophy	Secondary Causality	Ordinary manner by which God rules His creation - "laws of nature" natural causes = ordinary providence
Theology	Mediate Works	God's use of created things to accomplish His will

Figure 8. Differences between theological and philosophical language can causes confusion. The top two definitions refer to God's direct, often miraculous acts. The bottom two point to God's efficiency in ordinary providence in directing the workings of His creation, often subtly.

offered clarification between theological definitions of God's works and philosophical definitions of causality. Figure 8 shows two classes of God's works using both vocabularies. Sproul first drew the distinction between primary and secondary causality:

Primary causality refers to God's act of creation as well as his ongoing work of sustenance over creation. His sovereignty stands over and above the created order at every moment. This makes him not only the Creator but the Lord of history as well. Secondary causality refers to what we commonly call the laws of nature. These "laws" reflect not an independent power of nature but rather the ordinary manner by which God rules his creation (Sproul, 1989, p. 67).

Then he discussed theological distinctives in the modes of God's work.

Another crucial distinction that closely resembles the distinction between primary and secondary causality is the distinction between the immediate and mediate work of God. The term "immediate"... does not so much refer to "suddenness" as to a work directly done without intervening means (Sproul, 1989, p. 68).

The origin of scientific naturalism stems in part from the imprecise terminology of early scientists and philosophers—an excusable mistake because of the monolithic nature of the Christian worldview at that time. And it pales beside the errors of naturalism. These include errors of logic, a fuzzy positivism that inflates science beyond its bounds, a focus on method instead of truth, and a failure to distinguish history from science. But the foundational error is the assumption that God can be ignored. Recovering a seventeenth-century sense of divine immanence requires the doctrine of providence.

Providence as understood by Europe in the 1600s is largely rejected today.

Poor theology abounds, for example, in Simpson's (1970, p. 61) attempt to justify naturalism by reference to James Hutton's uniformitarianism:

He sharply distinguished First Cause from second causes. He was a providentialist in that he considered the First Cause as ordaining a terrestrial system the final cause of which is the benefit of its inhabitants, especially man, but he believed that the operation of that system, once it had been caused, was by entirely rational second causes with no preternatural intervention.

Hutton was no "providentialist"; he was a deist. It was Reformed scholars, using the philosophical terminology of Descartes, who applied the language of primary and secondary cause to describe modes of providence, most notably in the Westminster Confession of Faith (1647). In contrast to Hutton and Simpson, their view emphasized God's ongoing immanence and His constant control of both first and second causes. The God of orthodox Christianity did not create and retreat. As Paul noted in Acts 17:27-28, God is always at hand, providing life, motion, and being to all. Simpson's theological ineptness led to the contradiction: If God created, then He exists. If He exists, He is present, since part of being God is omnipresence. It is logically impossible for God to just go away! And thinking Him absent some of the time merely to affirm unbelief is irrational.

Simpson's worldview drove his thinking. What proves that nature's operation is entirely "rational," and what precludes "preternatural intervention?" On these issues science must be silent—a prospect that terrifies secular man. That is why secularism rages against orthodox understanding of both creation and providence—they take away the scissors that attempt to cut God out of the picture.

Unfortunately, there are Christians as inconsistent as Simpson, though in a different way. Like Hutton, they want a divine creation, but also like Hutton, they think the "second causes" of providence are inherent properties of matter. Sproul (1989, p. 67) warned against this error:

What we call natural causes may also be called examples of ordinary providence. It is when we conceive of these secondary causes as being independent of God that we commit a form of idolatry.

Historical Understanding of Doctrine

We will examine the doctrine of providence at two points in time: (1) before the Enlightenment, and (2) at the height of the nineteenth century's secular tide. John Calvin (Figure 9) is considered the premier systematic theologian of the Reformation and was influential in the views of the seventeenth-century scientists, especially through the English Puritans who influenced the age of Newton. His *Institutes of the Christian Religion* (McNeil, 1960) would have been well known to all educated men in the 1600s.

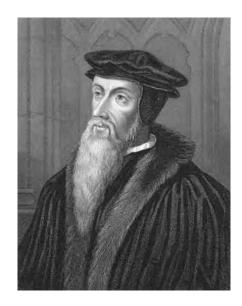


Figure 9. John Calvin (1509–1564) followed Martin Luther's reformation, becoming its premier systematic theologian.

Calvin first noted that both the original existence and ongoing operation of natural phenomena are chained to divine will.

And considering inanimate objects we ought to hold that, although each one has by nature been endowed with its own property, yet it does not exercise its own power except in so far as it is directed by God's ever-present hand. These are ... instruments to which God continually imparts as much effectiveness as he wills, and according to his own purpose bends and turns them to either one action or another (McNeill, 1960, p. 199).

Thus, pretending that physical phenomena have no causal connection to God is foreign to orthodox theology. Calvin noted that even those material actions we see as natural are under divine direction.

God has witnessed by those few miracles [e.g., Joshua's long day; Isaiah's sign] that the sun does not daily rise and set by a blind instinct of nature but that he himself ... governs its course (McNeill, 1960, p. 199, brackets added).

Then he addresses the immediacy and unlimited sweep of providential actions.

And truly God claims ... omnipotence-not the empty, idle, and almost unconscious sort that the Sophists imagine, but a watchful, effective, active sort, engaged in ceaseless activity. Not ... a general principle of confused motion, as if he were to command a river to flow through its once-appointed channels, but one that is directed toward individual and particular motions. For he is deemed omnipotent, not because he can indeed act, yet sometimes ceases and sits in idleness, or continues by a general impulse that order of nature which he previously appointed; but because, governing heaven and earth by his providence, he so regulates all things that nothing takes places

without his deliberations (McNeill, 1960, p. 200, emphasis added).

Calvin would have had had little patience for deism, as illustrated by his contempt for Epicureans.

I say nothing of the Epicureans (a pestilence that has always filled the world) who imagine that God is idle and indolent (McNeill, 1960, p. 202).

Thus the seventeenth-century thinkers held a very different view of the world than modern secular man. God was the powerful Creator *and* the equally powerful Sustainer. He was there and could not be ignored. There was no skepticism of miracles, for through the lens of providence, everything was a wonder (Hooykaas, 1999). This was the view held by the early scientists.

The regularities of nature were explained in terms of an order established by God and through which he *normally* acted in the world; this action of God was his *potentia ordinata* and it never circumscribed or limited the *potentia absoluta* which expressed his absolute freedom even in respect to the natural order he had established (Glover, 1984, p. 92).

The possibilities of science, especially after Newton, combined with skeptical (Hume) and dogmatic (Kant, Hegel) philosophy, acted to diminish this view of God. In time, Enlightenment philosophy won the argument because Christians—too comfortable in their worldview to imagine competition—accepted secular premises. With providence transmuted to "laws of nature," creation could be dismantled by means of a lengthy prehuman prehistory and evolutionary development of species. "If the foundations are destroyed, what can the righteous do?" (Psalm 11:3 NASB).

Turning the clock ahead from Calvin to the 1800s, we examine the views of Robert L. Dabney (Figure 10), a prominent scholar in the tradition of Calvin. Unlike many of his peers, he recognized

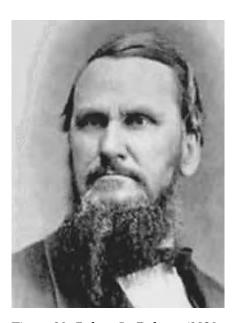


Figure 10. Robert L. Dabney (1820–1898) was one of the ablest theologians of the nineteenth century. He grasped the danger of both biological and geological views of secular natural history and opposed both vigorously.

the danger of both Lyell and Darwin and their role in the growing secularism (Reed, 2010b). Dabney (1996, p. 276) retained Calvin's basic view:

We believe the Scriptures to teach, not only that God originated the whole universe, but that He bears a perpetual, active relation to it; and that these works of providence are "His most holy wise, and powerful preserving and governing all His creatures and all their actions."

Well educated in the history of ideas, Dabney framed different views of God's work in terms of traditional schools of thought, although he probably did not grasp the extent to which the unconscious incorporation of biblical presuppositions (Reed, 2001) separated modern secularism from pre-Christian alternatives (Glover, 1984). Dabney's different schools included Epicureans, rational deists, and pantheists. Figure 11 provides a summary of these and other relevant schools.

Category	Description	Causality	Miracles
Atheism	No supernatural; cause-and-effect relationships inherent in eternal matter and energy; randomness; in extreme form, no causality.	Inherent in matter; effects are random interactions of natural law.	Impossible by definition.
Aristotle	Nature shaped from preexisting "stuff" and set in motion by unmoved mover, which had no interest in nature or man, being pure potentiality.	Cause explained by material, efficient, formal, & final causes.	May be lack of knowledge; if real, attributed to lesser limited "gods."
Pantheism	God exists within nature. Changes in nature reflect process of divine evolution. Eternalistic.	Effects in nature are simply manifestation of divine evolution.	Presently unknown or inexplicable actions of divine self-actualization.
Rational Deism	Nature created as fully functioning mechanism, with potential for cause built in. Causality manifested in invariant natural law.	Nature has order and intelligibility; power of cause created in matter at beginning.	Unlikely. If so, then anarchical intrusions into otherwise predictable nature.
Orthodox Christianity	Eternal, self-existing God created all ex nihilo for His glory; He governs and upholds creation by providential power through the Holy Spirit.	God causes effects, direct and indirect; first by Creation and then by Providence.	Direct exercise of Providence; natural "law" = indirect exercise of same.

Figure 11. A summary of possible positions regarding God's action in the world.

According to Dabney, Epicureans admit an intelligent deity but claim that an emotional attachment to the world is inconsistent with his perfections, much like Aristotle's Unmoved Mover. Rational deists allow the Creator some interaction with His creation, but only in a vague and general way, mediated through natural law, like human rulers using stewards during an absence. Dabney was quick to note the shortcomings of rational deism: (1) human rulers command intelligent underlings, but God commands inanimate matter; (2) humans capture energy to do work, while God supplies His own; (3) any event that surprises God removes His omniscience and omnipotence; (4) if cause and effect rely on matter, then God's decree is reduced to the Stoic's fate; (5) God cannot direct general events without

directing specific ones because the term "general" is an abstraction of particulars; and (6) if all events are connected by causality, and God is in that chain, then He must superintend each link or there would be no certainty in outcome. Of course pantheism disallows providence at the outset, since there is no distinction between God and the object of His work.

Dabney (1996, p. 279, emphasis added) rejected semantic confusion about "natural law."

The much-abused phrase, law of nature, has been vaguely used in various senses... properly it means that it is the observed regular mode or rule, according to which a given cause, or a class of causes operates under given conditions... For nature is but an abstraction, and the law is but the regular mode of

acting of a cause; so that instead of accounting for, it needs to be accounted for itself.

But how could this regular mode of causation be explained? After all, scientific discoveries of past centuries had raised questions about God's interaction with the physical world. Dabney (1996, p. 280) saw two possible interpretations, both of which linked God to this causality, noting:

But as to physical causes, orthodox divines and philosophers give different answers. Say the one class ... matter is only passive. The coming of the properties of the cause into the suitable relation to the effect is only the occasion; the true agency is but God's immediately. All physical power is God directly exerting Himself through passive matter; and the law

of the cause is but the regular mode which He proposes to Himself for such exertions of His power. Hence, the true difference between natural power and miraculous, would only be, that the former is customary under certain conditions, the latter, under those conditions, unusual.... Others ... say that to deny all properties of action to material things is to reduce them to practical nonentity; leaving God the only agent and the only true existence, in the material universe. Their view is that God, in creating and organizing material bodies, endued them with certain properties. These properties He sustains in them by that perpetual support and superintendence He exerts. And these properties are specific powers of acting or being acted on, when brought into suitable relations with the properties of other bodies. Hence, while power is really in the physical cause, it originated in, and is sustained by, God's power.

So though science had raised philosophical questions about the exact mechanism of causality, the bottom line was still God. Note that Dabney (1996, p. 281) rejected the deistic position that seems to have evolved into the modern complementarian view.

Some answer that God arranges the relationships between things, activating the potential for cause and effect. But this is no more than Leibnitz' pre-established harmony. This would, indeed, give the highest conception of the wisdom, power, and sovereignty exercised in establishing the amazing plan; but it would leave God no actual providential functions to perform in time, except the doubtful one of the mere sustentation of simple being.... This explanation is therefore obviously defective.

He concluded:

Natural laws are simply the expression of a mode of consistent causal operation. But in nature, many laws work together to produce effects. Like man combining properties of various laws to create some novel mechanism, called rational contrivance for an end. Likewise, God (Dabney, 1996, p. 281).

During Dabney's day, secular attacks on miracles were unrelenting. Dabney replied, unwilling to accept the secular attempts to redefine terms:

> Providence is not strictly "supernatural" for that is God's acting beyond established natural causes, but it is supra physical, being personal. "For that which Personal Will effectuates through the regular laws of second causes, is properly natural.... Some think miracles are hidden laws. But this is inconsistent with their purpose of attesting revelation. We must hold fast to the old doctrines; that a miracle is a phenomenal effect above all the powers of nature; properly the result of ... God's immediate power which He has not regularly put into any second causes, lower or higher.... Miracles are not anarchical infractions of nature's order.... Every miracle was wrought in strict conformity with God's decree (Dabney, 1996, pp. 282-283).

Then, he addresses the spirit of the nineteenth century directly.

The natural rose out of the supernatural, and in that sense, reposes upon it at all times. The Divine will is perpetually present, underlying all the natural. Else God is shut back to the beginning of the universe, and has no present action nor administration in His empire. Reason: Because, if you allow Him any occasional, or special present interventions, at decisive crises, or as to cardinal events, those interventions are found to be, as events, no less natural than all other events (Dabney, 1996, p. 283).

Having tasted orthodox views of providence, let us examine how it specifically refutes both metaphysical and methodological naturalism.

Providence versus Metaphysical Naturalism

The reason for deism is made clearer by understanding providence. Before Enlightenment atheism could overcome the doctrine of creation, it had to remove God from the immediate sphere of human existence, manifested through His providence. Dabney (1996, pp. 260–261) saw the key idea.

Again, why should the Theistic philosopher desire to push back the creative act of God to the remotest possible age, and reduce His agency to the least possible minimum, as is continually done in these speculations? What is gained by it? Instead of granting that God created a ... world, some strive continually to show that He created only the rude germs of a world, ascribing as little as possible to God, and as much as possible to natural law. *Cui bono*; if you are not hankering after Atheism?

Subsequent history has validated his insight—the "hankering" after atheism has been epidemic. And that is one reason the earliest assaults on orthodox Christianity were on biblical history, not origins. Once God was no longer intimately involved in His world, creation could be pushed back, resulting in a distant, uninvolved God. Human nature would then naturally progress toward atheism.

But the secularists made a fatal mistake in their carefully orchestrated distortions. They chose science as their champion, and although they successfully erected shields in the form of historical fables about science arising as a new classicalism overcoming Christian superstition (e.g., Bergman, 2003; Reed, 2008), they forgot that science had been built on axioms justified by, and only by, Christian theology. Science grew out of the theology of creation and providence. Thus, every time they attack orthodox Christianity, they attack themselves. Like Wile E. Coyote, every time they devised a clever plot to kill their enemy,

CHRISTIANITY: CREATION & PROVIDENCE	ATTRIBUTES OF SCIENCE	NATURALISM: "PROVISIONAL ATHEISM"
God is absolutely free to create. Only way to know is to go look at what He made.	Empirical	From Locke's empirical philosophy and Hume's skeptical philosophy.
God's perspective defines truth. Man made in God's image is distinct from nature; observer.	Objective	Avoid squabbling of speculative theology. Ignore issue by pretending it irrelevant.
Unity of truth guaranteed by God. Piecemeal work can be true if all pieces are true.	Cooperative	Human experience shows benefits of working together.
Man given dominion over rest of Creation. God provides for man through Creation.	Practical	Leftover of pragmatism. Necessary for public support.
Man prone to error by nature. Truth deserves greatest care and effort.	Experimental	Emphasizes objectivity and precision of scientists.
God is rational and efficient. Creation should reflect that in quantifiable precision.	Mathematical	Revival of Pythagorean ideas transmitted through Renaissance.
Man given dominion; must comprehend Creation in order to exercise it.	Inquiry into Nature	Practical benefits of technology and Romantic view of nature.

Figure 12. The essential elements of science do not require methodological naturalism. They are in fact fully justified and confirmed only by theology, particularly the doctrines of creation and providence. Methodological naturalism is an unnecessary accretion.

they overlooked key ideas, and ended up caught in their own trap.

Metaphysical naturalism cannot possibly be true. Creation and providence uphold a Christian view of reality that justifies science. Nothing else does. Since contradiction is the hallmark of the lie, the self-contradiction of naturalism marks it as a false system. No amount of science can change that. As Reed (1996a, p. 7) noted, "If you cannot possibly be right, why bother gathering empirical data?" Until advocates of naturalism can justify their axioms within their own materialistic metaphysic, then their worldview is invalid.

Any time an individual human being experiences God's action in his or

her life, such as an answered prayer, an uplifted heart, or even the next breath, providence is affirmed. If God acts in this world according to His will, and if God is omnipotent, then the continuous, immanent work of God in every detail of this world is affirmed. That reality is the antidote to metaphysical naturalism.

Providence versus Methodological Naturalism

Plantinga (1997) called methodological naturalism "provisional atheism," and if there are gray areas in the theoretical argument, there can be no doubt that has been the practical result. Otherwise, how do we account for the innumerable tales of science seducing the church's

youth away from the faith? Dabney (1996, p. 257) defined the bottom line.

If any part of the Bible must wait to have its real meaning imposed upon it by another, and a human science, that part is at least meaningless and worthless to our souls. It must expound itself independently; making other sciences ancillary, and not dominant over it.

The deceit of methodological naturalism is subtle because in some ways it closely resembles the classical method of science. But as we see in Figure 12, methodological naturalism is an unnecessary addition to the true attributes of science. In fact, these are all better justified by theology than by methodological naturalism.

While early scientists provisionally distanced the method of scientific inquiry from theological inquiry, they never separated science from theology. Instead, they remained aware of the very real links between the two, holding a view of providence that made God the final explanation, even if other causes were evident. Simply reading their works proves this. The subtlety of secularists is that they make a practical distinction into a theoretical separation and minimize this giant shift by playing up the autonomous power of science at the expense of theology.

Christians educated and trained in science imbibe this attitude early on, as well as that of metaphysical naturalism. Rejecting the latter, they see the former as a way to remain scientists in good standing with secular peers. They also see it as an antidote to creation science (Poe, 2008), the kiss of death vis-a-vis their secular peers. That methodological naturalism is used to oppose God's direct special revelation confirms its erroneous nature. "Has God said...?"

The method of science was developed to facilitate empirical, piecemeal, and objective inquiries into the workings of God's creation, recognizing God's providential superintending of it was

BATTLEGROUND	SIMPSON'S DEFINITION	FALLACIES	BIBLICAL "FIX"
naturalism	Basic postulate of science; super- natural excluded from scientific explanation by definition.	equivocation positivism logical inconsistency	Biblical Doctrine of Providence
actualism	Synonym of "uniformitarianism" in Lyellian sense. Present processes only options for past explanation.		
historicism	Problems and procedures coming from consideration of state of Earth and cosmos over time.		
evolutionism	"historical model or theory of life as changing directionally and irreversibly in the course of descent."		
mode of history	Fuzzy gradualism; catastrophes occur, but not sudden, great, and worldwide.		
methods of scientific history	Historical inferences are scientific as long as they are based on actualism, naturalism, and evolutionism.		

Figure 13. Answering the fallacies of the battlegrounds of natural history: naturalism. (Additional battleground fallacies will be added as they are addressed in later papers of this series.)

typically regular and predictable. Every aspect of science required Christian theology to justify assumptions; otherwise, as Stark (2003) noted, it would have developed elsewhere.

Providence and Miracles

Providence cuts through the fog surrounding modern discussions of miracles by changing the rules of the debate. By rejecting deism, we reject the "whether or not" God can or would do a miracle in the abstract. Instead, we regain that wondrous sense that everything is miraculous in the sense that God is acting continuously and omnipotently in space and time. We reject the categories "natural" and "supernatural" in explanation and return to the categories of "God's direct immanent action" and "God's indirect immanent action." God governs His creation; our only question is whether events represent the regular maintenance of secondary causes or a

direct intervention in the created order, even if it overrides those regularities. In doing so, we readmit theology to the table, restrain the hubris of science, and refocus on the goal of both—truth.

We have already discussed how the doctrine of providence dispels the fog of the "god-of-the-gaps" accusations.

In summary, an orthodox understanding of providence is the antidote to naturalism of all types and illustrates the spurious nature of the ancillary red herrings of miracles and "god-of-thegaps" accusations that have distracted Christians for two centuries. In answer to Simpson and his secularist peers regarding naturalism, we affirm that it is not a requirement for science and that any metaphysical manifestation in an attack on Christianity is a self-refuting argument. Furthermore, the corollaries of positivism and "scientific history" are rejected as inconsistent with this doctrine and its implications (Figure 13).

Conclusion

Naturalism in all forms must be opposed by Christians. As we have seen, a firm grip on the biblical doctrine of providence is an antidote to that intellectual poison. It refutes metaphysical naturalism in redirecting attention to the Christian presuppositions that permeate modern atheism. It also obviates the need for "methodological naturalism" because it is silly to assume God out of the picture when the biblical view is that God *is* the picture.

Secular "natural laws" are shown to be the regularities of God's providential care for His creation. They do not preclude God's direct action in space and time, even contrary to those regularities, because omnipotence is a prerequisite of providence and by definition that means that God is free to act however He wills. All of the attributes of science that supposedly require methodological naturalism are better defined and justified by Christian theology. Providence also answers the skeptical denial of miracles and the deistic view of minimalist "intervention." It also shifts our perspective on secular accusations of "god-of-the-gaps" reasoning. There are no ontological gaps because cause is united in the will of God. Epistemological gaps are endemic to the human condition of finitude and thus are no argument for or against any particular position.

Finally, providence drives us back to revelation, refuting the cultural positivism that renders science the doorway to truth. Limiting the boundaries of science also helps us understand that history is distinct from science, and so natural history must find its own methods and rules, eliminating the scientific certainty with which we are told about prehistory and evolution. Needless to say, the implications of the doctrines of creation and providence refute those two ideas too.

This perspective is contrary to the secular consensus of the West, demonstrating our original contention—that this topic is a battleground between two worldviews, one that Christians would do well to battle from the strong position of biblical orthodoxy.

Glossary

- Creation—The work of creation is that wherein God did in the beginning, by the word of his power, make of nothing the world, and all things therein, for himself, within the space of six days, and all very good (Westminster Larger Catechism, Answer 15).
- *Epistemology*—Branch of philosophy that deals with the nature of knowledge.
- "God of the gaps"—Accusation by secularists that Christians explain the unknown by reference to God. Supposedly, as science progresses, "gaps" decrease until God is no longer necessary.

- Immediate works Refers to Gods' direct causing of particular events; parallel to primary causality.
- Mediate works Refers to God's indirect causing of particular events; parallel to secondary causality.
- Metaphysics—Branch of philosophy that deals with the nature of being and reality.
- Metaphysical naturalism—Atheistic worldview or sometimes the metaphysical component of that worldview.
- Methodological naturalism—Assumption by science that physical phenomena are explained by innate physical laws of nature.
- Positivism—Epistemological position that truth comes through science, not theology.
- Primary causality—Refers to God's direct action in causing something to come to pass.
- Providence—God the great Creator of all things does uphold, direct, dispose, and govern all creatures, actions, and things, from the greatest even to the least, by His most wise and holy providence, according to His infallible foreknowledge, and the free and immutable counsel of His own will, to the praise of the glory of His wisdom, power, justice, goodness, and mercy (Westminster Confession of Faith, IV–I).
- Secondary causality—Refers to God's use of secondary causes in events. For example, God saved Jonah's life by using a large sea creature.

References

- CRSQ: Creation Research Society Quarterly PSCF: Perspectives on Science and Christian
- Adler, M.J. 1992. A Second Look in the Rearview Mirror. Macmillan. New York, NY.
- Bauer, H.H. 1992. *Scientific Literacy and the Myth of the Scientific Method*. University of Illinois Press, Urbana, IL.

- Bergman, J. 2002. Darwinism as a factor in the twentieth-century totalitarianism holocausts. CRSQ 39:47–53.
- Bergman, J. 2003. The Galileo myth and the facts of history. CRSQ 39:226–235.
- Bergman, J. 2008. *Slaughter of the Dissidents*. Leafcutter Press, Southworth, WA.
- Brand, L.R. 1996. The paradigm of naturalism, compared with a viable alternative: a scientific philosophy for the study of origins. *Origins* 23(1):6–34.
- Brand, L.R. 2006. A Biblical perspective on the philosophy of science. *Origins* 59:6–42.
- Brown, W.T. 2008. In the Beginning: Compelling Evidence for Creation and the Flood, 8th edition. Center for Scientific Creation, Phoenix, AZ.
- Clark, J.P. 1994. Fact, faith, and philosophy: one step toward understanding the conflict between science and Christianity. *PSCF* 46:242–252.
- Dabney, R.L. (1878) 1996. Systematic Theology, 2nd edition. Presbyterian Publishing Co. of St. Louis, St. Louis, MO. Reprint, Banner of Truth Trust, Carlisle, PA.
- Dawkins, R. 2006a. *The God Delusion*. Bantam Press, London, UK.
- Dawkins, R. 2006b. The Cydonia Group declares war on religion (December 15, 2006). Press release from http://www.positiveatheism.org/hist/quotes/dawkins.htm (accessed January 2010).
- Day, V. 2008. *The Irrational Atheist*. Benbella Books, Dallas, TX.
- D'Souza, D. 2008. What's So Great About Christianity. Tyndale House Publishers, Carol Stream, IL.
- Flew, A. 1997. Neo-Humean arguments about the miraculous. In Geivett, R.D., and G.R. Habermas (editors), *In Defense of Miracles*, pp. 45–57. InterVarsity Press, Downers Grove, IL.
- Geisler, N. 1997. Miracles and the modern mind. In Geivett, R.D., and G.R. Habermas (editors), In Defense of Miracles, pp. 73–85. InterVarsity Press, Downers Grove, IL.
- Glover, W. 1984. *Biblical Origins of Modern Secular Culture*. Mercer University Press, Macon, GA.

- Gould, S.J. 1997. This view of life: non-overlapping magisteria. *Natural History* 106(2):16,18–22,60–62.
- Harris, S. 2004. *The End of Faith*. W.W. Norton & Co., New York, NY.
- Harris, S. 2006. *Letter to a Christian Nation*. Knopf, New York, NY.
- Hitchens, C. 2007. *God is not Great*. Twelve, New York, NY.
- Hogan, T. 2010. Some implications of the demise of the demarcation problem. CRSO 46:167–176.
- Hooykaas, R. 1972. Religion and the Rise of Modern Science. Regent College Publishing, Vancouver, Canada.
- Hooykaas, R. 1999. Fact, Faith and Fiction in the Development of Science: The Gifford Lectures Given in the University of St Andrews 1976. Kluwer Academic Pub, Norwell, MA.
- Horton, M. 2008. Christless Christianity: The Alternative Gospel of the American Church. Baker Books, Grand Rapids, MI.
- Hume, David. (1748) 1977. An Inquiry Concerning Human Understanding. Reprint, Hackett Publishing Company, Indianapolis, IN.
- Keller, T. 2008. The Reason for God: Belief in an Age of Skepticism. Dutton Publishers, New York, NY.
- Klevberg, P. 1999. The philosophy of sequence stratigraphy part I—philosophic background. CRSQ 36:72–80.
- Krause, D.J. 1997. Response to Plantinga. *PSCF* 49:285–286.
- Kuhn, T.S. 1962. *The Structure of Scientific Revolutions*. University of Chicago Press, Chicago, IL.
- Laudan, L. 1983. The demise of the demarcation problem. In Cohen, R.S., and L. Laudan (editors), *Physics, Philosophy, and Psychoanalysis*, pp. 111–127. Reidel, Dordrecht, Holland. Reprinted in Ruse, M., and R. Pennock (editors). 2009. *But Is It Science*? pp. 312–330. Prometheus Books, New York, NY.
- Lisle, J. 2009. *The Ultimate Proof of Creation*. Master Books, Green Forest, AR.
- McNeil, J.T. (editor). 1960. Calvin: Institutes of the Christian Religion. Translated and

- Indexed by F.L. Battles. Westminster Press, Philadelphia, PA.
- Moreland, J.P. 1997. Complementarity, agency theory, and the God-of-the-Gaps. *PSCF* 49:2–14.
- Morris, H.M. 1974. *The Troubled Waters of Evolution*. Creation-Life Publishers, San Diego, CA.
- Morris, H.M. 1988. Men of Science Men of God: Great Scientists of the Past Who Believed the Bible. Master Books, San Diego, CA.
- Mortenson, T. 2004. The Great Turning Point: The Church's Catastrophic Mistake on Geology before Darwin. Master Books, Green Forest, AR.
- Pearcey, N.R., and P.E. Johnson. 2008. Total Truth: Liberating Christianity from its Cultural Captivity. Crossway Books, Wheaton, IL.
- Plantinga, A. 1997. Methodological naturalism? *PSCF* 49:143–154.
- Poe, H.L. 2008. Poe replies. *PCSF* 60(1):41–42.
- Poe, H.L., and C.R. Mytyk. 2007. From scientific method to methodological naturalism: the evolution of an idea. *PSCF* 59(3):213–218.
- Potter, H.D. 1999. How to end science's border war: a conceptual framework. *PSCF* 51(2):98–101.
- Reed, J.K. 1996a. A Biblical Christian framework for earth history research: part I—critique of the naturalist-uniformitarian system. CSRQ 33:6–12.
- Reed, J.K. 1996b. A Biblical Christian framework for earth history research: part II—foundation and method of historical analysis within the Biblical Christian system. *CSRQ* 33:210–216.
- Reed, J.K. 1998a. Demythologizing uniformitarian history. CRSQ 35:156–165.
- Reed, J.K. 1998b. Trigger finger on a shaky gun—Stephen Jay Gould's "take" on papal epistemology. CRSQ 34:239–242.
- Reed, J.K. 2000. Historiography and natural history. CRSQ 37:160–175.
- Reed, J.K. 2001. *Natural History in the Christian Worldview*. Creation Research Society books, Chino Valley, AZ.

- Reed, J.K. 2008. St. Hutton's hagiography. *Journal of Creation* 22(2)121–127.
- Reed, J.K. 2010a. Untangling uniformitarianism, level I: a quest for clarity. *Answers Research Journal* 3:37–59.
- Reed, J.K., and P. Klevberg. In press. Geotheory: past and present. CRSQ.
- Reed, J.K. 2010b. Robert L. Dabney: a rock in the storm of nineteenth-century natural history. *Journal of Creation* 24(3):122–127.
- Reed, J.K., P. Klevberg, C.B. Bennett, C.R. Froede Jr., A.J. Akridge, and T.L. Lott. 2004. Beyond scientific creationism. CRSQ 41:216–230.
- Rudwick, M.J.S. 2005. Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution. University of Chicago Press, Chicago, IL.
- Sarfati, J. 2010. Why does science work at all? http://creation.com/science-biblical-presuppositions (accessed August, 2010).
- Simpson, G.G. 1970. Uniformitarianism. An inquiry into principle, theory, and method in geohistory and biohistory. In Hecht, M.K., and W.C. Steere (editors), Essays in Evolution and Genetics, pp. 43–96. Appleton-Century-Crofts, New York, NY.
- Sproul, R.C. 1989. Providence, science, and the sovereignty of God. *PSCF* 41:67–68
- Sproul, R.C., J. Gertsner, and A. Lindley. 1984. Classical Apologetics: A Rational Defense of the Christian Faith and a Critique of Presuppositional Apologetics. Academie Books, Grand Rapids, MI.
- Stark, R. 2003. For the Glory of God. Princeton University Press, Princeton, NJ.
- Weinberger, L. 2008. Whose god? The theological response to the god-of-the-gaps. *Journal of Creation* 22(1):120–127.
- Wells, D. 1993. No Place for Truth or Whatever Happened to Evangelical Theology?Wm. B. Eerdmans Publishing Company, Grand Rapids, MI.
- Westminster Larger Catechism. http://www.reformed.org/documents/larger1.html (accessed August, 2010).
- Young, D., and R. Stearley. 2008. *The Bible*, *Rocks*, *and Time*. InterVarsity Press, Downers Grove, IL.