

Barbara Forrest and Naturalism

by Thomas A. Gilson

(Originally published as a [series](#) on the [Thinking Christian](#) weblog, December 2005 to January 2006.

Some blog formatting features are retained in this version.)

Barbara Forrest and Naturalism: Part 1

I reviewed [Creationism's Trojan Horse: The Wedge of Intelligent Design](#), co-authored by Barbara Forrest (with Paul Gross), about a year ago ([here](#) and [here](#)), not knowing then the prominent part she would play in the Dover Intelligent Design trial. I was perplexed by the book's offhand dismissal of philosophical issues respecting Intelligent Design, especially given that Forrest is herself a philosopher. As it turns out, she has indeed written about methodological and philosophical naturalism, in articles available [here](#) and [here](#) (see [here](#) for more from Forrest).

Her fundamental contention is that naturalism is the most rational view of the world, both methodologically (i.e., science is most fruitful when it assumes that all events have potentially discoverable natural causes) and philosophically (i.e., this is an accurate view of reality; there is no supernatural). Today I begin to review and respond to what she has written.

I'll start by summarizing her case in the first linked article, "Methodological Naturalism and Philosophical Naturalism: Clarifying the Connection," and by offering a rejoinder to just one of its points in this first section.

Forrest first defines the two versions of naturalism, in terms borrowed from Paul Kurtz:

"First, naturalism is committed to a methodological principle within the context of scientific inquiry; i.e., all hypotheses and events are to be explained and tested by reference to natural causes and events. To introduce a supernatural or transcendental cause within science is to depart from naturalistic explanations. On this ground, to invoke an intelligent designer or creator is inadmissible....

"There is a second meaning of naturalism, which is as a generalized description of the universe. According to the naturalists, nature is best accounted for by refer-

ence to material principles, i.e., by mass and energy and physical-chemical properties as encountered in diverse contexts of inquiry. This is a non-reductive naturalism, for although nature is physical-chemical at root, we need to deal with natural processes on various levels of observation and complexity: electrons and molecules, cells and organisms, flowers and trees, psychological cognition and perception, social institutions, and culture..."

She adds that methodological naturalism (hereafter MN) is an epistemological principle, while philosophical naturalism (hereafter PN) is ontological or metaphysical. Her reasons for adopting PN are primarily epistemological, however. (MN is relatively uncontroversial; it's the application of its assumptions to all of reality that draws fire, and to which I respond here.) She says,

"[I]f there is no workable method for acquiring knowledge of the supernatural, then it is procedurally impossible to have knowledge of either a supernatural dimension or entity. In the absence of any alternative methodology, the metaphysical claims one is entitled to make are very strictly limited. The philosophical naturalist, without making any metaphysical claims over and above those warranted by science, can demand from supernaturalists the method that legitimizes their metaphysical claims. In the absence of such a method, philosophical naturalists can not only justifiably refuse assent to such claims, but can deny--tentatively, not categorically--the existence of the supernatural, and for the same reason they deny the existence of less exalted supernatural entities like fairies and ghosts: the absence of evidence."

...

"If supernatural causation as a methodological principle 'does not afford a basis for objective knowledge,' the implication is that methodological naturalism does afford one. If supernatural causation cannot be 'counted as a means of comprehending the universe in a scientific manner,' the implication is that methodological naturalism can be so counted upon."

She does not claim that supernaturalism is actually impossible; rather, that it has no basis in knowledge

"This exclusivity is not mandated a priori; the philosophical naturalist justifies it on the basis of the explanatory success of science and the lack of explanatory success of supernaturalism."

...

"Methodological naturalism does not disallow the logical possibility that the supernatural exists. To assert categorically that there is no dimension that transcends the natural order is to assert that human cognitive capabilities are sufficient to

survey the whole of what there is; such a claim would amount to epistemological arrogance. But neither does methodological naturalism allow that logical possibility is sufficient warrant for the attribution of existence. At least the naturalist position is well established with respect to the kind of cognitive capabilities we do have."

...

"Adopted in the sciences because of its explanatory and predictive success, methodological naturalism is the intellectual parent of modern philosophical naturalism as it now exists, meaning that philosophical naturalism as a world view is a generalization of the cumulative results of scientific inquiry. With its roots in late 19th-century science in the aftermath of Darwin's *The Origin of Species*, it is neither the a priori premise nor the logically necessary conclusion of methodological naturalism, but the well grounded a posteriori result."

The explanatory success of science under MN provides her with confidence in its applicability to ontology:

"Naturalist philosophers ground their philosophical naturalism in both the failure of the supernaturalist to meet Schafersman's challenge and in the success of methodological naturalism in science. This is because the reliability of knowledge depends on the method by which it is obtained, and as Schafersman says, 'science, solely because of its method, is the most successful human endeavor in history. The others don't even come close.'"

...

"Taken together, the (1) proven success of methodological naturalism combined with (2) the massive body of knowledge gained by it, (3) the lack of a comparable method or epistemology for knowing the supernatural, and (4) the subsequent lack of any conclusive evidence for the existence of the supernatural, yield philosophical naturalism as the most methodologically and epistemologically defensible world view."

This claim of science's explanatory success is greatly overstated, as we'll see below; the same applies to her contention that evidence is lacking for the supernatural.

In summary, Forrest argues that PN is justified over supernaturalism because of its grounding in MN, which provides far greater epistemological support than any supernaturalist view. She allows for the logical possibility of a supernatural world but denies that we can know anything about it reliably. Therefore any speculation supernaturalism is trivial at best.

Interestingly, she quotes geologist Arthur Strahler in a passage that seems actually to rule out any possibility of the supernatural whatever. I highlight this not to suggest that is entirely her view, but to note a response she might have made to it but did not.

[Quoting Strahler] "A specific event of history in a specific time segment must fall into either (a) divine causation or (b) natural causation. Our logic is as follows: "If a [divine, supernatural causation], then not b [natural causation]. If b, then not a." To follow with the proposal "Both a and b" is therefore not logically possible. Moreover, one cannot get out of this bind by proposing that God is the sole causative agent of all natural causes, which in turn are the causative agents of the observed event. This "First Cause/ Secondary Cause" model, long a standby of the eighteenth-century school of natural theology ... adds up to 100 percent supernatural creation.

"Consider the analogy of cosmic history as an unbroken chain [of causal explanations] made from all possible combinations of two kinds of links, a [supernatural cause, as in religion] and b [natural cause, as in science].... When a theist declares any link in the chain to be an a-link (whereas all the others are b-links), an element of the science set has been replaced by an element of the religion set. When this substitution has been accomplished, the entire ensuing sequence is flawed by that single antecedent event of divine creation and must be viewed as false science, or pseudoscience. The reason that replacement of a single link changed the character of all ensuing links is that each successor link is dependent upon its predecessor in a cause-effect relationship ... that divine act can never be detected by the scientist because, by definition, it is a supernatural act. There exists only the claim that such an act occurred, and science cannot deal in such claims. By the same token, science must reject revelation, as a means of obtaining empirical knowledge.'

[Forrest continues] "Under the theistic model, according to Strahler, any recognition of natural causation is logically nullified by the simultaneous assertion of supernatural intervention, either actual or merely possible. Even while differing with Strahler on the logical impossibility of invoking both natural and supernatural explanations--it is logically conceivable if the supernatural and natural causes operate at different ontological levels--one must recognize that invoking supernatural explanations is illegitimate because of the procedural impossibility of ascertaining the facticity of the supernatural cause itself, not to mention its intervention in the chain of natural causes. This points to the metaphysical implications of methodological naturalism: if supernatural causal factors are methodologically permissible, the cosmos one is trying to explain is a non-natural cosmos."

Strahler deserves a stronger reaction than this. He claims that if any link in a causal chain is "replaced by an element of the religion set," then "the entire ensuing sequence is flawed . . . and must be viewed as false science, or pseudoscience." He sets up a

choice: you can have God or you can have science, but you can't have both. They are mutually exclusive. If there is the mere possibility of supernaturalism, there is the accompanying possibility that all science is false. This is an extremist position and should have been flagged as such; instead, Forrest gives it her qualified approval. (And the court, I'm sure, viewed her as a religion-neutral witness!)

Strahler's point, moreover, ignores much of the history of science. It has often been shown that science arose in only one culture, the Christian world of Europe, the only culture in which a rational Mind was conceived as the basis of reality. The earliest "scientists" (who more often called themselves "natural philosophers") believed they were investigating the works of God as they studied the natural world.

This did not stop science; it was precisely what was necessary for it even to get started. Note the extreme shift in mindset since then. A scientist like Strahler today will throw up his hands in the air and say, "Look, if we can't explain it all naturally, we don't have any explanations at all!" The early theistic scientists said, "If we study we can understand the world better, and thus know God more deeply." The naturalist viewpoint is independent, proud; it insists on knowing it all or not even trying. The theistic viewpoint says, "we can learn what we can learn from science and be grateful for the knowledge; and if it leads us beyond itself, so much the better."

Barbara Forrest and Naturalism: Part 2

Barbara Forrest, a witness for the plaintiffs in the Dover ID case, has written a defense of philosophical naturalism, outlined above. Her argument can be summarized:

1. Science employs methodological naturalism in its search for knowledge.
2. Science has been extremely successful in its search for knowledge.
3. Supernaturalist metaphysics have no comparably successful methodology for reliably discovering knowledge.
4. Science is progressively explaining more and more of the world, so that the need for extra-natural explanations is being gradually eliminated.
5. Therefore, although a supernaturalist metaphysic cannot be absolutely ruled out, there is no basis whatever for believing in it.

Even the first assertion can perhaps be challenged, though that would have only academic interest. Points 2, 3, and 4 present more interesting problems, and in fact they are where Forrest's argument fails.

In this section we look at the validity and generality of point 2, "Science has been extremely successful in its search for knowledge." Dr. Forrest wrote:

"Naturalist philosophers ground their philosophical naturalism in both the failure of the supernaturalist to meet Schafersman's challenge and in the success of methodological naturalism in science. This is because the reliability of knowledge depends on the method by which it is obtained, and as Schafersman says, 'science, solely because of its method, is the most successful human endeavor in history. The others don't even come close.'"

...

"[T]he demonstrated success of methodological naturalism suffices to show why it is the only justifiable explanatory principle. "

...

[Quoting Kornblith] "What does have priority over both metaphysics and epistemology, from the naturalistic perspective, is successful scientific theory, and not because there is some a priori reason to trust science over philosophy, but rather because there is a body of scientific theory which has proven its value in prediction, explanation, and technological application. This gives scientific work a kind of grounding which no philosophical theory has thus far enjoyed.

...

Since philosophical naturalism is an outgrowth of methodological naturalism, and methodological naturalism has been validated by its epistemological and technological success, then every expansion in scientific understanding lends it further confirmation.

And in summary,

"Taken together, the (1) proven success of methodological naturalism combined with (2) the massive body of knowledge gained by it, (3) the lack of a comparable method or epistemology for knowing the supernatural, and (4) the subsequent lack of any conclusive evidence for the existence of the supernatural, yield philosophical naturalism as the most methodologically and epistemologically defensible world view."

There's certainly no denying the success of science in its proper function. We live in a world unimaginable even a couple of generations ago, shaped largely by technology born out of science. We take for granted knowledge that would have astounded and perplexed our predecessors, who argued over whether heat was the flow of phlogiston,

whether there were such things as atoms, and what was the center of the universe. We can't imagine a planet or a solar system without simultaneously thinking of its associated gravity, yet the word itself was only invented as recently as Isaac Newton.

Science's epistemic success is attributable to the consistent accessibility of the material it works with. It deals with regularities and the publicly observable.¹ It is uniquely fitted, especially in the "hard" sciences, to highly reliable observation and measurement. As one whose training is in a field of social psychology (Industrial and Organizational Psychology) I know that this reliability wanes quickly as personality gets involved; we just can't predict and measure human behavior the way we can an electron or a mitochondrion. In physics, chemistry, much of biology, and so on, though, the stuff with which scientists work has a nice consistency of behavior. This allows scientists to repeat tests, to check each other, to make predictions and measure their accuracy, and all the things that work to make science the stable body of knowledge that it is.

So we won't get anywhere attacking disputing that science is spectacularly successful, and I'm not inclined even to suggest she's wrong, except for this: while science is very good at what it's good at, it has nothing to offer in other extremely crucial areas of knowledge.

I'll use three of these other areas as examples:

- A. What is the basic substance of reality? Does science describe real entities or something else?
- B. How do we determine truth?
- C. How do we determine value?

Question A addresses whether science actually provides true knowledge about the world, a matter that remains controversial. Most scientists are realists; they accept that they accept the full reality of the physical universe and believe that science yields ever more accurate approximations of a true picture of that physical reality. There remain scientists and philosophers who take the antirealist position. Without full assurance on this, science can hardly claim epistemic superiority over anything. Space does not allow a full exposition of the question. A few introductory comments, from [*Christianity and the Nature of Science: A Philosophical Investigation*](#) by J. P. Moreland (pages 139 and following), will have to suffice for now:

"The major issues in the realist/antirealist debate involve questions like these: Do the theories of science give a literally true model of the way the world is, or do they merely provide useful fictions, calculating devices, or convenient summaries

¹ This is speaking in generalities. There are well-known traps in defining science (the demarcation problem), and there may well be exceptions to what I'm saying, but in general it applies.

of sensory experience that 'work' (e.g., help us control nature, predict phenomena, and so on)?

. . .

"Rational nonrealism, also called instrumentalism, comes in several varieties, but all agree that science is an objectively rational discipline Nonrational nonrealism also comes in different forms, but all adherents of this school accept at least two theses: science does not seek truth or approximate truth; there is no objective notion of rationality available that either sets science off from other disciplines as objectively rational or sets some particular scientific theory off as more rational than another."

I personally favor realism and I do not bring this up to argue that science yields no actual information about the world. Rather, I wish to make two points in this regard: one, the question remains open whether science leads to real knowledge about reality, so Dr. Forrest would do well to adopt an appropriate stance of humility about science's epistemological success; and two, the answer to the question is not within the purview of science, it is a philosophical matter. If science is not even competent to say whether what it studies is real, that is all the more reason to view its epistemological prowess humbly.

Question B, "how do we determine truth?" is also unanswerable from within science. To say that knowledge of truth comes from the careful application of the scientific method is fine at one level of analysis (assuming a realist view of science and ever-closer approximations over time), but there's another level to which even Dr. Forrest alludes:

"Should cognitive science and neurobiology succeed conclusively in explaining the phenomenon of human consciousness, mind-body dualism would be completely undermined, and philosophical naturalism would again be immeasurably strengthened."

I'd like to alter that slightly: if human reasoning could be explained in terms of cognitive science and neurobiology, naturalism would be greatly strengthened, for it is perhaps the most salient point of difficulty for naturalism. Dr. Forrest is naively optimistic, however, in suggesting it could someday be possible to bring consciousness under purely physical explanation, for it is a self-defeating enterprise. If human thinking could be reduced to merely naturalistic operations, it would be invalid for apprehending truth. Peter Williams wrote:

"Beliefs and thoughts have and require intentionality: 'intentionality is the mind's ofness or aboutness. Mental states point beyond themselves to other things. Every mental state I have is of or about something - a hope that Smith will come, a sensation of the apple, a thought that the painting is beautiful.' [quoting Habermas and Moreland]

"We do not include physical entities such as books or computers in the category of 'beings capable of having beliefs' and thus of knowing things (holding true beliefs about facts). But how could this line be drawn on a physical view of the mind? As Habermas and Moreland argue:

"Now intentionality is not a property or relation of anything physical. Physical objects can stand in various physical relations with other physical objects. One physical thing can be to the left of, larger than, harder than, the same shape as, or the thing causing the motion of another physical object. But one physical object is not of or about another one."

"C.S. Lewis hit the nail on the head when he wrote that, 'to talk of one bit of matter as being true about another bit of matter seems to me to be nonsense.' What could possibly distinguish one state of matter from another such that one had the property of being true while the other had the property of being false?"

Science may lead to a deeper understanding of what is happening neurologically as we think, but there is [no possible naturalist bridge](#) from the firing of neurons to propositional truth. Philosophical naturalism is self-defeating: if it were ever to establish itself as true, it could only do so by destroying the meaning of the word "true."

The same holds for human values: what is good, what is important, and why? Could these potentially, someday, be explained in physical terms? This too is impossible, regardless of any advances in our understanding of physical processes of thought or belief. C. S. Lewis showed in *Miracles* that the more thoughts and values are explainable in physical terms, the less we credit them. I'll use an experience of my own to illustrate.

I was still single, in my late twenties, when I invited Vera out for a snack after church one Sunday evening. We went to the [Good Earth](#) restaurant, known for its multi-grain and vegetarian offerings and its delicious herbal tea. We stayed there a couple of hours drinking cup after cup of tea, and I had a great time. In fact, I got more and more excited as the night went on. I started to think, "This woman is really amazing--I've never felt so excited, just being out with someone at a restaurant on a first date!"

I was still really quite excited when I got home about 10 or 11 pm. In fact, three hours later I was still just as alert and awake. It was about 3 am that I had the sinking recognition: "I know this feeling--and it's not from being excited about Vera." I called the restaurant the next day and asked if there was caffeine in their tea. Sure enough, they said there was quite a load of it. I had been mistaken in assuming it was as herbal and drug free as their multi-grain pancakes. And I'd been mistaken about my feelings: it was just a caffeine rush.

Vera and I dated for some time after that first evening, but there never really was a "spark" between us. My initial excitement was almost entirely a drug reaction, and as soon as I realized that was so, I discounted any thought of "love at first sight." Compare

this to the common theme in fantasy stories (even in the recent Harry Potter): the magician who has a love potion refuses to use it because he or she wants the other's love to be real, not chemically determined. If science were to succeed in reducing all value, including love, to physico/chemical states, it would destroy it. Value depends on choice, which disappears in a purely physical universe (despite [Daniel Dennett's protestations](#) to the contrary).

To summarize: science is fantastically successful, as Barbara Forrest says, but in limited arenas. It has little or nothing to offer in basic matters of reality, truth, and value. That's okay; it's not a flaw of science, it's just an inherent limitation; but it means that science has nothing whatever to tell us about some of the most important questions. It tells us that Dr. Forrest should not be putting such stock in science as the ultimate model of epistemological success. Barbara Forrest and Naturalism: Part 3

Dr. Forrest, in trying to make a case for philosophical naturalism, makes a big deal of what she sees as science muscling religion out of any claim on truth. Her argument in "[Methodological Naturalism and Philosophical Naturalism](#)" replays familiar "God-of-the-Gaps" themes, portraying science and religion in a zero-sum game where any advance in science forces religion to retreat. (This addresses Point 4 above.)

This zero-sum approach is stated concisely here:

"Under the theistic model, according to Strahler, any recognition of natural causation is logically nullified by the simultaneous assertion of supernatural intervention, either actual or merely possible."

It's one or the other, there is no shared territory. The point is expanded later in her essay:

"The gaps in scientific knowledge which have historically functioned as entry points for divine creativity are considerably narrower than they were just a generation ago. Every expansion in scientific knowledge has left in its wake a more shrunken space of possibilities from which to infer the plausibility of supernaturalism. . . . The more expansive the continuity, the firmer the foundation for the inference from methodological naturalism to philosophical naturalism, and the less plausible the non-naturalistic explanations.

. . .

"The known world expands, and the world of impenetrable mystery shrinks. With every expanse, something is explained which at an earlier point in history had been permanently consigned to supernatural mystery or metaphysical speculation. And the expansion of scientific knowledge has been and remains an epistemological threat to any claims which have been fashioned independently (or in defiance) of such knowledge. We are confronted with an asymptotic decrease in

the existential possibility of the supernatural to the point at which it is wholly negligible.

How defensible, though, is this zero-sum assumption? Do increases in scientific knowledge necessarily take ground away from religious knowledge? Historically the answer has been "no." As Rodney Stark has shown in several recent writings, science itself is an experiment testing a prediction of religion. Christian theism, unlike all other world religions and philosophies², saw rationality in God the creator, and began to test the possibility that God's creation could be understood rationally.

The earliest real scientists, going back at least to William of Occam (whose "[Razor](#)" is among the most crucial principles of scientific knowledge) viewed scientific knowledge as a window on the mind of God. Today, around [40% of scientists believe](#) in a God who is active in the world--who can be prayed to, for example--a figure that has not changed over 80 years. That percentage is much lower among biologists, where conflicts between science and religion are obviously most heated. In other sciences, the question of compatibility with religion seems not to be at issue.

The tussle between science and religion began slowly during the Enlightenment but gained steam with 19th-century studies in geology (Lyell's uniformitarianism) and especially with Darwin and his followers. (It was very much [exaggerated](#) by Andrew Dickson White and John William Draper.) This was a period of astonishing progress in all the sciences, progress of the sort we've become accustomed to in our day, but which left almost everyone at the time rather breathless. It's easy to see how, under those circumstances, the power of science would seem limitless. (Now we understand better that there are boundaries around science's capacities.)

Some religious explanations of the time did have to give way before the advance of science. The germ theory of disease made it difficult to view sickness as a personal affliction by God or demons. Lightning and thunder could no longer be viewed as fire from God's hand and shouting from his mouth.

What may be too easily forgotten, though, is that Western Christians did not choose belief in God because of mysteries of disease and weather. They saw his hand in such things--with some naivete, to be sure--but they did not build their theology on natural mysteries. Belief in God was based on the historical record of his workings with Israel, the life of Christ and the early church, and the tradition of church history, not to mention believers' personal experience of God. An impressive body of thought built up over the centuries as theologians and philosophers (most notably Thomas Aquinas) explored rational arguments for God.

² It's fascinating to speculate, but we can never know, whether Judaism might have reached the same conclusion under different sociological circumstances.

Dr. Forrest and others apparently view religion as nothing but a foolish and simple set of explanations of natural mysteries. If this were true, then the advance of science might be a real defeater for religion, but it's a very skewed vision of what theistic belief is about. Religious belief comes primarily from other sources of knowledge. Still, "all truth is God's truth," and all knowledge is a glimpse of the knowledge of God.