# Naturalism or Ignorance:
# An Unavoidable Dilemma for Creation Science
# (and Why It Matters)

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Advocates of creation science (now called "intelligent design theory") often argue that evolutionary theory is *merely* a theory. Consider a typical disclaimer inserted by a creationist school board into biology textbooks in Alabama:

> This textbook discusses evolution, a controversial theory some scientists present as a scientific explanation for the origin of living things, such as plants, animals and humans. No human was present when life first appeared on earth. Therefore, any statement about life's origins should be considered as theory, not fact.

This disclaimer upholds a very high epistemic standard. It demands that in order for a statement about an event or process to be accepted within science, the events it describes must have been observed by a human being, preferably more than one, I assume. Failing that, evolutionary accounts of "the origin of living things" must remain speculative, hypothetical and, like any "controversial theory," possibly false.

One could fault creation science for the naive, positivistic conceptions of science, epistemology, and human psychology this disclaimer rests on. Eye witness reports, to mention only one such line of psychological argument, are known to be notoriously unreliable, whether the events in question are as immediate as traffic accidents or as remote as the (alleged) creation of species. It is more profitable, however, to defend evolutionary theory by examining creation science and the arguments for it on its own terms, from *within* this conception of science as a controversy-free chronicle of publicly observed facts.

To this end, I will build an argument directed against one pillar of creationist thought in recent decades, namely Phillip Johnson's campaign against scientific "naturalism." The argument is based on a thought experiment which accepts both this conception of science and also the belief that species were, and still are, actively created by an intelligent, powerful designer. The thought experiment will reveal that creation science rests on an unresolvable dilemma resulting from the mixture of its metaphysical and epistemological commitments: if creation science is to produce non-controversial theories about observable events (such as the creation of species by a rational designer) then it must abandon its view that such events are supernatural. If, conversely, it maintains its commitment to the reality of supernatural events, then these epistemological aspirations must be sacrificed and creation science must inevitably be

unable to learn anything about those very events it chastises evolutionists for dismissing.

I. The Roy Cohn of Creationism

Johnson's influential attack on evolutionary theory is not directed at its concepts or empirical adequacy. Johnson attacks instead the entire framework—"naturalism," he calls it—in which evolutionary theory and other sciences operate. What is naturalism? Johnson defines it negatively. The essence of naturalism, for Johnson, is the methodological rule holding that when investigating or explaining natural phenomena, one may *not* invoke non-natural or supernatural causes, processes or principles. Thus, natural and non-natural causes, processes, or principles are differentiated on the basis of a metaphysical dualism: in one corner, we have nature, including those things we can interact with or observe (broadly speaking) either through our unaided senses or scientific instruments. And in the other we have supernature, home of supernatural entities such as intelligent, omnipotent designers of universes and places such as heaven, I presume, that we do not ordinarily see or interact with. Johnson's proposal is that scientists must liberate themselves from their one-sidedness and appeal to this domain of the supernatural as they study and theorize about nature and its history.

One reason that Johnson's crusade has been influential is perhaps its use of the enormously influential and popular view of science articulated in Thomas Kuhn book *The Structure of Scientific Revolutions* in which Kuhn depicts scientific revolutions as winner-take-all conflicts between "world views" or "paradigms" (Kuhn 1970). Indeed, Johnson has "Kuhnified" the debate between creation science and evolution by treating creation science as if it were a full-fledged, paradigmatic science that stands as an alternative or competitor to established, naturalistic science. On that basis, he can appeal to Kuhn's relativistic picture of scientific revolutions in which advocates for competing paradigms typically talk past and misunderstand each other because they see the world in different terms. As I read Johnson's books and essays, I find that my heart goes out to creation science as a kind of epistemological victim that is unfairly marginalized in the shadow of the reigning naturalistic paradigm:

> Philosophical naturalism is so deeply ingrained in the thinking of many educated people today, even theologians, that they find it difficult even to imagine any other way of looking at things. To such people Darwinism seems so logically appealing that only a modest amount of confirming evidence is needed to prove the whole system. (Johnson 1990, p. 7)

Take the case of the Cambrian explosion. Johnson argues that even Richard Dawkins, one of creation science's most aggressive critics, acknowledges in *The Blind Watchmaker* that Cambrian strata show fossil evidence of

> most of the major invertebrate groups. And we find many of them in an

> advance state of evolution, the very first time they appear. It is as though they were just planted there, without evolutionary history. (Dawkins 1986, pp. 229-30)

Dawkins's point (though you would not know it from this citation) is that evolutionary theory guides us away from a naive positivism and allows us to see even apparently abrupt changes as parts of larger, usually more gradual evolutionary and geological processes. From Johnson's point of view, however, Dawkins' comment plainly illustrates how naturalism can obscure the plainest of truths for those in its grip. When Dawkins writes that this gap "is simply due to the fact that, for some reason, very few fossils have lasted from periods before about 600 million years ago," (Dawkins 1986, pp. 229-30) Johnson sees a scientist struggling to explain away damaging evidence by attributing it to ad hoc unknown factors or events. Dawkins is just one of many who are so trapped. Of these, he writes,

> even if they do develop doubts about whether such modest [selectionist] forces can account for large-scale [evolutionary] change, their naturalism is undisturbed. Since there is nothing outside of nature, and since something must have produced all the kinds of organisms that exist, a satisfactory naturalistic mechanism must be waiting to be discovered. (Johnson 1990, p. 7)

Johnson's task is summed up in the title of one of his books: *The Wedge of Truth: Splitting the Foundations of Naturalism* (Johnson 2000). The old, fallen timber of naturalism must be cleared away to make space for a new, non-naturalistic paradigm.

If Johnson's use of Kuhnian paradigm shifts and its attendant metaphors helps him establish intellectual credibility, it is the metaphor of the courtroom that best captures the popular appeal of Johnson's crusade. This is not only because of the Scopes trial and the fact that Johnson himself is a professor of law who established his leading role in anti-evolutionary circles by publishing *Darwin on Trial* (Johnson 1991). Rather, Johnson's rhetoric recalls famous, successful prosecutions of the McCarthy era. With naturalism playing the part of communism, and the scientific establishment in the roles of Alger Hiss or Owen Lattimore, Johnson encourages his readers to suspect that modern scientists who defend naturalism are cleverly *hiding something* from the rest of us. For if science is about studying and explaining the world objectively, intelligently, and with honest reliance on our senses—and what biology teacher or school board member would reject such a friendly, Norman-Rockwell picture of science?—then naturalism and its prohibitions can indeed be seen as a corrupting, "authoritarian" force that is every bit as sneaky and diabolical as the red menace.[1] Just as McCarthy, Nixon, Roy Cohn and others took themselves to be saving America from communism, so

[1] Johnson's (2000) inquires in chapter 3 "can science be defended by authoritarian methods?"

Johnson can pose as the defender of science and science education against the controlling ideology of naturalism. Only then may science reclaim its due glory and open its mind to alternative, non-naturalistic points of view and possibilities for explaining and understanding our world.

## II. A Thought Experiment

For all his bluster and posturing, however, Johnson's campaign is philosophically and scientifically hollow. For naturalism is not an optional feature of scientific paradigms; it is a basic presupposition of any scientific program. There is, therefore, no scientific and non-naturalistic alternative program available and Johnson's project amounts, in the end, merely to a *rejection* of naturalistic inquiry into natural history. Johnson's anti-naturalism, in other words, goes no farther than its prefix and root.

Suppose tomorrow's *New York Times* were to feature this story:[2]

> Anytown, U.S.A. Inhabitants of this town observed unusual events today which many experts take to have finally settled ongoing debates between creation scientists and evolutionists. According to witnesses, this community was startled by the appearance in the sky of an enormous and distant apparition that announced, "I am God and I have become visible so that you can see with your own eyes that I exist and intervene in the course of (what you call) 'natural' history."
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> Local religious leaders and intellectuals were treated to something of a lecture regarding recent controversies over the teaching of evolution in public schools. "I have been following this debate of yours and it has gone on long enough," God said. "I'm here to tell you that creation science is onto something that you naturalists are blind to. You should have been listening more carefully to Phillip Johnson. He knows all about this stuff."
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> A biology professor from Anytown University risked God's wrath by taking issue with His thesis. "That doesn't seem right," objected a member of the university's biology department. "Evolutionary theory tells us all we need to know about the history of life and--sorry to tell you this, but--we have no epistemic need of you." God raised his voice and warned, "Oh yes you do have epistemic need of me! What about that little flourish of mine you call 'the Cambrian Explosion'? What about the

[2] I first thought it was my own, but later discovered that the philosopher of science Norwood Russell Hanson had decades ago published a similar argument directed against theism. See Norwood Russell Hanson, "What I Do Not Believe" in (Hanson 1971).

absence of fossils for the uncountable number of varieties and species that Darwinism says once existed? Heck, even Darwin knew about these problems. He just didn't see that the engine of natural selection won't work without some supernatural help (and that would be me)."

Another professor, a philosopher of science, asked God to clarify how it could be that a supernatural entity could possibly intervene in the natural order of things. "If metaphysically separate substances actually interact with each other and change each other," queried the professor as he spoke through a bullhorn, "doesn't that mean they're not really metaphysically distinct?" "Yeah," God acknowledged as he rolled his eyes. "I keep forgetting how hard it is for you finite intellects to understand my ways. Look, let me just demonstrate what I'm talking about and, on your own, you can do your best to figure it out."

God pointed toward the center of Anytown with his left arm, raised his right hand and snapped his fingers. The gathered crowds murmured, apparently sensing that something momentous had just taken place. "There," God said. "I have just created some new species in your fair city. Your dogs have made an evolutionary leap and are now a new, intelligent species, like yourselves. They'll be able to take themselves for walks, help the kids with their math, clean up around the house--that sort of thing."

The apparition then began to fade and residents of Anytown then returned to their homes to find their dogs watching television, speaking perfect english, and playing poker.

The thought experiment grants everything that Johnson and advocates of creation science demand. The events supposed are public, objective, and cannot be explained away as a mass hallucination or social construction. And, they are taken to prove the central positive claim of creation science: that there exists an active, powerful intelligent designer without which the history of life on earth cannot be adequately explained by naturalistic science.

By granting all that, the thought experiment helps us focus on the question of What, exactly, would evolutionary biology—now purged of naturalistic prejudices—be like? Now that the scientists of Anytown are clear about the truth of creationism and the limitations of naturalism, that is, how would they proceed to study and learn about biology and evolution?

III. The Power of Curiosity

These questions begin to reveal that, much worse than the naturalism lurking inside evolutionary theory, there is something inside the very idea of creation science, namely

an incoherence that Johnson's Kuhnian portrayal of the opposition between creation science and evolutionary theory only serves to hide. Recall that, on Johnson's view, we are supposed to believe that, confronted with events like this, evolutionary science would be reformed and revolutionized, that the alternative non-naturalistic paradigm would see the light of day, and that evolutionary scientists would now think and act *differently* as they investigate the history of life on earth. Would that hold for our scientists in Anytown? How would they respond to these revelations?

First, we can safely say that these scientists would be *extremely curious* about the events of that special day. We can also outline what they would be likely to be curious about. Neurophysiologists, for example, would suppose that some change must have taken place in the brain tissues and neural pathways of those dogs to endow them with this intelligence. Anatomists would especially wonder about the sudden modifications of musculature and physiology required to allow these dogs to speak. Biologists with an interest in physics would speculate about how God intervened to realize these physiological changes? Was it an electromagnetic, nuclear, gravitational, or some other, unknown kind of force that issued from his snapping fingers and traveled down to all those Fidos and Fluffies? Whatever kind of force or influence it was, of course, it had to be able to carry sufficient amounts of information—God's *re*-design, as it were—to effect these changes. This is not to say that these scientists would not spend time adjusting to these revelations personally and emotionally. If they remain scientists, however, they will sooner or later become curious about these events and actively think about them. That is what scientists do.

What they would *not* do is merely accept these events as observed and go no farther. They would hardly be satisfied, say, with some new biological law—call it "Johnson's law of evolution"—holding that whenever fossil gaps or puzzles appear in the history of species they are to be attributed to similar finger snaps from God. For such a law does nothing to assuage the curiosity that drives scientists.

Instead, the thought experiment shows that these scientists would proceed to conduct the relevant research using the same *naturalistic* tools and methods they had used before converting to creation science. There is no reason to suppose, that is, that some Kuhnian revolution would occur inaugurating new and different categories of thought or new ways of seeing and studying nature. For if we join these scientists in believing that a supernatural agent *caused* natural, observable and measurable effects (the new neural pathways and aptitudes belonging to Fido and others), we must further suppose that there is some substantial metaphysical continuity between these two supposedly separate metaphysical domains.

There are at least two reasons for this. First, the fact that these events occurred at all requires us to believe that some kind of causal influence or information traveled from God's supernatural domain into our natural domain. Second, the fact that residents of Anytown interacted with God—spoke to Him, heard his fingers snap—requires us to

believe the that some kind of causal influence or information (at least, sound waves and light rays) traveled from our natural domain into God's supernatural domain. Causation, that is, flows both ways across the natural-supernatural boundary, just as it flows in all directions *within* the natural world currently understood by science. Thus the epistemological standards of creation science take a huge bite out of its metaphysics. The observability and the factuality of these events, their being non-controversial (by textbook standards) establishes that they occur substantially within the natural world and are therefore open to naturalistic examination. Introducing "supernatural" events into the science of biology, that is, becomes from Anytown's point of view a distinction without a difference.

That sound of rushing air you hear is Johnson's Kuhnian picture of naturalistic and anti-naturalistic paradigms deflating. For it is plain to the scientists of Anytown that this novel supernatural cause and the causal mechanisms involved *can be treated* as natural phenomena to be investigated by naturalistic methods. Suppose that as the apparition was occurring, some quick thinking scientists turned on video cameras, peered into telescopes and turned on instruments—seismic and meteorological, say—to record aspects of these events. In that case, the *naturalistic* study of this supernatural event was underway even before the thought experiment was over.

Nor, to anticipate an obvious objection, would these scientists behave naturalistically merely out of habit. The point, again, is not only methodological but metaphysical. For if these supernatural events in fact occurred, and are known to have been caused by a supernatural agent, then there must be targets or objects of this study that naturalistic methods are in principle capable of interacting with and learning about that agent and the causal mechanisms involved. One cannot object, that is, that these tools will be impotent because they are natural and the causes involved are supernatural, because then we had no grounds to believe in the first place that supernatural causes could interact with natural objects and produce sudden evolutionary mutations.

IV. What Might Johnson Say?

Johnson and most supporters of creation science will likely object precisely in this way. This creator depicted *is* supernatural, they will assert, and as such possesses the ability to *bridge* or *connect with* our natural order on those occasions (such as the Cambrian explosion) that require it. Nothing about that, they will say, naturalizes the supernatural status of the creator. In addition, the most effective rebuttal creation scientists will reject the thought experiment as I have framed it here. Yes, the creator may intervene and even create intelligent dogs (if that's the design *de jour*), they will say. But they will reject the supposition that the supernatural machinery involved in this is open to inspection and investigation by ordinary mortals as gratuitous and fanciful. God has the power to cross metaphysical divides; we don't.

While that response may save Johnson's metaphysics from naturalistic heresies, it only

illuminates the other half of the dilemma. Here, metaphysics takes a bite out of creation science's epistemology. For if the supernatural agents and causes that must be invoked to understand evolution are also metaphysically isolated from us and closed to our inspection, then a possible and future creation science will not be able to meet its own epistemic standards. Consider for instance those physicists in Anytown wondering about the physical nature of that influence that traveled from God's snapping fingers to their dogs. On this view, their curiosity will surely never be satisfied and creation science becomes, in a way, self-refuting. Not unlike the idea of having money in the bank that has an account balance of zero, the knowledge that creation science promises about the supernatural machinery of evolution consists entirely in the knowledge that this machinery is inscrutable.

The creation science that would become possible in the wake of Johnson's dismantling of our naturalistic dogmatism is thus impaled on the horns of dilemma: either supernatural causes are susceptible to naturalistic investigation (in which case Johnson's anti-naturalist campaign collapses), or they are are not susceptible to naturalistic investigation (in which case creation science is guaranteed to produce no scientific knowledge about the causes and processes it invokes).

V. Why Libertarianism Doesn't Cut It

Creationists can of course choose which horn they would prefer to sit on. Were I a creation scientist in Anytown, I would opt for the first and, metaphysics and theology be damned, indulge in a naturalistic orgy of meter readings, photograph analysis, and experiments designed to get a fix on this Creator and its mechanisms for creating new species. There is no guarantee I would get far, of course. These processes may turn out to be more complicated than the weather, string theory, and the neurophysiology of memory *combined*. Yet I and others would remain free to choose this horn of the dilemma and see what we might learn about this newly discovered supernatural machinery of evolution.

In this light, my defense of naturalism joins the approaches of libertarians (who often cite Karl Popper or John Stuart Mill) and happily grant that anyone has the right to study nature in any manner they choose. If creationists want to posit a hypothetical supernatural agent (whatever that may mean) as one cause of evolutionary change, then by all means they should be allowed to do so. The future, then, will tell whether creation science is a good idea or not.

In the world of science, this is as good a strategy as any for defending evolutionary theory against creationism. As this essay has tried to show, there are deep and compelling reasons for presuming that, sooner or later, the question of creation science will answer itself. As its critics often point out, despite its many publications, its several institutes and a handful of established intellectuals, it has produced little by way of scientifically interesting results. As the years go by, it will probably join the ranks of

phrenology, astrology, and other pseudosciences that are most informative only as sociological curiosities.

But the task at hand is larger than simply defending science against confused pseudoscientists. That otherwise intelligent and articulate persons like Johnson take such pains to hide creation science's incoherence within fashionable Kuhnian garb itself suggests that contemporary attacks on evolutionary theory are not only—perhaps not even primarily—about science. To borrow Johnson's metaphor, his "wedge of truth" gets wider as it is driven into its target. While its tip is designed to tear apart philosophical naturalism, its shank is much wider and designed to pry apart the various social, cultural and judicial institutions that creationists take to be of a piece with evolutionary theory.

That is why scientists and philosophers should not merely await the inevitable failure of creation science but also articulate, as clearly as possible, why it is that those failures are inevitable. For most scientists depend upon certain social, institutional and political conditions to obtain funding, conduct their research, and teach students who may carry the institution of science into the future. This future is not guaranteed. As recent intellectual histories of McCarthyism and the cold war have shown, American social and political movements can subvert the conditions on which science depends (McCumber 2001; Reisch 2005; Saunders 1999; Schrecker 1986). Thus its defenders have a strong interest in opposing creationism actively and blunting the sharp edge of Johnson's "wedge".

I have tried to show here that Johnson's wedge is in fact very blunt. His vision of a non-naturalistic creation science is incoherent. Struggling as it does to import supernature into nature, and import religious concepts into natural science, it is and remains deeply misconceived and uninformed about scientific methods and practice—regardless of how impressively its attacks on established science and evolutionary theory are dressed up in respectable Kuhnian attire.

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