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How Not to Critique Intelligent Design Theory

A Review of Niall Shanks, *God, The Devil, and Darwin*

Foreword by Richard Dawkins; Oxford: Oxford University Press, 2004; xiii + 273 pp.; hb. \$ 29.95; ISBN: 0-19-516199-8.

Abstract

I have been an interested observer of the Intelligent Design (ID) movement for some years, and although I have argued elsewhere that some of the philosophical points made by a number of ID advocates are right, I have been critical of other aspects of ID views. Having that interest, I would welcome a comprehensive, competent, evaluation and critique of ID. The structure, the catalogue of topics addressed, and the Oxford University Press imprimatur initially suggest that Niall Shanks's *God, the Devil, and Darwin*, may be exactly the book. However, overall this book is more likely to detract from than to contribute to objective and on-target discussion/evaluation/criticism of Intelligent Design. Consequently, I shall focus on what I take to be some of the major problems of the book.

1 Introduction

[1] I have been an interested observer of the Intelligent Design (ID) movement for some years, and although I have argued elsewhere that some of the philosophical points made by a number of ID advocates are right, I have been critical of other aspects of ID views. (In fact, in one ID conference at which I was an invited speaker, I was publicly identified as a 'subversive' to the design cause.) Having that interest, I would welcome a comprehensive, competent, evaluation and critique of ID. The structure, the catalogue of topics addressed, and the Oxford University Press imprimatur initially suggest that Niall Shanks's *God, the Devil, and Darwin*, may be exactly the book.

[2] The substance of the book is contained in six chapters which are bracketed between introductory and concluding sections. The core chapters (and foci) are:

1. 'The Evolution of Intelligent Design Arguments' – the history, structure and relation to science of design arguments,
2. 'Darwin and the Illusion of Intelligent Design' – Darwin's thought and its relationship both to design and to religion more broadly,

3. 'Thermodynamics and the Origins of Order' – thermodynamic laws and the implications for, and purely natural mechanisms capable of, the generating of highly (and relevantly) ordered systems,
4. 'Science and the Supernatural' – the contrasting characters of genuine science and supernaturalism, and the various stratagems via which ID covertly pushes the latter agenda,
5. 'The Biochemical Case for Intelligent Design' – explication and criticisms of ID attempts to co-opt biological complexity ('specified' or 'irreducible' complexity) into the design agenda, and
6. 'The Cosmological Case for Intelligent Design' – explication and criticism of ID attempts to appropriate cosmology (specifically 'fine tuning') for design purposes.

[3] The concluding section addresses a perceived wider – and profoundly pernicious – social/political/religious ID agenda.

[4] The book has its positive points. Various parts of the treatment of evolutionary theory and of thermodynamics are nice, wide-ranging discussions which may prove useful to some. And I am unaware of any previous discussion of the at least *prima facie* difficulties which William Dembski's assertion of an inverse relationship between entropy and 'complex specified information' (Dembski's proposed evidence of choice for intelligent agent activity) may generate for other parts of his views. I think that Shanks is on to something here (cf. the final section of Chapter 3). Further, I think that Shanks – and many others – are right that contemporary ID has not produced very much to this point.

[5] Unfortunately, however, this book seriously fails on crucial counts. Shanks has a substantive agenda (no surprise given that the 'Foreword' is by Richard Dawkins, whose anti-religious emotionalism gets ever more shrill). In his straining eagerness to denigrate anything associated with ID, Shanks inflates the rhetoric, misconstrues history, blurs important distinctions, and seriously skews the views of various ID advocates. And along the way there are repeated cries that the sky is falling. (For instance, although various critics argue that ID is a threat to science, education, Enlightenment values and so forth, were it not for Shanks it is unlikely that many of us would realize that the alleged progenitor of ID – creationism – is a threat even to NATO ('Introduction'), or that ID is in part really a cover for pushing religious extremist opposition to assisted suicide [p. 230].) (Unless otherwise indicated, all page references are to Shanks's book.)

[6] Overall this book is more likely to detract from than to contribute to objective and on-target discussion/evaluation/criticism of Intelligent Design. Consequently, I shall focus on what I take to be some of the major problems of the book. If ID and the ID movement do have serious flaws (and I will not here dispute that), then those should by all means be exposed rigorously and vigorously. But real exposure – or any sort of productive discussion – is not a likely immediate outcome of the sort of inaccuracies, slants and vilifications which unfortunately pervade this book.

2 A history of ID: skewing the past

[7] Critics of Intelligent Design routinely tar ID with a creationist brush ('Intelligent Design Creationism' is now the term of choice of ID critics), and although both polemically driven and in some sense misleading, use of the term is understandable given that significant numbers of lay creationists have enthusiastically appropriated ID into their own efforts. Nevertheless, the term is misleading because key figures in the birth and early development of the contemporary ID movement had no prior connection either with creationism or creationists. Key figures with no such prior ties include people like Phillip Johnson and the biochemist Michael Behe. To the extent that the ID movement has a founder and head, it is Johnson (Shanks himself identifies Johnson as 'the architect of the intelligent design movement' [p. 11]). And Behe (whom Shanks identifies as a 'leading light of the contemporary intelligent design movement' [p. 40]) was arguably the ID movement's first (and still one of its two most recognized) scientific theorist. On the other hand, a number of dominant creationist figures have sharply criticized ID. That number includes Henry Morris, who was arguably the world's dominant young-earth creationist during the last third of the 20th century.

[8] Yet, Shanks simply asserts – without providing substantive evidence – that ID was 'spawned' by the creationist movement [p. 6], which 'gave rise to modern intelligent design theory.' [p. 7] He further claims that '[m]odern biological creation science... descend[ed] with little modification from the positions articulated by Paley' [p. 35], and refers to 'the natural theologians of old from whom they [modern creationists] descended' [p. 48–9]. In this latter context, it is worth noting that (unless I missed it) in his definitive history of the creationist movement (*The Creationists*, University of California, 1993), Ronald Numbers does not so much as mention William Paley, *The Bridgewater Treatises*, the natural theology movement or other things which, if Shanks were right, would constitute the core roots of creationism. Numbers traces contemporary creationism to the work of George McCready Price, and in the chapter devoted to Price the whole concept of design is mentioned only once in passing, and the design argument not at all. (Incidentally, Price held that teaching creationism in public schools would violate the U.S. Constitution, and the Discovery Institute – which Shanks identifies as 'the home base for intelligent design theory' [p. 226] – opposes teaching ID in public schools. Despite that, Shanks still insists that ID is really a plot to get religion into public schools [p. 7].) Thomas Woodward, in his recent book-length history of the design movement argues that the 1986 book *Evolution: A theory in crisis* by the Australian biochemist Michael Denton was an initial spur for both Johnson and Behe, and says that 'It was Denton, more than anyone else, who triggered the birth of Design' (*Doubts About Darwin: A History of Intelligent Design* (Baker, 2003) p. 32.). Denton, who is generally identified as an agnostic during his entire adult life, is not a creationist by anyone's definition.

[9] The creationist movement of course took nature to be designed and without much comment took design arguments to be cogent (and many creationists gratefully appropriate ID as an anti-evolutionary and anti-naturalistic resource).

But attempts to make design arguments ‘scientific’ were not the focus of creationism – the driving scientific themes were the age of the earth, a global flood, and rejection of evolution. (The early 20th century creationist Harry Rimmer may have been an exception in this regard, but Numbers does not connect even him to the earlier design tradition. And for what it’s worth, creationists themselves apparently don’t construe their own history the indicated way. Creationist Henry Morris, in his nearly 400 page *History of Modern Creationism* (Master, 1984) devotes a total of three sentences to Paley and the traditional design argument, and does not mention the natural theology tradition.¹) But even *had* Shanks’s story of ID reflected actual history, that would have been of limited critical significance, given that the history, the scientific legitimacy, and the truth of a theory are all separate issues. To be of any interesting present consequence, any flaws in ID must be more than mere blotches on its (alleged) past pedigree.

3 Ad hominem, distortion, and misrepresentation

[10] The level and type of *ad hominem* and otherwise derogatory rhetoric in this volume is really quite remarkable for something from Oxford University Press. We learn that ID advocates wish to ruin science, to close minds, that they engage in deception, they lie, they are actually bent on gaining political power for repressive and extremist purposes, etc. It often gets specifically personal. For instance, Shanks says that Phillip Johnson makes him think of people who ‘hang around schoolyards peddling soft drugs so that a taste for the harder stuff will follow’ [p. 12].

[11] Attempts to denigrate frequently run to misrepresentation. Following are a number of examples. (I must ask readers’s indulgence for going on at some length – I think that the problem exhibited is serious and pervasive enough to warrant multiple, detailed examples. Readers in a hurry may wish to read the first three cases, involving William Dembski’s work, then skip the cases involving the work of Phillip Johnson, Nancy Pearcey, Michael Behe and John West, and move on to Section 4.)

[12] *A. William Dembski.* (Example 1) Shanks remarks, sarcastically, that Dembski (on p. 169 of his *No Free Lunch*, Rowman and Littlefield, 2002) ‘modestly claims to have discovered a fourth law of thermodynamics.’ Dembski’s proposed fourth law is ‘something he calls the *Law of Conservation of Information*’ [p. 123]. But 40 pages *prior* to the cited passage in *No Free Lunch*, Dembski says:

This is an instance of what Peter Medawar calls [in a 1984 book] the Law of Conservation of Information. [*No Free Lunch*, p. 129]

[13] Ten pages prior to the passage Shanks cites, Dembski says:

1. Master Books, 1984, p. 32. In fact, unless I’ve missed some occurrences, the word ‘design’ appears exactly once and ‘Designer’ twice in the entire volume. The term ‘designed’ occurs only once – in an appendix in reference to textbooks ‘designed for use in public schools’. For most of the modern creationist movement’s history, ‘design’ has simply not been a prominent part of the movement’s working vocabulary.

... Medawar's Law of Conservation of Information can therefore be formulated as follows ... [*No Free Lunch*, p. 159]

[14] As Dembski notes, there was discussion of a possible 'Fourth Law' as early as the 1970s [*No Free Lunch*, p. 167]. Dembski simply suggested that Medawar's principle – which he repeatedly explicitly attributes to Medawar – is the law for which others had previously sought. That hardly fits Shanks's denigratory (and repeated) accusation.

[15] (One further oddity concerning Shanks's treatment of Dembski's work is worth noting. Despite supposedly presenting a scholarly study of ID, Shanks does not so much as mention Dembski's initial scholarly ID book on complex specified information (*The Design Inference*, Cambridge University Press), published six years prior to Shanks's book. It is remarkable that a book subtitled 'A Critique of Intelligent Design Theory' should completely overlook the theoretical manifesto of the design movement. On the contrary, much of what is cited in Shanks's discussion of Dembski comes from popularizations (e.g., an article with the subtitle 'A Primer on the Discernment of Intelligent Design' in a collection from a popular Christian press, and another book from a different Christian publisher). This, like the above 'history', is one of a number of instances of Shanks's apparently not having done the homework.)

[16] *B. Dembski* (Example 2). Shanks quotes Dembski on self-organization as follows:

[...] Some areas of science are open to bargain-hunting and some are not. Self-organizing complex systems, for instance, are a great place for scientific bargain-hunters to shop. Benard cell convection, Belousov-Zhabotinsky reactions, and a host of other self-organizing systems offer complex organized structures apparently for free. But there are other areas of science that frown on bargain-hunting. The conservation laws of physics, for instance, allow no bargains. [This quoted passage is from Dembski's 'Introduction' in *Signs of Intelligence*, Brazos Press, 2001, p. 23.]

[17] Shanks immediately responds:

Dembski does not tell us which conservation laws of physics forbid self-organization. ... Benard cells occurred in nature ... *Their existence is certainly consistent with known conservation laws.* [p. 127, Shanks's italics]

[18] One hint of trouble here is the following from Dembski's *No Free Lunch*:

Emergence in this nonproblematic sense occurs in everything from the self-organization of dynamical systems to the self regulation of ecosystems to the self-optimization of market economies. [p. 243]

[19] This is hardly a comment one would anticipate from someone claiming that the conservation laws of physics forbid self-organization. But there is a deeper problem. The above quote from Dembski continued thus:

The big question confronting design is whether it can be gotten on the cheap or must be paid for in kind. Design theorists argue that design admits no bargains.

[20] Dembski's claim is that some interesting things (e.g., Benard cell phenomena) can perfectly well emerge in the relevant sense and that other things cannot (things prohibited by conservation laws, for instance). Dembski's question – left out by Shanks – is: which category does design go in? Design theorists, says Dembski, plump for the 'not on the cheap' category. Note that that question itself would have been pointless if the relevant sort of emergence – explicitly including self-organization – were forbidden by physical law. The claim that Dembski thinks that 'conservation laws of physics forbid self-organization' doesn't even have much *appearance* of plausibility absent the clipping of the quote.

[21] C. Dembski (Example 3). Critics of ID frequently ask advocates: *who designed the designer?* The underlying suggestion is that the designer would have to be designed as well and that chasing alleged design back one level thus gains no explanatory ground at all, and in fact invites a regress. There is an obvious answer to that question, and it is that there can be a significant explanatory gain at the immediate level even if comparable things remain unexplained on a deeper level. For instance, suppose that panspermia theories were correct. That life was planted on earth by life forms from elsewhere would contain genuine explanatory substance (indeed, important and interesting substance) even if one did not know much of anything about the life forms that planted life here, how *they* came to be, etc. And it would cut no ice whatever for a critic to claim that that specific theory concerning how life on earth came to be was not really legitimate unless advocates could explain how the aliens who seeded earth themselves came to be. That latter would be a crucial question (and one would not have a *complete* theory of life until it was answered) but the answer to it can be bracketed from the question of life on earth, and the absence of such an answer has no bearing upon the rightness, wrongness, rationality, evidential support, etc. of the initial question.

[22] Dembski makes exactly that straightforward point. Here is Shanks's introduction and quotation of Dembski [Shanks, p. 170]:

Responding to objections in which critics ask about the design of the intelligent designer itself, Dembski has observed:

The who-designed-the-designer question invites a regress that is readily declined. The reason this regress can be declined is because such a regress arises whenever scientists introduce a novel theoretical entity. For instance, when Ludwig Boltzmann introduced his kinetic theory of heat back in the late 1800s and invoked the motion of unobservable particles (what we now call atoms and molecules) to explain heat, one might just as well have argued that such unobservable particles do not explain anything because they themselves need to be explained.

[23] Two paragraphs later, Dembski's above point is referred to as 'Dembski's suggestion that we stop and content ourselves with the progress we have made'

and is described as ‘utterly fatuous.’ Dembski’s general – correct – point that not having an explanation of level *b* does not imply that things on level *b* cannot nonetheless give proximate explanations of things on level *a* is now misrepresented as a (fatuous) suggestion to stop at level *a*. Dembski neither said nor implied anything of the sort.

^[24] *D. Phillip Johnson*. According to Shanks, part of the ‘dark side’ of ID strategy is

to close minds to critical, rational scrutiny of the world we live in [so that] religion becomes the true opiate of the masses. As Johnson makes clear [*The Wedge of Truth*, InterVarsity, 2000, p. 176], once [ID’s plan has been realized] even the rules of reasoning and logic will have to be adjusted to sit on theological foundations. In this way, critical thinking and opposition will not just be hard but literally unthinkable.’ [p. 12]

^[25] Here is the relevant passage from Johnson:

Reason cannot provide its own premises because its main tool is logic. Logic tells us how to get from premises to conclusions but not how to know which premises we can rely on. If we try to derive our ultimate premises by reasoning from other premises, as modernists have been taught to do, we only make ourselves captive to circular reasoning. If reason is to be a reliable guide, it must be grounded on a foundation that is more fundamental than logic and that provides a basis for reasoning to true conclusions about ends. Instrumental reason is not enough. That is why the fear of the Lord is not the beginning of superstition but the beginning of wisdom. [*Wedge of Truth*, p. 176]

^[26] There is not the slightest hint in that passage that the rules of logic will have to change. The issue is what foundational premises one should employ one’s logic on, in order for the rules of logic to get one to true conclusions. Since trying to reason *to* foundational premises is quite clearly logically unworkable one must acquire them by some other means. There is nothing even mildly pernicious about that. (Indeed, that general point is part of the standard philosophical criticism of classical foundationalism.) On the other hand if, say, Shanks’s apparent suggestion is right – that starting with some set of premises makes critical thinking about those premises impossible – then since *any* reasoning requires prior premises *any* reasoning will face precisely that problem. But the point at the moment is that Johnson neither says, suggests nor says anything that implies any slightest hint of the dire and threatening matters of which Shanks accuses him - that the rules of logic will have to change and critical thinking will be literally unthinkable.

^[27] *E. Nancy Pearcey*. One of Shanks’s key contentions is that ID motivations are socially pernicious – that ‘the real motivations of the intelligent design movement . . . in reality have little to do with science but a lot to do with . . . the imposition of discriminatory, conservative Christian values on our educational, legal, social, and political institutions’ [p. 230]. In pursuit of that contention, Shanks says:

[A]ccording to Nancy Pearcey . . . Phillip Johnson has recorded that he has encountered fears that if naturalistic evolution is discredited, women will be sent back to the kitchen, gays back to the closet, and abortionists to jail. Pearcey then goes on to comment:

Though the fears Johnson encounters are certainly exaggerated, *the basic intuition is right*, for the question of our origin determines our destiny. It tells us who we are, why we are here, and how we should order our lives together in society. *Our views of origins shapes our understanding of ethics, law, education – and yes even sexuality.* [Shanks continues the quote – italics his, p. 230–1]

[28] But what was the *basic intuition* Pearcey was talking about – her reference to which Shanks italicized? Pearcey tells us, in the sentence immediately preceding the above – a sentence Shanks does not include. It was this:

In other words, on both sides of the issue most people sense instinctively that there is much more at stake here than a scientific theory – that a link exists between the material order and the moral order. [*Signs of Intelligence*, p. 45]

[29] Ironically enough, Shanks's whole book is an attempt to establish precisely that – that more is at stake than just a scientific theory. Indeed, on the very next page Shanks himself says:

Pearcey is nevertheless right about one thing. How one sees one's origins and place in nature can have a profound influence on one's views about ethical, social, and political matters. [p. 231]

[30] But, of course, that 'one thing' *was* Pearcey's point – a fact that was obscured by omission of the key sentence, thus causing the 'basic intuition' to appear to be referring to something different and 'more than a little disturbing.'

[31] *F. Michael Behe*. Sometimes misrepresentations are more subtle than mere clipped passages. According to Michael Behe, an irreducibly complex system would be a 'powerful challenge to Darwinian evolution.' Although he does not believe that gradualist natural selection provides a good explanation, his reasons for thinking that are probabilistic. But in discussing Behe, Shanks says that

Irreducible complexity was supposed to be something that *could not, even in principle*, be explained by Darwinian methods' [p. 185, my italics]

[32] and that it

supposedly could not possibly be explained in terms of natural evolutionary processes [p. 225].

[33] Shanks apparently forgets the following passage occurring earlier in his own book:

Is it absolutely impossible for Darwinian mechanisms to explain irreducible complexity? Behe observes:

Demonstration that a system is irreducibly complex is *not* a proof that there is absolutely no gradual route to its production. Although an irreducibly complex system cannot be produced directly, one can't definitively rule out the possibility of an indirect circuitous route. However, as the complexity of an interacting system increases, the likelihood of such an indirect route drops precipitously. [p. 162]

[34] But Shanks's use of Behe's quote, even when acknowledged in that earlier passage, involves an oddity. The above Behe quote comes from a 2001 article ('Darwin's Breakdown') and is described by Shanks as a 'significant admission.' The oddity is that this 'admission' appears nearly word for word quite early on (p. 40) in Behe's original piece (*Darwin's Black Box*, Free Press) published in 1996:

Even if a system is irreducibly complex (and thus cannot have been produced directly), however, one can not definitively rule out the possibility of an indirect, circuitous route. As the complexity of an interacting system increases, though, the likelihood of such an indirect route drops precipitously.

[35] That 'admission' quoted from the 2001 piece was part of Behe's original argument in his very first piece on the topic in 1996.

[36] *G. John West*. Political scientist John West is, predictably enough, interested in the possible political – and other humanities – implications of ID. But among West's 'profoundly muddled' statements that arouse Shanks's ire is the following:

If intelligence itself is an irreducible property, then it is improper to try to reduce mind to matter. Mind can only be explained in terms of itself – like matter is explained in terms of itself. In short, intelligent design opens the door to a theory of a nonmaterial soul that can be defended within the bounds of science. At the very least, if intelligence is understood as an irreducible property of human beings, the grounds on which science can undercut free will and personal responsibility will be significantly diminished. [quoted p. 226–7]

[37] In response, Shanks first points out that 'Free will is not guaranteed simply through an appeal to the nonmateriality of the soul' [p. 227]. Perfectly true, but of course West suggested nothing to the contrary. West was talking about materialistic reductionism, and what he *said* was that immateriality of the soul would *diminish* the *grounds* on which deterministic pictures of humans could be erected. Since denying that humans are purely material would remove the possibility of purely materialistic determinism, West's point is trivially true. *Diminish* does not mean remove any and all possible alternative grounds. (And, of course, this is all in the context of questioning West's motives, integrity, etc. – but luckily Shanks quickly uncovers West's *real* motives.)

4 Broader problems

[38] So far, then, the history is mistaken, the polemical index is distressingly high, and ID advocates are frequently misrepresented (as are creationists, on occasion), the misrepresentations in question serving as occasions for attribution of pernicious motives and character slurs. And again, the foregoing cases are merely examples – not an exhaustive catalogue. Beyond all this, the book exhibits some problematic philosophical shortcomings as well. For instance, important distinctions are sometimes systematically blurred. Following is one particularly striking example.

[39] One key flashpoint of dispute over ID is the matter of *methodological naturalism* (MN). On this issue, Shanks gets even the views of his own allies wrong. Shanks begins his discussion by quoting two characterizations of MN from Dembski:

The view that science must be restricted solely to undirected natural processes also has a name. It is called *methodological naturalism*. [quoted on p. 140]

[40] and again

Methodological naturalism asks us for the sake of science to pretend that nature is self sufficient. [quoted on p. 141]

[41] According to Shanks,

this characterization of methodological naturalism is a straw man – a position not actually maintained by theorists committed to methodological naturalism. It is a phantom in the minds of the advocates of intelligent design. [p. 141]

[42] I'm at a bit of a loss here. Consider the following, all from prominent advocates of methodological naturalism (and almost all from fervent opponents of ID) and which are overwhelmingly representative of the literature:

Science has made a little deal with itself; because you can't put God in a test tube (or keep it [sic] out of one) science acts *as if* the supernatural did not exist. This methodological materialism [her term for MN] is the cornerstone of modern science. [my italics] – Eugenie Scott²

[I]n no sense is the methodological naturalist . . . committed to the denial of God's existence. It is simply that the methodological naturalist insists that, inasmuch as one is doing science, one avoid all theological or other religious references. In particular, one denies God a role in the creation. – Michael Ruse³

2. 'Darwin Prosecuted', p. 43, *Creation/Evolution* 13.2, Winter 1993. Scott is Executive Director of the National Center for Science Education, an organization dedicated to fighting anti-evolution efforts.

3. 'Methodological Naturalism Under Attack', p. 363–385, in Robert Pennock (ed), *Intelligent Design Creationism and its Critics*, (Cambridge: MIT, 2001), p. 365.

Science [has] one overriding rule: Rule No. 1: Let us see how far and to what extent we can explain the behavior of the physical and material universe in terms of purely physical and material causes, without invoking the supernatural. – Richard Dickerson⁴

[43] Shanks also repeatedly asserts that methodological naturalism is a (loosely) empirical result ‘based on an inductive generalization from 300 to 400 years of scientific experience’ [p. 141]. Shanks does not provide historical documentation or sources spanning that 3–400 year history during which, he claims

[t]ime and time again, scientists... considered hypotheses about occult entities ranging from souls, to spirits, to occult magical powers, to astrological influences, to psychic powers, ESP, and so on. [p. 141]

[44] But in any case that induction claim does not fit well with the claims of many of his fellow ID critics, who tend to see MN as an *essential conceptual stipulation*:

[P]erhaps the single most important element of our modern understanding of science is that science is limited to naturalistic processes that do not rely on or permit, the intervention of supernatural forces. . . . [A]ny reliance on a supernatural force, a Creator intervening in a natural world by supernatural processes, is *necessarily* not science. – Ruse again [my italics]⁵

[W]hat we might call *methodological atheism* [her term for MN] . . . is *by definition* common to all natural science. – Nancey Murphy [second italics mine]⁶

[B]y the very *definition* of science, [scientists] cannot offer God’s intervention as the cause for whatever they seek to explain. – NCSE pamphlet ‘Facts, Faith and Fairness’ [my italics]

By definition, science cannot consider supernatural explanations . . . So *by definition*, if an individual is attempting to explain some aspect of the natural world using science he or she must act *as if* there were no supernatural forces operating on it. – Scott again [my italics]⁷

[M]ethodological naturalism does *not* restrict our study of nature; it just *lays down* which sort of study qualifies as scientific . . . Scientists *have* to proceed in this way . . . – Ernan McMullin [first italics his, others mine]⁸

[45] And even earlier:

4. ‘The Game of Science’, *Perspectives on Science and Christian Faith* 44, no. 2 (June 1992), p. 137.

5. ‘Witness Testimony Sheet’, p. 300–301, *But Is It Science?* (Prometheus, 1998).

6. ‘Phillip Johnson on Trial’, p. 451–469 in Pennock, *op. cit.*, p. 464.

7. ‘Creationism, Ideology and Science,’ *Annals of the NY Academy of Science*, Vol 775, June 24, 1996

8. ‘Plantinga’s Defense of Special Creation,’ p. 165–196 in Pennock, *op. cit.*, p. 168.

The cornerstone of the scientific method is the... *systematic* denial that ‘true’ knowledge can be got by interpreting phenomena in terms . . . of ‘purpose’ . . . [S]cience as we understand it today . . . required [this] unbending stricture – ironclad, pure, forever undemonstrable. . . . There is no way to be rid of it, even tentatively or in a limited area, without departing from the domain of science itself. – Jacques Monod [his italics]⁹

[46] Another interesting statement in explicit contradiction of Shanks’s type of position comes from the Harvard biologist Richard Lewontin (also no friend of ID):

Our willingness to accept scientific claims that are against common sense is the key to an understanding of the real struggle between science and the supernatural. We take the side of science... because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material explanations, no matter how counter-intuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.¹⁰

[47] Not only is MN definitive of science, Lewontin claims, but far from exclusion of the non-natural being an induction from several hundred years of scientific experience, science is deliberately constructed around a *prior philosophical* commitment to just that exclusion.

[48] In any case, Dembski’s definition of MN is spot on. The truly puzzling characterization is Shanks’s own, according to which

On the [methodological naturalism] view . . . supernatural hypotheses can be entertained. [p. 153]

[49] After getting the view of nearly everyone on all sides of the issue wrong, Shanks then uses his own misconstrual as a platform for another bit of *ad hominem*:

I suspect that the real reason Dembski wants to run [methodological and metaphysical naturalism] together as being functionally equivalent, in the context of claims about supernatural intelligent design, is that accompanying methodological naturalism is a demand for the production of clear, unambiguous evidence, and it would be as well to ensure that this demand for such evidence is conflated with a purely philosophical theory according to which none is required right at the outset. [p. 154]

[50] (I apologize for reproducing so many characterizations of MN above, but it is difficult otherwise to give a sense of how astonishingly off target Shanks is on this – which he only compounds by dismissing (with no supporting evidence) Dembski’s perfectly correct characterization as a ‘gross and egregious mischaracterization’ [p. 141].)

9. *Chance and Necessity* (Arthur Knopf, 1971), p. 21.

10. ‘Billions and Billions of Demons’, *New York Review of Books*, Vol 44 #1.

5 Is ID (really) religion?

[51] One of Shanks's dominant concerns is to expose ID as (deliberately concealed) religion. And the religion in question is portrayed as of a particularly pernicious and dangerous sort. Despicable religion-driven motives are constantly sought and 'exposed' – the underlying intent (deliberately obscured 'under cover of smoke and mirrors') being 'the imposition of discriminatory, conservative Christian values . . . The real issues are . . . about who shall count, whose views shall be heard, and who shall be silenced.' [p. 230].

[52] In any case,

[I]ntelligent design claims are really claims about the supernatural. [p. 154]

[53] And not just any sort of supernatural. ID advocates 'know' the identity of the designer:

Make no mistake: This debate is all about supernatural intelligent design by the God spoken of in the Christian religion. [p. 154]

[54] But there is one especially notable peculiarity in this connection specifically regarding the alleged identification of the designer. Shanks says:

[E]ven if we conclude that the constants were tuned by design, the numbers themselves tell us nothing about who or what did it. To get from the conclusion of mere design to the further conclusion that it was design by the God of religion X will require more than simple observations of cosmological fine-tuning [p. 211]

[55] So mere design tells us little or nothing about the identity of the designer. But major ID advocates agree wholeheartedly. Indeed, Dembski specifically says (in this passage quoted by Shanks himself) that:

Whether an intelligent cause operates within or outside nature (i.e., is respectively natural or supernatural) is a separate question entirely from whether an intelligent cause has operated. [Quoted on p. 154]

[56] And in a related passage (also quoted by Shanks) Dembski says:

The existence of design is distinct from the morality, esthetics, goodness, optimality or perfection of design. [quoted on p. 156]

[57] Dembski thus claims to have a method to detect design, but insists that that tells us essentially nothing beyond the fact of design (a claim many other ID advocates, e.g., Michael Behe, endorse.) Dembski thus seems to be making exactly the same point as did Shanks above. But the fact that ID people make the *precise* distinction Shanks demands doesn't get them off the hook. In fact, Shanks dismisses Dembski's statement here as 'technically correct but irrelevant.' Why irrelevant? Shanks tells us in the very next sentence after the last Dembski quote:

The motivation behind the intelligent design movement is to justify the claim that there is evidence for a supernatural designer indistinguishable from the God of Christianity . . . [p. 156]

[58] That is followed by the routine *ad hominem*: ‘Dembski and his friends know this as well as I do.’

[59] But *motivation* obviously has no relevance to the point Dembski is making – especially since Shanks himself made precisely the same point without sharing the slightest whiff of Dembski’s alleged motivation. Notice too that, oddly enough, making the distinction Shanks himself demanded apparently counts against the integrity of ID advocates. And why should that be? Because

When proponents of intelligent design theory deny that they are trying to teach religion dressed up as science, they frankly violate their own religion’s prohibitions against telling lies. [p. 158]

[60] Here is where things get interesting. Says Shanks:

The problem lies in Dembski’s unwarranted leap to the conclusion of supernatural design using his methods for the mere detection of design. [p. 157]

[61] So if Dembski and ID advocates ignore the distinction Shanks demands (and which Dembski of course made above), and try to infer the supernatural character (and other identifying characteristics) of the designer from the proposed fact of design they are making a serious logical error – an ‘unwarranted leap’ But if they *do* make the distinction Shanks demands and claim to be separating design from their religious identification of the designer, they are ‘telling lies’. This particular playing field isn’t merely slanted – it’s vertical.

[62] But suppose that Shanks was right about the hidden, pernicious religious motivation and agenda of the design movement. Why should one think that *design theory itself* was really about the supernatural – that design *claims* were ‘really claims about the supernatural’? There is nothing much like a formal case here, but the factors which continually resurface are

[63] (a) that ID advocates believe (mistakenly) that purely naturalistic explanations of relevant phenomena in nature are scientifically inadequate,

[64] (b) that ID advocates typically believe that there are gaps in nature,

[65] (c) that ID advocates have religious motivations, and

[66] (d) that ID advocates believe that the designer in question is the Christian God.

[67] Of course, (c) is simply irrelevant in this context, whatever its importance regarding other issues might be – motive does not constitute content. And the fact that ID advocates might believe (as does Dembski) that they knew on other grounds the actual identity of any designer – (d) – would not of itself turn the content of inferences about a designer into content about the preferred candidate. Someone might infer the existence of an alien designer from some artifact found on Mars, and that person might for independent reasons believe in Alpha Centaurians, and might be utterly convinced that the designer of the alien artifact was in fact Alpha Centaurian. That would not in the slightest mean that *Alpha Centaurian* was part of the content of either the initial inference or any of its premises or its conclusion.

[68] What of (b)? It is certainly true that most ID advocates believe that there are gaps in nature, and that design theories are required to bridge such gaps. And it is certainly plausible to think that any designer which bridged gaps in *nature* would be outside nature – i.e., supernatural. Although that is indeed reasonable and is what most ID advocates in fact personally believe, that is not an *entailment* of design theories – and ID advocates sometimes call attention to that fact by citing the *logical possibility* of advanced aliens or some such being the designers of things which *we* intuitively take to be parts of nature. (Shanks himself refers to one such case on p. 155.)

[69] Things are a bit trickier with (a). Shanks, naturally, believes that ID advocates are seriously mistaken on this point. But ID advocates sometimes (at least, in principle) believe that some natural systems or mechanisms have perhaps been designed to in turn produce – without intervention, gaps, etc. – phenomena exhibiting design signatures and which, while they could not arise without design *somewhere* in their causal history, are the immediate products of natural processes. Darwin himself endorsed this view on occasion. (Shanks sometimes talks as though *all* design thinking is gap thinking (cf. e.g., p. 92). That is simply inaccurate.) In any case, showing that some thing was a product of apparently unbroken natural causes would not show that design theories were defective (contrary to e.g., p. 125).

6 Failures, forfeits and other uneven fields

[70] In any case, Shanks believes that ID advocates have failed both to establish the inadequacy of the theories they oppose and to establish the adequacy of their own alternative theories. He *may* well be right about that (I have some sympathy for the latter, anyway), but assessing his case is not straightforward because, it seems to me, the playing field he deploys is again not quite level.

[71] How so? In keeping with his repeated contention that design theories are utterly empty, Shanks at every turn demands that ID advocates provide details of mechanisms for supernatural activity – while suggesting that since such theories are implicitly about the supernatural, that such details cannot be supplied (and that ID advocates have refused in any case to try to supply them). Indeed, Shanks claims, it is not even clear that ID theories are *coherent*. Here are some characteristic contentions:

[W]e have no account whatsoever of how nonphysical, supernatural beings could interact with a physical world. [p. 213]

[N]o explanation is given for how it is that the creator, by its supernatural constitution, manages to get something for nothing. [p. 202]

Invoking supernatural beings and supernatural causes (about which little is ever said and even less evidence is presented) amounts to little more than a shallow excuse for a violation of the laws of nature. [p. 202]

With the explanation of creation ex nihilo, we might just as well have said Abracadabra! [p. 202]

In the case of supernatural intelligent designers of unknown constitution using unknown methods and materials to unknown ends, we have neither independent evidential warrant nor even mere explanatory utility. [p. 170–1]

The methods and materials employed by the designer and any account of supernatural objects themselves (how they differ from physical objects, how they bring about effects in the physical world) are apparently beyond the scope of human knowledge. . . . [W]ithout some honest account of these matters, the invocation of a supernatural cause for any particular thing we currently don't understand.. is tantamount to mumbling the magic word *Abracadabra*. [p. 221]

But it is far from obvious that passive acceptance of the hypothesis that a supernatural agent could design a universe . . . even makes sense . . . [p. 212]

[W]e have nothing beyond the assurances of the faithful that talk of supernatural beings is . . . meaningful . . . [p. 213]

[W]e must minimally ensure that the claim is meaningful. . . . [Analogy to] human designers. . . tells us absolutely nothing about the intelligibility of talking of supernatural beings, still less about . . . whether it makes sense to suppose they can design natural universes . . . [p. 213]

[72] And, of course, the routine *ad hominem* makes its appearance in this connection too:

[T]he postulation of supernatural intelligent design of the universe . . . may be incoherent nonsense . . . We do not know, and the advocates of supernatural intelligent design have evidently decided to say nothing helpful. [p. 223]

[73] and Shanks also refers to

the flat refusal of design theorists to even try to spell out the details of their supernatural design scenarios. . . [p. 214]

[74] Despite throwing up a thicket of demands for specific mechanisms, assurances of intelligibility, etc. for design theories, naturalism-friendly views get nearly automatic passes. For instance, on p. 183 we are told that we cannot follow Behe on a specific point because [my italics]:

Behe nowhere *demonstrates* [a relevant principle].

[75] On the very next page, however, the following from Cairns-Smith is waved through the checkpoint without even an eyebrow, much less a question, being raised:

There is plenty of scope for accidental discoveries of effective new combinations of subsystems. It seems inevitable that every so often an older way of doing things will be displaced by a newer way that depends on a new set of subsystems. It is then that seemingly paradoxical collaborations may come about. [my italics]

[76] So Behe must *demonstrate* while (even in the face of the ‘seemingly paradoxical’) Cairns-Smith need only speculate about *accidents* (unspecified) that *seem* (no demonstration) like they *every so often* (unspecified) *may* (uncertainty) produce (unspecified mechanism) something (unspecified) new.

[77] Or again, Shanks favors a materialist account of mind, in part, it appears, because ‘we have no good account of how a nonphysical mind could interact with a physical body. . .’ [p. 213]. (Shanks cites this as in some respects resembling the issue of whether and how ‘supernatural objects. . . can interact with physical objects’ [p. 212], and takes lack of proposed mechanisms as leaving open even the question of whether alleged ID claims of interaction between the supernatural and the physical are even *coherent*.) But in materialist views of consciousness we have absence of understood mechanism in spades. Jerry Fodor (of the Center for Cognitive Science at Rutgers, and one of the top people anywhere in the relevant field) has remarked that

Nobody has the slightest idea how anything material [including the brain] could be conscious. Nobody even knows what it would be like to have the slightest idea about how anything material could be conscious.¹¹

[78] Sometimes even absences are adequate:

Moreover, there is no reason to suppose that similar gradations did not exist in the lineages leading to modern chimpanzees and modern humans. . . [p. 61]

[79] And it seems ironic that after belaboring ID advocates for providing no mechanism for the allegedly designed cosmic fine tuning, that Shanks reveals that he thinks that the (apparent) fine tuning was a result of ‘blind chance or luck’ [p. 219] – a view which would itself seem to be a bit short on specific mechanism.

7 And that ain’t all

[80] There are a variety of other types of difficulties of which I shall only briefly mention one. In any such discussion, a crucial underlying issue will involve the nature and interpretation of evidence. Shanks notes – rightly – that:

[W]hat constitutes evidence of intelligent behavior in animals is not a simple issue to be settled by examining raw data. Different theoretical perspectives . . . give very different interpretations of the same experimental data and result in very different sorts of inference from the data. Once again, the raw, unanalyzed pattern tells you very little in and of itself. [p. 176]

11. *Times Literary Supplement*, Jul 3, 1992, p. 5

[81] Shanks takes this to tell against alleged design inferences. But that would seem to suggest that what something was or was not legitimately taken as evidence for depended at least in part upon the background interpretive context – and possibly that whether something was or was not legitimately taken as evidence for design might depend upon background interpretive context as well. That fact would make problematic such repeated, universal, and often unqualified claims as this:

There is currently no evidential reason to believe that the appearance of cosmological intelligent design is anything more than an illusion explicable in terms of purely natural effects. [p. 223]

[82] The above – and similar – unqualified blanket denials [e.g., p. 228] are peculiar in other ways as well. Earlier, Shanks asserted that

We have no reliable evidence for the existence of a supernatural cosmic universe-tuner, except as an explanation for what might be attributed to luck. [p. 217]

[83] and noted that

[M]any scientists (though not all, by any means) reject design because it is perceived as involving a craven appeal to the supernatural without adequate supporting evidence (other than to explain coincidences). [p. 217]

[84] The ‘except’ and ‘other than’ are hardly trivial qualifications. It is in fact the apparently outrageous unlikeliness of the ‘cosmic coincidences’ that initiated the cosmic fine-tuning discussion among professional cosmologists in the first place. And the fact that a theory can explain patterns which would otherwise represent mere coincidence or sheer luck counts *as evidence* (whether decisive or not) for the theory in question. Indeed, there are philosophers of science – e.g., John Leslie – who hold that that is definitive of what evidence *is*. In any case, by p. 228 the previous significant qualification [p. 217] has disappeared.

8 Concluding remarks

[85] As indicated at the outset, I do think that ID has some worrisome and significant shortcomings, and I think that as discussion – both professional and lay – continues to heat up both in the U.S. and elsewhere, that a rigorous, accurate, penetrating, careful and balanced critique of ID would be enormously valuable. Unfortunately, this book isn’t it.