

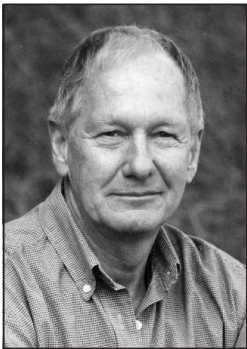


Dialogue III: Intelligent Design and Naturalism

Is the ID Movement Capable of Defeating Naturalism? A Response to Madden and Discher

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Are Madden and Discher ... warranted in charging me with an error for "raising theological objections to the purported empirical findings of ID"?

Madden and Discher are correct, I believe, in arguing that the scientific program of the ID movement is inherently incapable of developing a positive case for any particular non-naturalistic world view. I also concur with these authors that ID's scientific case should be judged on its scientific merits independently of ID's close association with divine interventionism. However, when I perform the scientific critique that Madden and Discher invite, I am led firmly to the conclusion that the ID movement's scientific strategy is wholly incapable of accomplishing its goal of defeating naturalism.

James Madden and Mark Discher are correct in noting that I have often asked advocates of Intelligent Design (ID) to be more clear and candid about the kind of action they intend to denote by the terms *design* and *intelligent design*.¹ I have also cited (a) the mind-like action of purposefully conceptualizing and planning something, and (b) the hand-like action of forming or assembling something, as the two categories of action that are most relevant to the issues of concern to the ID movement.² Furthermore, I indeed have frequently expressed my preference (without categorically precluding other possibilities) for envisioning the universe as having been fully equipped by God with a *robust formational economy*—a universe possessing all of the physical resources, all of the formational capabilities and all of the structural and functional potentialities needed for the natural formation of every kind of structure, system, and organism that has appeared in the universe's formational

history. (I use *natural* here in the specific sense of *by creaturely action that does not need to be supplemented by divine, form-imposing intervention*.)³

Madden and Discher are also justified in contrasting my preferred view of the universe with the view proposed by ID advocates by noting that "ID theorists, on the other hand, claim that matter and the laws that govern matter are not sufficient by themselves to have brought about by chance at least some of the highly specified and complex systems and structures that are found in nature."⁴ One essential clarification of terminology must, however, be made. As it is here used, the term *by chance* has the considerably less than obvious meaning, *by the joint effect of all natural causes, both known and unknown*.⁵ Indeed, the scientific success of the ID movement hangs on whether it will ever be able to demonstrate from empirical evidence that the system of natural causation is inadequate to bring about the forming or assembling of particular biotic structures.

But are Madden and Discher also warranted in charging me with an error for "raising theological objections to the purported empirical findings of ID"? No actual example of such an error is cited from my writings, so it is difficult for a reader to eval-

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uate their charge.⁶ I indeed have criticized theological dimensions of the ID movement on theological grounds.⁷ I also have criticized key scientific claims of the ID movement on scientific grounds.⁸ However, I do not recall criticizing ID's *scientific* argumentation on *theological* grounds.

The Goal of the ID Movement

Madden and Discher argue that the ID movement is inherently incapable of developing a positive case for any particular "nonmaterialist" approach for explaining empirical evidence and that the movement instead should be content to focus on the more modest goal of becoming a successful "materialism defeater." I am inclined to agree with the first part of this assessment, but I will argue below that success as a "materialism defeater" is impossible to achieve by ID's scientific strategy. In agreement with Madden and Discher, I believe that the ID movement can never hope to identify the particular designing agent (or the particular nonmaterial aspect of the universe) that is responsible for forming certain biotic structures that ID theorists judge impossible to form by the system of natural causes alone. But in their references to the religious implications of their program, ID advocates themselves sometimes make similar disclaimers, so I see no need to dwell on this point here. I heartily agree that specifically *scientific* claims made by ID theorists should be evaluated on their *scientific* merits. The ID movement's success as a "materialism defeater" is wholly dependent on its ability to make its scientific case. If that scientific case cannot be made, however, then the movement has no basis whatsoever for asking that the concept of "intelligent design" be presented as an alternative to mainstream science's understanding of biotic evolution in a public school science classroom. *Public school board members and legislators need to know this.*

But if we wish to evaluate whether or not ID theorists have been, or will ever be, successful as "materialism defeaters" (Madden and Discher's term), we must know with some precision what package of views is included under the rubric of "materialism." Consequently we must pay careful attention to Madden and Discher's actual words when they define this term. "By materialism," they say:

We mean the view that *efficient* and *material causes* along with precise laws of nature are by themselves sufficient to explain and predict all phenomena in the natural world; it is the view that we do not need to include anything in our explanation of how things in nature operate and why they are arranged in any particular way that is not empirically observable and mathematically calculable.⁹

I find this definition of materialism highly problematic in many ways, especially these three:

1. Positing that materialism entails the idea that efficient and material causes are sufficient "to *predict* all phenomena in the natural world" appears to exclude all authentically

contingent events from natural phenomena. To exclude authentic contingencies, which are inherently unpredictable, from natural phenomena strikes me as being radically unrealistic.¹⁰ Furthermore, the accuracy and relevance of predictions are always limited by the less than perfect knowledge and skill of the human beings that are doing the predicting.

2. Positing that materialism entails the idea that "empirically observable and mathematically calculable" causes are sufficient to explain *why* things are "arranged in any particular way" needs considerable qualification in order to avoid slipping into such metaphysical or religious matters as the "why questions" of purpose or ultimate end.

3. More conventional definitions of materialism ordinarily include a denial of the existence of any immaterial Deity, making materialism an explicitly atheistic and maximal form of naturalism. If, as Madden and Discher argue, ID is best seen as an enterprise that would play the role of "materialism-defeater," then some persons might mistakenly be led to infer that all critics of ID fall in the category of materialism-affirmers. Such is not the case. Most of the critics of ID that I know personally are members of the Christian community.

I believe it would be better if we stayed with the language most commonly employed by the ID movement itself and say that the goal of ID is the defeat of "naturalism."

For these and other reasons, I believe it would be better if we stayed with the language most commonly employed by the ID movement itself and say that the goal of ID is the defeat of "naturalism."¹¹ In this context it is, I believe, sufficient to say that the *naturalism* that the ID movement wishes to defeat is any world view (whether theistic or atheistic) that posits the sufficiency of the system of natural causes to bring about the actualizing (forming, assembling, constructing, fabricating) of the full spectrum of physical structures and biotic forms and systems that have appeared in the formational history of the universe.¹² Included among the several world views that the ID movement is out to defeat is any world view that posits, as I have done, that the universe is gifted by its Creator with a *robust formational economy*—a universe lacking nothing needed to actualize, without any compensatory non-natural action, every type of structure and organism that has appeared in its formational history.



Madden and Discher have successfully argued ... that ID is inherently unable to establish a positive case for any particular “nonmaterialist” explanation of empirical observations. ... I would add ... that ID is equally unable to establish a conclusive scientific case that any non-naturalistic explanation is even necessary.

Dialogue: Response

Is the ID Movement Capable of Defeating Naturalism? A Response to Madden and Discher

Is ID’s Scientific Goal Achievable?

How do ID theorists seek to achieve this goal of defeating naturalism? Although the theoretical literature of the ID movement may not be the easiest to digest, ID’s strategic approach is actually quite straightforward. Non-natural *intelligent design* action would be needed only on those occasions for which natural action is inadequate to accomplish what needs to be done. Thus, when seeking to establish their scientific case for the necessity of supplemental non-natural action, ID theorists seek to identify specific biotic systems (usually some portion of an organism, such as the bacterial flagellum) for which it is possible to demonstrate, by reasoned appeal to empirical evidence and mathematical computation, that the system of natural causes is in fact incapable of assembling those structures. (It could also be noted, however, that many ID proponents seem inclined to go far beyond this and to speak of this non-natural action solely in terms of a succession of episodes of form-conferring intervention by an unidentified, unembodied, choice-making agent that bears a striking resemblance to the God of the Judeo-Christian tradition. But Madden and Discher are correct, I believe, to argue that ID’s *scientific* case provides no warrant for such a specific inference and that several other “nonmaterialistic theories of origins” are consistent with ID’s scientific argumentation. The problem for ID advocates in North America, however, is that the vast majority of them hold to a traditional Christian world view and the other options that Madden and Discher list are radically unacceptable on theological grounds, leaving divine interventionism as the only attractive option available for serious consideration. It is in the light of this reality that I see ID and compensatory, hand-like, supernatural action as effectively constituting a package deal.)

How do ID theorists attempt to make their scientific case? ID theorist William A. Dembski builds his case around the idea of what he calls *specified complexity*. No object that possesses this quality, he argues, could have been assembled by natural causes alone. To be *specified* is to exhibit a “detachable” pattern, one that is independent of the particular structure under scrutiny. The *complexity* of some structure is, by Dembski’s

unconventional definition, a measure of the difficulty of forming that structure by chance, where “by chance” means “by the joint effect of all natural causes.” Dembski counts a structure sufficiently complex if the probability for forming it “by chance” (that is, by natural means) falls below the minuscule value 10^{-150} . This has the peculiar result that the “Dembski-type complexity” of some object is not so much a property of the object itself, but a property of the rest of the universe—viz., its ability or inability to actualize that object.

As I have explained in detail elsewhere, I find Dembski’s scientific case for the specified complexity of the bacterial flagellum to be seriously flawed.¹³ After a lengthy development of the idea of *specification* as a structural or configuration pattern, illustrated with numerous examples of letter strings and numerical sequences, Dembski simply asserts that “biological specification always refers to function.”¹⁴ It is, he argues, the flagellum’s biological functioning as something like a rotary outboard motor that serves as the flagellum’s specification. Dembski’s abrupt move from configurational patterns to biological function as the definitive mark of specification struck me as astoundingly facile.

Even more serious problems arise in regard to the way in which Dembski seeks to demonstrate that the bacterial flagellum, or any other biotic structure *X*, is sufficiently “complex” (as he defines this term) as to require some non-natural means of assembly. In order to do so, he must demonstrate by computation that $P(\text{flag} | N) < 10^{-150}$, where $P(\text{flag} | N)$ is the probability that the *E. coli* bacterium could have become equipped with a flagellum by the joint effect of *all* natural causes, *N* (which includes both *known* and *unknown* ways—and *unknown* causes). But, of course, that probability cannot be computed—not by Dembski, not by anyone who has less than a complete knowledge of the universe’s formational economy.¹⁵ The best that anyone can do is to compute $P(X | n)$, the probability that biotic system *X* could have been actualized by the application of *known* natural causes in *known* ways, here denoted by “*n*.” The assertion that no adequate natural causation will ever be discovered in the future is, in the spirit of Madden and Discher’s rhetoric, nothing more than “promissory note anti-naturalism.”

ID's success as a naturalism defeater depends, therefore, on knowing far more than anyone will ever know. ID theorists are now unable, *and will necessarily remain unable*, to reach a computationally warranted conclusion any more forceful or specific than this: In the absence of a detailed and causally specific scientific account of the particular sequence of natural processes and events that can fully explain the formational history of biotic system X, it is *logically permissible* to posit that the actualization of X required at least one instance of non-natural action. That is certainly true, but the logical permissibility of positing a religiously attractive, non-natural explanation in the context of incomplete knowledge is a weapon far too weak to defeat (or even bruise) naturalism of any type.¹⁶

Madden and Discher have successfully argued, I believe, that ID is inherently unable to establish a positive case for any particular "nonmaterialist" explanation of empirical observations. To that conclusion I would add my own judgment, based not on religious concerns but on sound scientific criteria, that ID is equally unable to establish a conclusive scientific case that any non-naturalistic explanation is even necessary. *Consequently, there is no scientific basis for political action promoting the inclusion of the ID hypothesis in the public school science classroom.* ♦

Notes

- ¹I am a bit puzzled, however, at Madden and Discher's choice to use an old combat metaphor when they say that I have "thrown down the gauntlet" to advocates of ID. The intent of my request was not to issue a hostile challenge to engage in combat. Rather, it was a request for clarification and candor in their use of key terminology. This is but one of many instances in which Madden and Discher write as if they had privileged information regarding my personal motivations (including some they characterize as "wrong-headed") for criticizing claims made by the ID movement or for favoring particular positions differing from ID.
- ²A person could well posit many other forms of action that might be denoted by the terms "design" or "intelligent design," but these two are, I believe, the principal meanings that are at issue for those ID advocates (the vast majority) who are committed to traditional Christianity and the concept of supernatural divine action (God exercising power over nature).
- ³Form-imposing intervention by a Creator, for example, would constitute an instance of the supernatural divine action to which I referred in the previous note.
- ⁴James Madden and Mark Discher, "What Intelligent Design Does and Does not Imply," *Perspectives on Science and Christian Faith*, 56, no. 4 (2004): 286.
- ⁵One of my continuing criticisms of the rhetorical strategies of ID theorists is that the operative meanings of key terms are often radically different from what most readers would expect. I have called attention to this phenomenon in a number of publications dealing with the published work of the ID movement's chief theorist, William A. Dembski. See, for example, either of two versions of my review essay of Dembski's book, *No Free Lunch: Why Specified Complexity Cannot Be Purchased without Intelligence* (Lanham, MD: Rowman & Littlefield, 2002): (1) "Are Bacterial Flagella Intelligently Designed? Reflections on the Rhetoric of the Modern ID Movement," *Science and Christian Belief* 15, no. 2 (October, 2003): 117-40, or (2) a more detailed version posted on the website of the American Association for the Advancement of Science. Go to www.aaas.org/spp/dser/evolution/perspectives.shtml and look under the heading "Intelligent Design" for my essay, "E. coli at the

No Free Lunchroom: Bacterial Flagella and Dembski's Case for Intelligent Design," followed by an exchange between Dembski and myself.

- ⁶I find it odd that, although Madden and Discher refer to me by name twenty times in their essay, they did not once offer a direct quotation from my published writings to substantiate what they say about my position. How can a reader judge whether or not I have said something that is "inappropriate," or "methodologically unsound," or "hasty," or "illicit," or "wrong-headed" if they are not even shown examples from my publications?
- ⁷To understand the Intelligent Design movement comprehensively one must recognize that it has not only a scientific dimension but religious and political dimensions as well, each of which should be open to an appropriate form of scrutiny. To neglect the ID movement's religious dimension or to suggest that it is a purely scientific enterprise that would exist even if the religious agenda of its most vocal advocates were absent strikes me as utter silliness. Furthermore, for anyone to suggest that the religious agenda of the current ID movement in North America is not dominated by the concerns of Christian supernaturalism would, I believe, require a denial of the obvious. For an analysis of the multifaceted character of the ID movement, see Barbara Forrest and Paul R. Gross, *Creationism's Trojan Horse: The Wedge of Intelligent Design* (New York: Oxford University Press, 2004), especially the book's final chapter, "Religion First—and Last."
- ⁸Madden and Discher seem not to be familiar with the material that I cite in note 5. This material is concerned, not with ID's theological connotations, but with the highly questionable nature of Dembski's rhetorical strategy and the serious flaws in his scientific argumentation.
- ⁹Madden and Discher, "What Intelligent Design Does and Does not Imply," 289.
- ¹⁰I cannot predict what the precise wind velocity will be at some specified location in my yard at 9 a.m. next Tuesday, but I have every right to posit that its particular value will be the outcome of purely natural (creaturely, not supernatural) causes.
- ¹¹I made precisely the same point in my essay, "Are Bacterial Flagella Intelligently Designed?" *Science and Christian Belief* 15, no. 2 (2003): 121.
- ¹²In the essays to which I referred in note 5, I list several variant strains of naturalism that differ from one another in very important ways. In spite of those differences, however, the ID movement is opposed to all strains of naturalism because they are uniform in their rejection of the idea that compensatory non-natural action is either necessary or empirically detectable.
- ¹³See the references listed in note 5.
- ¹⁴Dembski, *No Free Lunch*, p. 148.
- ¹⁵Actually, ID's case is even more deeply flawed. I would argue that even if Dembski's probability condition could be satisfied, this is not the probability value that needs to be computed to make ID's scientific case against naturalism successful. The most relevant probability, I believe, is not the probability that some *particular* biotic structure came to be formed naturally, but this one: given the innumerable multitude of genetic variations that might occur in any population, and given the vast diversity of environmental circumstances that might prevail, what is the probability that at least one of these variations (or any other type of biological novelty) will trigger a positive feedback process that eventuates in the actualization of some functionally successful biotic structure or system (say for locomotion, which is the biotic function of the bacterial flagellum)?
- ¹⁶A few thousand years ago, in the absence of knowledge about electrostatic discharge, and in the context of religious beliefs held by polytheistic cultures, it was both logically permissible and religiously attractive for some people to posit that lightning required the direct action of a divine agent. In the long run, however, a belief that is both logically permissible and religiously attractive remains vulnerable to defeat by knowledge based on empirical science. Lightning, we now know, is an electrical phenomenon.