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The fine-tuning argument: the 'design inference' version

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Abstract: **William Dembski claims that the fine-tuning supports the inference that the universe was designed. His 'design inference' is based on the identification of two features of the fine-tuning. Dembski claims that it is a 'specified' event of small (a priori) probability. Specification, in this context, is the ability to describe an event without using any knowledge of the actual event itself. I argue that we currently do not have the ability to describe accurately the fine-tuning of the universe without using any knowledge of the fine-tuning itself. If we cannot generate a specification, then the fine-tuning is not a specified event, so the 'design inference' is not justified.**

In his paper considering the common version of the fine-tuning argument M. C. Bradley uses the example of a 'perfect hand' dealt from a pack of cards to illustrate the fine-tuning argument (as envisaged by its proponents). If we were to see all the cards of an apparently well-shuffled deck dealt out in ascending numerical order within suits we would be reluctant to attribute this event to chance, but rather we would assume that design (perhaps in the form of a prankster) was involved. Bradley asks:

> … why do we regard this one arrangement of cards – the perfect hand – as significant, i.e. as betokening purpose, as the work of an intervening mind, but the other 8066×10^{64} odd arrangements as *not* significant, *not* betokening purpose, not the work of an intervening mind? The answer is surely a simple one; it is that this one arrangement (a) is the way that cards are packed by the manufacturer, (b) is the way that cards (and other sequentially numbered objects) are *naturally* thought of as due for arrangement, or liable to be arranged, and (c) is the way that (partially) reflects something even more fundamental, viz. the natural order of the integers, i.e. their order according to magnitude.[1]

Bradley considers the reasons (a), (b), and (c) to be good reasons to assume the deal was significant (in his sense of betokening purpose). Bradley then observes

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that if the common version of the fine-tuning argument is to succeed, there must be corresponding good reasons for the fine-tuning to be significant in the same sense. He reviews the following reasons suggested in the literature: life's value, the existence of complex orderliness, Leslie's 'neatness principle', and the existence of mind, and he argues that these are not good reasons.

William Dembski's 'design inference' is relevant to Bradley's analysis of the claimed significance of the fine-tuning.[2] Dembski's inference to design is based on the application of his 'explanatory filter'. I will not examine the overall functioning of the filter here.[3] Rather I will focus on what Dembski calls the 'law of small probability' as this is directly relevant to Bradley's concept of significance that betokens purpose. This law states that 'specified events of small probability do not occur by chance'.[4] Dembski does not present his own argument to support this law, but rather uses an historical presentation of it, by quoting Laplace, referring to the process in which a large number of letters (perhaps printed on small tiles) are tossed onto a table:

> On a table we see letters arranged in this order, *Constantinople*, and we judge that this arrangement is not the result of chance, not because it is less possible than the others, for if this word were not employed in any language we should not suspect that it came from any particular cause, but this word being in use among us, it is incomparably more probable that some person has thus arranged the aforesaid letters than that this arrangement is due to chance.[5]

Because the letters *C o n s t a n t i n o p l e* make a 'word being in use among us' the event of the letters arranged in this order is 'specified', and Dembski claims that this arrangement cannot be due to chance.[6] Given that the specification eliminates chance, we must then seek another explanation, namely design.[7] This is the 'design inference'. Contrast this with the letters arranged in the following order, *T a o r g h a w i n t o p p*. Because this is not a 'word being in use among us' it is not 'specified'. This arrangement of the letters does not eliminate chance, and thus does not prompt us to seek an explanation in the form of design. For the sake of argument in this paper, I grant that specified events of small probability do not occur by chance.

For Dembski, a specified event is an event we have described (or can describe) without using any knowledge of the actual occurrence of the event. In other words, we can describe the event independently from any knowledge of the event itself. (In the process of seeking a specification, Dembski allows for the generation of multiple descriptions.)[8] In Laplace's example we have access to the description of the word *Constantinople* independently from the event (the word arranged on the table), because it is a 'word being in use among us', and in the 'perfect-hand' example we have access to the description of the event (the actual ordering of the deal) because of the reasons (a), (b), and (c). In either case, if we were asked to offer a description (or multiple descriptions) of the event, without any knowledge of the actual deal or the actual arrangement of

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the letters on the table, it would be possible for us to describe accurately the event. In the case of the deal, the perfect hand may well be one of the first descriptions that came to mind, and in the case of the fourteen letters arranged on the table, we could simply list all the fourteen-letter words. Dembski contrasts the notion of 'specification' with that of 'fabrication'. The description of an event is a fabrication if the source of the description is the event itself. So, to claim, after we have observed the letters arranged on the table, that *Taorghawintopp* is a word being in use among us, would be a case of fabrication. With reference to the 'law of small probability', an event of small probability that is only described using knowledge of the event itself *can* be due to chance.

Dembski claims that the fine-tuning is a specified event, and that this indicates God's involvement in the creation of the universe.[9] In order for Dembski's design inference to be reasonable (granting small probability) we must be able to describe the event of the fine-tuning independently from the event itself. If we can accurately describe the fine-tuning of the universe without using any information about the fine-tuned nature of the laws, constants, and initial conditions, then we have successfully generated a specification, and thus chance can be eliminated. As mentioned above, Dembski generously allows for multiple descriptions. If one of these descriptions matches the event, then the requirements of Dembski's method of inference have been met.

One way to ensure the independent description of the fine-tuning would be to describe accurately every logically possible universe. But, on the assumption that there are at least very many logically possible universes, this would be beyond our capacities. And, even if it were possible to describe every logically possible universe, this approach would not justify the inference to design simply because it would be equivalent to specifying the winner of a lottery by listing the ticket holders and noting that one of them will win. Alternatively, there is the possibility that a manageably small set of independently produced descriptions just happened by chance to include a description that matched the fine-tuning. But if this did occur, I suggest, that due to the role of chance in the process, it could not be interpreted as a specification in the sense required to justify the design inference. Thus, I contend, that it is beyond our capacities to describe accurately the fine-tuning without using knowledge of the fine-tuning itself.

But perhaps there is another way independently to describe the fine-tuning. This involves different expectations concerning the detail of the description. One presentation of the fine-tuning argument is that God desired the existence of intelligent organisms, and so designed the universe to allow for their existence.[10] Perhaps it is reasonable to consider the general notion of God's desire for intelligent organisms that could in turn lead to a general description of a universe that would allow for such organisms.[11] However, we must be careful here. Is such a description generated independently of the fine-tuning? The fine-tuning has generated organisms with desires. Thus, the existence of organisms with desires

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is not independent of the event of the fine-tuning. So, knowledge of the actual existence of organisms with desires cannot be used to inform the notion of a God with desires. So, we must determine whether the concept of a God with desire is independent of the actual existence of organisms with desires in this universe. If the concept is independent, then it can be used as the basis of the description.

However, the concept of a God having desire may not be independent of the actual existence of organisms with desires. The actual existence of organisms with desires may have produced the concept of a God with desires. If the independence of the concept of a God with desires can be demonstrated, then this concept can be used as a basis for an independent description of the universe. This, then, would be a case of specification, and then following Dembski, chance would be eliminated, and thus design would be inferred. But if this concept is derived from the actual existence of organisms with desires in this universe, then the description of the fine-tuning based on the notion of God's desire is not independent, so chance is not eliminated, and thus design could not be inferred. Here I suggest that the burden of proof lies with the advocates of design to demonstrate the required independence. Descartes' project in his *Third Meditation* is to demonstrate that the origin of the idea of God, is God and not the human mind.[12] I am not convinced by his argument, and for the purposes of this paper, I suggest that the idea of God *having desire* originates in the human mind.

Thus, in conclusion, neither the detailed description of the fine-tuning nor the more general description of a world that is desired by God can currently be generated without knowledge of this fine-tuned universe. As such, the fine-tuning cannot currently be said to be a specified event, and so Dembski is not justified in inferring design. Thus, another attempt to demonstrate that the fine-tuning has significance that betokens purpose has failed.[13]

Notes

1. M. C. Bradley 'The fine-tuning argument', *Religious Studies*, **37** (2001), 453–454.
2. William A. Dembski *The Design Inference: Eliminating Chance Through Small Probabilities* (Cambridge: Cambridge University Press, 1998).
3. For a critical analysis of Dembski's filter, see Brandon Fitelson, Christopher Stephens, and Elliott Sober 'How Not to Detect Design – Critical Notice: William A. Dembski, *The Design Inference*', *Philosophy of Science*, **66** (1999), 472–488.
4. Dembski *The Design Inference*, 5.
5. *Ibid*., 1.
6. *Ibid*.
7. In the context of Dembski's explanatory filter, if chance is eliminated as a possible explanation (of an event of small probability), then the only remaining explanation is design.
8. Dembski *The Design Inference*, 136–154.
9. William Dembski *Intelligent Design: The Bridge between Science and Theology* (Downers Grove IL: InterVarsity Press, 1999), 233.

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10. Richard Swinburne 'Argument from the fine-tuning of the universe', in J. Leslie (ed.) *Physical Cosmology and Philosophy* (New York: Macmillan, 1990), 154–173.
11. Graham Oppy referred to the general notion of a God who wanted to make a universe that contained 'carbon-based life' in correspondence on 7 December 2005.
12. René Descartes *The Philosophical Works of Descartes: Volume 1*, E. S. Haldane and G. R. T. Ross (trs) (Cambridge: Cambridge University Press, 1931), 157–171.
13. I thank James Chase, Phil Dowe, Graham Oppy, and an anonymous referee for this journal for their comments.

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