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Response to Bussey

Peter Bussey's stimulating article raises more issues than there is space to discuss, but I hope it will be helpful to clarify why simplicity does seem important in the case of hypothetical ultimate explanations, and why God seems a more problematic candidate for ultimate explainer than Bussey suggests.

Observed explanations versus explanatory hypotheses

Sometimes it is possible to determine the correct explanation for a state of affairs by direct observation; so, for example, people could have observed the tenth earl designing the maze in Bussey's example. We need not worry about hypothetical explanations when directly observed ones are available.

However, when direct observation is not possible, as is often the case in dealing with many theoretical explanations in science, and in many other cases, we often use hypothetical explanations. The question thus arises whether God is best seen as an explanatory hypothesis.

God as explanatory hypothesis?

Many theologians have justified belief in God by appeal to his value as an explanation.¹ However, if belief in God is not justified in this way then God's explanatory virtues are less important. Though focusing on explanation, Bussey also mentions confirmation from trusted revelatory sources and personal experience. While he points out that these would not be convincing to a scientific sceptic, we need to note that the problems are not merely scientific. Problems arise from contradictory 'revelations'; historical and moral criticism of the Bible; contradictory personal experiences; disconfirmatory experiences of apparently senseless evil and of God's absence, as well as from the availability of naturalistic explanations for religions and religious experiences. Without addressing these problems it seems unclear how much real confirmation religious experience and alleged revelations can provide. It therefore seems worthwhile investigating God's explanatory virtues.

Inference to the best explanation

Even when we cannot observe the correct explanation, we may believe a good hypothetical explanation to be correct when it seems better than rival expla-

1 e.g. Thomas Aquinas *Summa Theologiae*, 1a2.3

nations and than no explanation at all. This is known as 'inference to the best explanation', and is a kind of reasoning widely used in the sciences and beyond.

How do we decide which explanation is best? This is often a controversial matter, requiring judgement, but it would be widely agreed that explanatory power, simplicity and fit with background knowledge are all virtues in an explanation.²

Simplicity and fit with experimental data

We should note that theories about unobservables are rarely proved conclusively by experimental data, since granted enough ingenuity and complexity, potentially infinite numbers of hypotheses that fit the data can be dreamt up. Theories about unobservables are often said to be underdetermined by the data. Simplicity and other explanatory virtues are usually thought important in determining which of the potentially infinite theories that could explain the data is best.

This can be illustrated by the standard example of scientists' practice in 'curve-fitting' a set of data points on a graph. Scientists show a preference for simple, smooth curves to the countless more complex curves that could also fit the data points. A simpler curve that does not fit all the data points exactly may even be chosen over a complex curve that does fit the data exactly. Simplicity and ability to explain the data are both virtues, but the data may contain errors or artefacts.³

Simplicity is generally important

Bussey sometimes seems to suggest that simplicity is not very relevant beyond scientific explanations,⁴ but this would not meet widespread agreement. To quote the *Stanford Encyclopaedia of Philosophy*, 'There is a widespread philosophical presumption that simplicity is a theoretical virtue... Simplicity principles have been proposed in various forms by theologians, philosophers, and scientists, from ancient through medieval to modern times.'⁵ This view that simplicity is a virtue of explanations *generally* is echoed in *The Oxford Handbook of Epistemology*.⁶

2 See e.g. Lycan, W.G. 'Explanation and Epistemology', in Moser, P.K. (ed.) *The Oxford Handbook of Epistemology* Oxford: Oxford University Press (2002), p.408.

3 See e.g. Sober, E. 'What is the Problem of Simplicity?' in Keuzenkamp, H., McAleer, M. & Zellner, A. (eds.) *Simplicity, Inference, and Econometric Modelling*, Cambridge: Cambridge University Press (2002), pp. 13-32.

4 e.g. 'God's complexity need not be greater than that of the universe, but is hard to assess and not very relevant because God is not a scientific explanation.'

5 Baker, A. 'Simplicity', in Zalta, E.N. (ed.) *The Stanford Encyclopedia of Philosophy (Winter 2004 Edition)*, URL = <<http://plato.stanford.edu/archives/win2004/entries/simplicity/>>.

6 *op. cit.*, (2), p.415.

Fit with background knowledge

Simplicity is not the only explanatory virtue. Explanations that fit well with our background knowledge, that is, with other things we know (or think we know), gain in plausibility, other things being equal. A theory that fits well with background knowledge in a field of enquiry may for this reason be preferable to a simpler theory. (Simplicity is plausibly operative when we judge that a new hypothesis fits well with background knowledge; given enough complexity, almost anything can be made to fit with anything else).

Bussey notes that in some cases simple phenomena have complex explanations. 'Within physics, simple phenomena with complex explanations include superconductivity and the spin-statistics theorem for quantum particles.'

In such cases the complex explanation is supported by many background observations, not just by the evidence from, for example, superconductivity. Our background knowledge of quantum theory and other experimental results plays a part in justifying our explanation in a particular case.

However, in the case of God and other ultimate explanations, there is no background experimental data in the relevant sense. All contingent data are in the foreground, since an ultimate explanation explains everything else. Contingent background knowledge will not be relevant in the case of ultimate explanations, but will be relevant in the case of proximate explanations. In the case of ultimate explanations it therefore seems that simplicity and explanatory power are the principle explanatory virtues.⁷

I therefore think it is worth noting that, to the extent that God is seen as an unobservable, ultimate, hypothetical explanation, then simplicity will be more important in reasoning about God than it is in reasoning about observable, non-ultimate beings like the maze-designing earl in Bussey's example, or even in reasoning about unobservable cube-creating aliens, as in Ratzsch's example.

I agree with Bussey that it is difficult to assess God's complexity, but I think this means that it is difficult to assess how good an explanation God is, not that simplicity isn't very relevant.

Dawkins' problem with God as ultimate explainer

Underlying Dawkins' objection is the feeling that God would be 'even more in need of an explanation than the object he is alleged to have created...'⁸ The same sorts of questions that arose about living organisms pre-Darwin arise with God, but there seems no possible answer for them, since God is supposedly ultimate and unexplained.

⁷ See Swinburne, R. *The Existence of God*, 2nd edn., Oxford: Clarendon (2004), pp.60-61. Scope will not be much help in assessing ultimate explanations since ultimate explanations all share wide scope, explaining everything else.

⁸ Richard Dawkins and Jerry Coyne, *Guardian*, Thursday September 1, 2005.

As previously argued, I do not think that Dawkins justifies his claim that God must have organised complexity,⁹ but I think that Christians need to recognise that postulating an omniscient God means postulating perfectly detailed knowledge of all possible creations, along with the power to choose among them, all existing eternally, without obvious explanation. Might not an unexplained God leave us with a bigger mystery than unexplained physics? With human designers we plausibly have some understanding of the structures and abilities in which our intelligence and knowledge are grounded, and some inkling of how these might have evolved from unintelligent, ignorant origins. Yet, I suggest, Bussey offers little insight into why God's infinite intelligence and knowledge might plausibly exist unexplained.

Dawkins' approach is not without difficulties, but at least it has the intellectual merit of seeking comprehensible forms of explanation, rather than explaining the mystery of nature's existence by the potentially greater mystery of an infinite intellect existing without explanation.

Bussey commendably attempts to show that God need not be as complex as the universe he creates:

God... needs to possess just the concepts and the originating creative power, delegating the random number generation to the created universe.

But God's concepts for creating our universe will not be alone, but accompanied by concepts for all possible creations. Bussey suggests that God's complex thoughts might derive from simpler axioms but, leaving aside the problems with this idea,¹⁰ the underlying problem remains that we are taking for granted the existence of an intelligent agent with astounding conceptual understanding. This is just what many believe should not be granted without further explanation. Doesn't it seem at least a little problematic that such amazing knowledge, so hard won in humans by evolution and scientific endeavour, should just exist for no reason? Wouldn't a little attempt at justifying this mysterious claim be helpful, if we are expected to believe it?

Why doesn't this designing agent need an explanation? Since God is ultimate, it seems that it is not just that we don't know the explanation for his existence, but that he cannot have one, unless God's existence is somehow self-explanatory, in which case we face the problems of logically necessary existence, with which Bussey does not engage.

Appealing to our ignorance and to the incomprehensibility of God doesn't help, either. We might as well suspend judgement and admit that we don't know whether God provides a good explanation or not.

9 See Richmond, P. 'Richard Dawkins' Darwinian Objection to Unexplained Complexity in God', *Science and Christian Belief* (2007) 19 (2), 99-116.

10 e.g. Not every truth will be derivable from axioms. Isn't it too much of an unexplained coincidence that God knows these axioms? How do we explain God's ability to reason from axioms? Wouldn't it be more perfect to know things immediately, without having to reason from axioms?

The failure of aliens and earls to provide a convincing analogy to an ultimate designer

Bussey appeals to the propriety of explaining a titanium cube on Mars by aliens, or a maze by the earl, even in ignorance of the details of their genetic origins, to justify appealing to God, even in the absence of an explanation of God's amazing attributes. But there are significant disanalogies between the natural and divine designers to make this unconvincing. Not only do we have background knowledge of the existence of human designers like the earl, which also supports the possibility of other alien designers evolving elsewhere, but we have in Darwinism a *prima facie* explanation of how complex, organised, intelligent beings come to exist. I agree 'we don't really need to know the ultimate origins of the aliens who planted the titanium cube on Mars, nor the genetic history of the tenth earl' but plausibly there *are* explanations of how aliens and the earl came to have their power and knowledge. The problem is that plausibly there is *no* explanation possible of how God exists with such amazing power and knowledge, since his existence is ultimate and inexplicable. The existence of God poses problems far more profound than those surrounding natural, evolved agents like the aliens and the earl. The analogy proves inadequate.

Is the complex physical universe a hypothesis comparable to God?

Bussey writes:

if in the story of life on Earth we are prepared to swallow the camel of exceedingly high physical complexity, then to seek to strain out the possibility of a Deity, even a fairly complex Deity, seems rather fussy. It is more than a little arbitrary to take happily on board a truly vast set of random events possessing no explanation, but then to complain about other people's explanations being too complex.

While I agree that an explanation for the universe is desirable and that postulating a multiverse would be problematic, comparing the complexity of the physical world with the complexity of a hypothetical designer may not be comparing like with like. The existence of a complex, physical world is not just a hypothesis, but at least partly observable. We are not just postulating natural complexity as a hypothesis, but observing it. The unobservable events gain considerable support from our background knowledge of observable ones. Finally, in so far as complexity arises from random quantum events it is unclear that it invites further explanation in the same way that intelligence would. Quantum mechanical randomness may seem less surprising than utterly unexplained intelligence. The atheist need not be wholly arbitrary in accepting the complexity of the physical world while complaining about God.

Is God the appropriate unexplained ultimate explainer?

Bussey in his Abstract says: 'It is argued that science cannot provide a truly ultimate explanation for the universe but that God is the appropriate recourse here' but he later elects not to pursue the argument that God is the appropriate recourse:

Various non-physical transcendent explanations could perhaps be proposed for the universe. It is beyond the scope of this article to go into these questions, or to attempt to persuade the reader from first principles that the Christian concept of God is better than other possible explanatory Transcendents.

Bussey notes that science does not provide a necessary end to explanation, but does not explain why God does provide such an end. One scenario for the termination of scientific explanation that Bussey considers is that scientific explanations 'stop at something for which there exists no further explanation, even though its truth is not logically compelled and therefore it might have an explanation'. Here 'the unanswered question "why" still exists and can be asked'. But how are we to avoid the 'why' questions in the case of God?

Traditionally, God has often been conceived as a logically necessary being, and his existence somehow self-explanatory, but Bussey's paper does not stress such approaches and says in a footnote, 'The logic itself, therefore, needs to be built into God's Being, and we are unlikely to understand its real nature.' I suspect that those doubting God's existence will wonder how much explanation is really being offered here. If theists can't answer the 'why' questions then is it fair to demand answers of atheists? Contrary to the impression created by the abstract, the paper hardly argues that God is an appropriate ultimate explanation, let alone the best one.

If readers are sympathetic to my claim that simplicity does seem important in the case of hypothetical ultimate explanations, and that God seems a more problematic candidate for ultimate explainer than Bussey suggests then how might they proceed? One strategy is to argue that God does indeed offer a better terminus to explanation than does atheism, defending some sort of divine simplicity,¹¹ or necessary existence, or both.¹² In addition, or instead, we could pursue the idea that faith in God can be warranted even without explanation, and defend this claim against the various problems.¹³

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11 Following on from Swinburne *op. cit.*, (7); Richmond *op. cit.*, (9).

12 See Pruss, A.R. 'Some Recent Progress on the Cosmological Argument', Conference paper available at <http://www9.georgetown.edu/faculty/ap85/papers/RecentCosmoProgress.pdf> accessed 24 May 2008.

13 Following on from e.g. Plantinga, A. *Warranted Christian Belief*, Oxford: Oxford University Press (2000).