THE ARGUMENT FROM APPARENT DESIGN

Clement Dore

I point out that, though animal bodies and their parts are not sufficiently similar to the products of conscious design to warrant an inference to a supernatural designer of the former things, the proponent of the design argument would be on firmer ground were he to base his inference on the more specific resemblance of well-functioning human eyes and brains to well-functioning cameras and computers. Though I argue that Darwin has not refuted the design argument, I conclude that the design arguer needs to show that there is a first cause in the enormously lengthy causal sequences which have culminated in human eyes and brains.

1.

The argument to which the title refers (henceforth, 'the AAD') is sometimes formulated in the following manner:

(1) Animal bodies are similar to artifacts.
(2) Artifacts are, by definition, the products of design.

But

(3) similar effects have similar causes.

So

(4) animal bodies and their parts are also products of design.

doi:10.1017/S1477175613000511 © The Royal Institute of Philosophy, 2014
Think 37, Vol. 13 (Summer 2014)

https://doi.org/10.1017/S1477175613000511 Published online by Cambridge University Press

But

(5) we know by observation that they are not the products of *human* design.

Hence

(6) they are products of non-human design – products, that is to say, of a supernatural designer.

This familiar formulation of the argument is, as it stands, unacceptable. For it is far from obvious that *entire* animal bodies and *all* of their parts bear a strong enough resemblance to artifacts to warrant its conclusion. But the proponent of the AAD can make the argument more persuasive by substituting for step (2) the assertion that well-functioning *eyes* are in some respects like well-functioning *cameras*, and that the well-functioning *brains* of professional mathematicians and of world-class chess masters (henceforth simply 'brains') resemble well-functioning *computers*. Given these substitutions, the proponent of the AAD is in a position to argue as follows: 'Though eyes and well-functioning cameras are physically dissimilar, and though that is even more obviously true of brains and well-functioning computers, the similarity between the *activities* which those two pairs of things typically perform makes it likely that the activities, in which eyes and well-functioning cameras and brains and well-functioning computers typically engage, were intended to take place by a conscious individual. For not only are we warranted in drawing inferences from physically similar effects to physically similar causes, as in the case of two automobiles of the same make and the same year, we are also warranted in drawing inferences from similar *activities* to similar causes, as in the case of the boiling of water in two physically dissimilar containers and the taking off from a runway of two different kinds of aircraft.'

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Having these similarities in view, we can formulate an improved version of the AAD:

(1) Well-functioning eyes are similar to well-functioning cameras with respect to the activities which they characteristically perform. And this is true as well of well-functioning brains and well-functioning computers.
(2) We know by observation that well-functioning cameras and computers are the products of design.

But

(3) similar effects have similar causes.

So

(4) well-functioning eyes and brains are also products of design.

But

(5) we know by observation that they are not the products of *human* design.

Hence

(6) they are products of a *non*-human, supernatural designer.

2.

Since Darwin, most educated people have believed that arguments which purport to demonstrate the existence of a supernatural designer of animal bodies, and/or such parts of animal bodies as eyes and brains, are unsuccessful. Nowadays, almost all educated people believe that eyes

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have evolved from light-sensitive patches (which were mutations, produced either by imperfect genetic copying mechanisms or by environmental radiation) to their present complex form, because increasingly light-sensitive organs enabled the individuals who possessed them to win out in the struggle to survive in a hostile environment against competitors who had organs which were less sensitive to light. In Darwin's view, the former individuals were more likely to have offspring, some of whom would themselves posses the advantages of their ancestors. Darwin, supplemented by Mendelian genetics, predicts that the descendants of the more light-sensitive individuals would, after many centuries, enormously outnumber the offspring of the less light-sensitive individuals. A similar explanation of the emergence of the brains of mathematicians and master chess players may well not be available, since it doesn't look as though the computations of the former and the chess-playing skills of the latter give them a survival advantage over animals with much smaller brains. Still, the fossil record with respect to skull sizes supports Darwin's claim that the larger brains of mathematicians and chess players are the end-product of a lengthy evolutionary process.

But it is not at all clear that Darwin really has undermined the AAD. For a person doesn't have to be an evolutionary biologist to realise that well-functioning eyes and brains were not directly caused by a supernatural designer. It is obvious that if there were such a designer, he would have been at a considerable temporal distance from his product. And the best explanation of how there can be such a remote designer is that he fixed the values of the constants of physics, having in view the fact that eyes and brains would come about after billions of years of cosmic, and, finally, biological evolution, which essentially involved the Darwinian mechanism of natural selection, acting on molecular mutations, on this planet, and, perhaps, on other planets elsewhere in the empirical universe. At present there is no scientific explanation of the fact that the constants of physics have the precise values which they have.

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But in case this is not a *brute* fact – in case such an explanation will be discovered in the future – the defender of the AAD will need some other account of how the supernatural designer which he postulates works. In any case, it is not obvious that Darwin's theory *per se* entails that the AAD is unsound.

Someone may object here that what follows from the fact that eyes resemble cameras, and that brains resemble computers, is not that eyes and brains are products of a remote, supernatural designer, but that Darwin has shown that it is false that similar effects have similar causes. But the reply to this objection is that it is very unlikely that our ancestors could have survived if similar sounds or motions in the nearby underbrush did not indicate the presence of a predator there, or if similar footprints did not give them reason to believe that there was a water hole nearby. Paradoxically, then, there is a Darwinian objection to the claim that Darwin has undermined the AAD.

3.

There are other objections, however. One of them goes as follows: Whether or not Darwin has undermined the claim that similar effects have similar causes, it takes only a little reflection to see that it is false. When two or more things resemble one another with respect to properties which everything – or almost everything – possesses, then we are not warranted in inferring that those things have a similar cause. The motion of an object (relative to another object) is a property which everything, or almost everything, possesses, at least on some occasions. But, though airplanes and bicycles are products of design, and earthworms and birds sometimes resemble them with respect to the property of being in motion, it would be wildly irrational to infer on that basis that earthworms and birds are also products of design. Similar considerations apply to colours and sizes. The fact that some products of design – red

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automobiles, for example – resemble, say, large red rocks with respect to their size and colour does not entitle us to infer that large red rocks are the products of design.

But this objection can also be met. The objection is correct just to this extent: The assertion that similar effects have similar causes is true only of activities which are *not* such that everything, or almost everything, engages in them, and of properties which are *not* such that everything, or almost everything, has them. While the claim that similar effects have similar causes is not true of the activities of moving through space or of the properties of having a certain shape or colour, the activities which well-functioning eyes and well-functioning cameras characteristically engage in, are *not* activities in which *everything*, or almost everything, engages, nor are they properties which everything, or almost everything, possesses. And that is true as well of computers and brains. The characteristic activities in which they engage are not almost universally engaged in. And the properties which they possess are not almost universally possessed.

4.

On pages 36 and 37 of the Barnes & Noble edition of David Hume's *Dialogues Concerning Natural Religion*, Hume's spokesperson, Philo, objects to arguments like the AAD that, if we postulate a non-human designer of machine-like things in nature, then, since *thought processes* are machine-like, we ought to conclude that they, too, must have a non-human designer, whose thought processes must have still another non-human designer, and so on without end.

Now it is, I think, far from clear that all thought processes resemble the workings of machines. But the essence of Hume's objection to the inference to a non-human designer of human brains can be captured as follows: 'We know by observation that the activity of designing could not occur in the absence of a well-functioning brain. Hence, if we

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postulate a non-human designer of human brains, then we will have to postulate another such designer, namely, a designer of the brain of the former designer, and a designer of the brain of the second designer; and so on, *ad infinitum*.'

Still, this revised Humean objection presupposes that the supernatural designer would have to have a body, or, in any case, a brain. And, of course, a designer who was disembodied would be very unlike any designer we have ever actually observed. But an individual who fixed the values of the constants of physics with the end in view of bringing about intelligent life would have to be very different from any designer with whom we have ever been acquainted. All the designers we have ever observed have had brains. But since the proponent of the AAD ought to conclude that the non-human designer is an enormously remote individual, who fixed the value of the constants of physics with the end in view of bringing about well-functioning eyes and brains after billions of years of cosmic and then biological evolution, he ought to conclude as well that the non-human designer is very different from human designers – so different, indeed, that it is not at all implausible that he is a disembodied individual. Here someone may object that it is a well-established empirical fact that no one could design anything unless he had a well-functioning brain. But the reply is that, though observation shows that *human* designers must have brains, it is, perhaps, open to the proponent of the AAD to deny that the *supernatural* designer must also have a brain *precisely in order to avoid an unacceptable regress of embodied designers*.

5.

We have been considering well-functioning eyes and brains. But, of course, there are eyes and brains which function poorly, if at all. And it might be thought that there is an argument which is no less persuasive than the argument we have been considering, and which shows that

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there is a *defective* designer of *defective* eyes and brains. If such an argument is available, then, since we oughtn't to multiply explanatory entities beyond necessity, we should conclude that there is just one non-human designer, who, since he is responsible for imperfect eyes and brains, as well as for normal ones, is himself an imperfect individual – a being who is not at all like the God of orthodox theism.

But if the proponent of the AAD wishes, as he normally does, to defend orthodoxy, he will want to point out that the claim that *defective* eyes resemble *defective* cameras enough to warrant an inference to a supernatural designer of *defective* eyes is surely much less plausible than the assertion that *non*-defective eyes are sufficiently like *non*-defective cameras and that *non*-defective brains are sufficiently like *non*-defective computers to warrant an inference to a supernatural designer. The assertion that the resemblance is strong enough to warrant an inference to a supernatural designer of the latter is surely much more plausible than the assertion that the resemblance of *defective* brains to *defective* (worn-out) computers is evidence that *those* things are also products of supernatural design. After all, as I have said, the *physical resemblance* of eyes to cameras and of brains to computers is clearly not strong enough to warrant an inference to a non-human designer of eyes and brains. It is the fact that the *activities*, in which eyes and cameras and brains and computers engage, resemble one another which warrants the inference in question (if anything does). And since *defective* eyes and *defective* cameras – as well as *defective* brains and *defective* computers – cannot do what well-functioning eyes and cameras, and well-functioning brains and computers, can do, the envisaged parody is unsuccessful.

It may be objected here that, though it is false that what *radically* defective eyes and brains do is similar to what well-functioning cameras and computers do (except in the sense that *any* two activities resemble one another in *some* respect or other), it remains true that if *slightly* defective human eyes and brains are the products of a

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non-human designer, then, because he is the designer of slightly defective eyes and brains, he must himself be slightly defective. But, in view of Ockham's prohibition against multiplying explanatory entities beyond necessity, the proponent of the AAD will want to conclude that the remote non-human designer of non-defective human eyes and brains is one and the same individual as the designer of slightly defective eyes and brains. And he will want to arrive at the further conclusion that the non-human designer could have done *better* than produce slightly defective human eyes and brains, that is to say, that he is not defective *qua* designer.

6.

What we have seen up to this point is that the argument from apparent design in nature is more resilient – more able to withstand objections – than many thoughtful people, especially since Darwin, have believed it to be. But it is time to point out that there is a much more serious objection to the AAD: 'Let us mean by the expression, "an artifact" – "a thing which can be known by observation to be a product of design." Then observation shows that, unless something is an artifact, its proximate causes are not makers of artifacts. We know by observation that those causes are not *designers*, but are non-artifacts which are themselves not brought about by the designing makers of artifacts, but by non-artifacts. And it would be irrational not to infer that if causal sequences which are composed of non-artifacts are infinite in the direction of the past, and culminate in present time in something which is a non-artifact – in eyes and brains, in particular – then there is, as it were, no room for a designing artifact-maker in those sequences. And, if the sequences of causes and their effects, which culminate in present time in human eyes and brains, do *not* extend without a beginning into an infinite past, it is up to the proponent of the AAD to prove that this

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is so. As it stands, that argument is unacceptably incomplete. If we had reason to think that the causal sequences which culminate in human eyes and brains contain a first cause, then, since the activities which eyes and well-functioning cameras typically perform, and the activities which brains and well-functioning computers typically perform, is strong enough to warrant the conclusion that there is a remote designer of eyes and brains, we ought to accept the AAD. But, if the proponent of the AAD is unable to demonstrate that those causal sequences don't have a beginning, then his argument is unsuccessful.' This objection is not open to philosophers who believe that a causal regress without a beginning in time is impossible. But many philosophers don't believe this; and these philosophers can raise the objection without inconsistency.

Clement Dore is Professor of Philosophy Emeritus, Vanderbilt University. Denise@Aplusoncall.com

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