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THE ARGUMENT FROM DESIGN

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THE OBJECT of this paper[1] is to show that there are no valid formal objections to the argument from design, so long as the argument is articulated with sufficient care. In particular I wish to analyse Hume's attack on the argument in *Dialogues Concerning Natural Religion* and to show that none of the formal objections made therein by Philo have any validity against a carefully articulated version of the argument.

The argument from design is an argument from the order or regularity of things in the world to a god or, more precisely, a very powerful free non-embodied rational agent, who is responsible for that order. By a body I understand a part of the material Universe subject, at any rate partially, to an agent's direct control, to be contrasted with other parts not thus subject. An agent's body marks the limits to what he can directly control; he can only control other parts of the Universe by moving his body. An agent who could directly control any part of the Universe would not be embodied. Thus ghosts, if they existed, would be non-embodied agents, because there are no particular pieces of matter subject to their direct control, but any piece of matter may be so subject. I use the word 'design' in such a way that it is not analytic that if anything evinces design, an agent designed it, and so it becomes a synthetic question whether the design of the world shows the activity of a designer.

The argument, taken by itself, as was admitted in the *Dialogues* by Cleanthes the proponent of the argument, does not show that the designer of the world is omnipotent, omniscient, totally good, etc. Nor does it show that he is the God of Abraham, Isaac, and Jacob. To make these points further arguments would be needed. The isolation of the argument from design from the web of Christian apologetic is perhaps a somewhat unnatural step, but necessary in order to analyse its structure. My claim is that the argument does

not commit any formal fallacy, and by this I mean that it keeps to the canons of argument about matters of fact and does not violate any of them. It is, however, an argument by analogy. It argues from an analogy between the order of the world and the products of human art to a god responsible for the former, in some ways similar to man who is responsible for the latter. And even if there are no formal fallacies in the argument, one unwilling to admit the conclusion might still claim that the analogy was too weak and remote for him to have to admit it, that the argument gave only negligible support to the conclusion which remained improbable. In defending the argument I will leave to the objector this way of escape from its conclusion.

I will begin by setting forward the argument from design in a more careful and precise way than Cleanthes did.

There are in the world two kinds of regularity or order, and all empirical instances of order are such because they evince one or other or both kinds of order. These are the regularities of copresence or spatial order, and regularities of succession, or temporal order. Regularities of copresence are patterns of spatial order at some one instant of time. An example of a regularity of copresence would be a town with all its roads at right angles to each other, or a section of books in a library arranged in alphabetical order of authors. Regularities of succession are simple patterns of behaviour of objects, such as their behaviour in accordance with the laws of nature—for example, Newton's law of gravitation, which holds universally to a very high degree of approximation, that all bodies attract each other with forces proportional to the product of their masses and inversely proportional to the square of their distance apart.

Many of the striking examples of order in the world evince an order which is due both to a regularity of copresence and to a regularity of succession. A working car consists of many parts so adjusted to each other that it follows the instructions of the driver delivered by his pulling and pushing a few levers and buttons and turning a wheel to take passengers whither he wishes. Its order arises because its parts are so arranged at some instant (regularity of copresence) that, the laws of nature being as they are (regularity of succession) it brings about the result neatly and efficiently. The order of living animals and plants likewise results from regularities of both types.

Men who marvel at the order of the world may marvel at either or both of the regularities of copresence and of succession. The men of the eighteenth century, that great century of 'reasonable religion', were struck almost exclusively by the regularities of copresence. They marvelled at the design and orderly operations of animals and plants;

but since they largely took for granted the regularities of succession, what struck them about the animals and plants, as to a lesser extent about machines made by men, was the subtle and coherent arrangement of their millions of parts. Paley's *Natural Theology* dwells mainly on details of comparative anatomy, on eyes and ears and muscles and bones arranged with minute precision so as to operate with high efficiency, and Hume's Cleanthes produces the same kind of examples: 'Consider, anatomise the eye, survey its structure and contrivance, and tell me from your own feeling, if the idea of a contriver does not immediately flow in upon you with a force like that of sensation'.[2]

Those who argue from the existence of regularities of copresence other than those produced by men, to the existence of a god who produced them are however in many respects on slippery ground when compared with those who rely for their premisses on regularities of succession. We shall see several of these weaknesses later in considering Hume's objections to the argument, but it is worth while noting two of them at the outset. First, although the world contains many striking regularities of copresence (some few of which are due to human agency), it also contains many examples of spatial disorder. The uniform distribution of the galactic clusters is a marvellous example of spatial order, but the arrangement of trees in an African jungle is a marvellous example of spatial disorder. Although the proponent of the argument may then proceed to argue that in an important sense or from some point of view (e.g. utility to man) the order vastly exceeds the disorder, he has to argue for this in no way obvious proposition.

Secondly the proponent of the argument runs the risk that the regularities of copresence may be explained in terms of something else by a normal scientific explanation[3] in a way that the regularities of succession could not possibly be. A scientist could show that a regularity of copresence R arose from an apparently disordered state D by means of the normal operation of the laws of nature. This would not entirely 'explain away' the regularity of copresence, because the proponent of this argument from design might then argue that the apparently disordered state D really had a latent order, being the kind ot state which, when the laws of nature operate, turns into a manifestly ordered one. So long as only few of the physically possible states of apparent disorder were states of latent order, the existence of many states of latent order would be an important contingent fact which could form a premiss for an argument from design. But there is always the risk that scientists might show that most states of apparent disorder were states of latent order, that is, that if the world lasted long enough considerable order must emerge from whichever of many initial states it began. If a scientist showed that, he would have

explained by normal scientific explanation the existence of regularities of copresence in terms of something completely different. The eighteenth-century proponents of the argument from design did not suspect this danger and hence the devasting effect of Darwin's Theory of Evolution by Natural Selection on those who accepted their argument. For Darwin showed that the regularities of copresence of the animal and plant kingdoms had evolved by natural processes from an apparently disordered state and would have evolved equally from many other apparently disordered states. Whether all regularities of copresence can be fully explained in this kind of way no one yet knows, but the danger remains for the proponent of an argument from design of this kind that they can be.

However, those who argue from the operation of regularities of succession other than those produced by men to the existence of a god who produces them do not run into either of these difficulties. Regularities of succession (other than those produced by men) unlike regularities of copresence, are all-pervasive. Simple natural laws rule almost all successions of events. Nor can regularities of succession be given a normal scientific explanation in terms of something else. For the normal scientific explanation of the operation of a regularity of succession is in terms of the operation of a yet more general regularity of succession. Note too that a normal scientific explanation of the existence of regularities of copresence in terms of something different, if it can be provided, is explanation in terms of regularities of succession.

For these reasons the proponent of the argument from design does much better to rely for his premiss more on regularities of succession. St Thomas Aquinas, wiser than the men of the eighteenth century, did just this. He puts forward an argument from design as his fifth and last way to prove the existence of God, and gives his premiss as follows:

'The fifth way is based on the guidedness of nature. An orderedness of actions to an end is observed in all bodies obeying natural laws, even when they lack awareness. For their behaviour hardly ever varies, and will practically always turn out well; which shows that they truly tend to a goal, and do not merely hit it by accident.'[4] If we ignore any value judgment in 'practically always turn out well', St Thomas' argument is an argument from regularities of succession.

The most satisfactory premiss for the argument from design is then the operation of regularities of succession other than those produced by men, that is, the operation of natural laws. Almost all things almost always obey simple natural laws and so behave in a strikingly regular way. Given the premiss, what is our justification for proceeding to the conclusion, that a very powerful free non-embodied

rational agent is responsible for their behaving in that way? The justification which Aquinas gives is that 'Nothing . . . that lacks awareness tends to a goal, except under the direction of someone with awareness and with understanding; the arrow, for example requires an archer. Everything in nature, therefore is directed to its goal by someone with understanding and this we call "God".'[5] A similar argument has been given by many religious apologists since Aquinas, but clearly as it stands it is guilty of the grossest *petitio principii*. Certainly *some* things which tend to a goal, tend to a goal because of a direction imposed upon them by someone 'with awareness and with understanding'. Did not the archer place the arrow and pull the string in a certain way the arrow would not tend to its goal. But whether *all* things which tend to a goal tend to a goal for this reason is the very question at issue and that they do cannot be used as a premiss to prove the conclusion. We must therefore reconstruct the argument in a more satisfactory way.

The structure of any plausible argument from design can only be that the existence of a god responsible for the order in the world is a hypothesis well confirmed on the basis of the evidence, viz. that contained in the premiss which we have now stated, and better confirmed than any other hypothesis. I shall begin by showing that there can be no other possible explanation for the operation of natural laws than the activity of a god and then see to what extent the hypothesis is well confirmed on the basis of the evidence.

Almost all phenomena can, as we have seen, be explained by a normal scientific explanation in terms of the operation of natural laws on preceding states. There is however one other way of explaining natural phenomena, and that is explaining in terms of the rational choice of a free agent. When a man marries Jane rather than Anne, becomes a solicitor rather than a barrister, kills rather than shows mercy after considering arguments in favour of each course, he brings about a state of the world by his free and rational choice. To all appearances this is an entirely different way whereby states of the world may come about than through the operation of laws of nature on preceding states. Someone may object that it is necessary that physiological or other scientific laws operate in order for the agent to bring about effects. My answer is that certainly it is necessary that such laws operate in order for effects brought about directly by the agent to have ulterior consequences. But unless there are some effects which the agent brings about directly without the operation of scientific laws acting on preceding physical states bringing them about, then these laws and states could fully explain the effects and there would be no need to refer in explaining them to the rational choice of an agent. True, the apparent freedom and rationality of

the human will *may* prove an illusion. Man may have no more option what to do than a machine and be guided by an argument no more than is a piece of iron. But this has never yet been shown and, in the absence of good philosophical and scientific argument to show it, I assume, what is apparent, that when a man acts by free and rational choice, his agency is the operation of a different kind of causality from that of scientific laws. The free choice of a rational agent is the only way of accounting for natural phenomena other than the way of normal scientific explanation, which is recognised as such by all men and has not been reduced to normal scientific explanation.

Almost all regularities of succession are due to the normal operation of scientific laws. But to say this is simply to say that these regularities are instances of more general regularities. The operation of the most fundamental regularities clearly cannot be given a normal scientific explanation. If their operation is to receive an explanation and not merely to be left as a brute fact, that explanation must therefore be in terms of the rational choice of a free agent. What then are grounds for adopting this hypothesis, given that it is the only possible one?

The grounds are that we can explain some few regularities of succession as produced by rational agents and that the other regularities cannot be explained except in this way. Among the typical products of a rational agent acting freely are regularities both of copresence and of succession. The alphabetical order of books on a library shelf is due to the activity of the librarian who chose to arrange them thus. The order of the cards of a pack by suits and seniority in each suit is due to the activity of the card player who arranged them thus. Among examples of regularities of succession produced by men are the notes of a song sung by a singer or the movements of a dancer's body when he performs a dance in time with the accompanying instrument. Hence knowing that some regularities of succession have such a cause, we postulate that they all have. An agent produces the celestial harmony like a man who sings a song. But at this point an obvious difficulty arises. The regularities of succession, such as songs which are produced by men, are produced by agents of comparatively small power, whose bodies we can locate. If an agent is responsible for the operation of the laws of nature, he must act directly on the whole Universe, as we act directly on our bodies. Also he must be of immense power and intelligence compared with men. Hence he can only be somewhat similar to men having, like them, intelligence and freedom of choice, yet unlike them in the degree of these and in not possessing a body. For a body, as I have distinguished it earlier, is a part of the Universe

subject to an agent's direct control, to be contrasted with other parts not thus subject. The fact that we are obliged to postulate on the basis of differences in the effects differences in the causes, men and the god, weakens the argument. How much it weakens it depends on how great these differences are.

Our argument thus proves to be an argument by analogy and to exemplify a pattern common in scientific inference. As are caused by Bs. A*s are similar to As. Therefore—given that there is no more satisfactory explanation of the existence of A*s—they are produced by B*s similar to Bs. B*s are postulated to be similar in all respects to Bs except in so far as shown otherwise, viz. except in so far as the dissimilarities between As and A*s force us to postulate a difference. A well-known scientific example of this type of inference is as follows. Certain pressures (As) on the walls of containers are produced by billiard balls (Bs) with certain motions. Similar pressures (A*s) are produced on the walls of containers which contain not billiard balls but gases. Therefore, since we have no better explanation of the existence of the pressures, gases consist of particles (B*s) similar to billiard balls except in certain respects—e.g. size. By similar arguments scientists have argued for the existence of many unobservables. Such an argument becomes weaker in so far as the properties which we are forced to attribute to the B*s because of the differences between the As and the A*s become different from those of the Bs. Nineteenth-century physicists postulated the existence of an elastic solid, the aether, to account for the propagation of light. But the way in which light was propagated turned out to have such differences (despite the similarities) from the way in which waves in solids are normally propagated that the physicists had to say that if there was an aether it had very many peculiar properties not possessed by normal liquids or solids. Hence they concluded that the argument for its existence was very weak. The proponent of the argument from design stresses the similarities between the regularities of succession produced by man and those which are laws of nature and so between men and the agent which he postulates as responsible for the laws of nature. The opponent of the argument stresses the dissimilarities. The degree of support which the conclusion obtains from the evidence depends on how great the similarities are.

The degree of support for the conclusion of an argument from analogy does not however depend merely on the similarities between the types of evidence but on the degree to which the resulting theory makes explanation of empirical matters more simple and coherent. In the case of the argument from design the conclusion has an enormous simplifying effect on explanations of empirical matters. For if the conclusion is true, if a very powerful non-embodied rational

agent is responsible for the operation of the laws of nature, then normal scientific explanation would prove to be personal explanation. That is, explanation of some phenomenon in terms of the operation of a natural law would ultimately be an explanation in terms of the operation of an agent. Hence (given an initial arrangement of matter) the principles of explanation of phenomena would have been reduced from two to one. It is a basic principle of explanation that we should postulate as few as possible kinds of explanation. To take a more mundane example—if we have as possible alternatives to explain physical phenomena by the operation of two kinds of force, the electromagnetic and the gravitational, and to explain physical phenomena in terms of the operation of only one kind of force, the gravitational, we ought always—*ceteris paribus*—to prefer the latter alternative. Since as we have seen, we are obliged, at any rate at present, to use explanation in terms of the free choice of a rational agent in explaining many empirical phenomena, then if the amount of similarity between the order in the Universe not produced by human agents and that produced by human agents makes it at all plausible to do so, we ought to postulate that an agent is responsible for the former as well as for the latter. So then in so far as regularities of succession produced by the operation of natural laws are similar to those produced by human agents, to postulate that a rational agent is responsible for them would indeed provide a simple unifying and coherent explanation of natural phenomena. What is there against taking this step? Simply that celebrated principle of explanation—*entia non sunt multiplicanda praeter necessitatem*—do not add a god to your ontology unless you have to. The issue turns on whether the evidence constitutes enough of a *necessitas* to compel us to multiply entities. Whether it does depends on how strong is the analogy between the regularities of succession produced by human agents and those produced by the operation of natural laws. I do not propose to assess the strength of the analogy but only to claim that everything turns on it. I claim that the inference from natural laws to a god responsible for them is of a perfectly proper type for inference about matters of fact, and that the only issue is whether the evidence is strong enough to allow us to affirm that it is probable that the conclusion is true.

Now that I have reconstructed the argument from design in what is, I hope, a logically impeccable form, I turn to consider Hume's criticisms of it, and I shall argue that all his criticisms alleging formal fallacies in the argument do not apply to it in the form in which I have stated it. This, we shall see, is largely because the criticisms are bad criticisms of the argument in any form but also in small part because Hume directed his fire against that form of the argument

which used as its premiss the existence of regularities of copresence other than those produced by men, and did not appeal to the operation of regularities of succession. I shall begin by considering one general point which he makes only in the *Enquiry* and then consider in turn all the objections which appear on the pages of the *Dialogues*.

1. The point which appears at the beginning of Hume's discussion of the argument in section XI of the *Enquiry* is a point which reveals the fundamental weakness of Hume's sceptical position. In discussing the argument, Hume puts forward as a general principle that 'when we infer any particular cause from an effect, we must proportion the one to the other, and can never be allowed to ascribe to the cause any qualities but what are exactly sufficient to produce the effect.'[6] Now it is true that Hume uses this principle mainly to show that we are not justified in inferring that the god responsible for the design of the Universe is totally good, omnipotent, and omniscient. I accept, as Cleanthes did, that the argument does not by itself lead to that conclusion. But Hume's use of the principle tends to cast doubt on the validity of the argument in the weaker form in which I am discussing it, for it seems to suggest that although we may conclude that whatever produced the regularity of the world was a regularity-producing object, we cannot go further and conclude that it is an agent who acts by choice, etc., for this would be to suppose more than we need in order to account for the effect. It is, therefore, important to realise that the principle is clearly false on our normal understanding of what are the criteria of inference about empirical matters. For the universal adoption of this celebrated principle would lead to the abandonment of science. Any scientist who told us only that the cause of E had E-producing characteristics would not add an iota to our knowledge. Explanation of matters of fact consists in postulating on reasonable grounds that the cause of an effect has certain characteristics other than those sufficient to produce the effect.

2. Two objections seem to be telescoped in the following passage of the *Dialogues*. 'When two *species* of objects have always been observed to be conjoined together, I can *infer* by custom the existence of one wherever I *see* the existence of the other; and this I call an argument from experience. But how this argument can have place where the objects, as in the present case, are single, individual, without parallel or specific resemblance, may be difficult to explain.'[7] One argument here seems to be that we can only infer from an observed A to an unobserved B when we have frequently observed As and Bs together, and that we cannot infer to a B unless we have actually observed other Bs. Hence we cannot infer from regularities of succession to an unobserved god on the analogy of the connection between observed regularities and human agents, unless we have

observed at other times other gods. This argument, like the first, reveals Hume's inadequate appreciation of scientific method. As we saw in the scientific examples which I cited, a more developed science than Hume knew has taught us that when observed As have a relation R to observed Bs, it is often perfectly reasonable to postulate that observed A*s, similar to As have the same relation to unobserved and unobservable B*s similar to Bs.

3. The other objection which seems to be involved in the above passage is that we cannot reach conclusions about an object which is the only one of its kind, and, as the Universe is such an object, we cannot reach conclusions about the regularities characteristic of it as a whole.[8] But cosmologists are reaching very well-tested scientific conclusions about the Universe as a whole, as are physical anthropologists about the origins of our human race, even though it is the only human race of which we have knowledge and perhaps the only human race there is. The principle quoted in the objections is obviously wrong. There is no space here to analyse its errors in detail but suffice it to point out that it becomes hopelessly confused by ignoring the fact that uniqueness is relative to description. Nothing describable is unique under all descriptions (the Universe is, like the solar system, a number of material bodies distributed in empty space) and everything describable is unique under some description.

4. The next argument which we meet in the *Dialogues* is that the postulated existence of a rational agent who produces the order of the world would itself need explaining. Picturing such an agent as a mind, and a mind as an arrangement of ideas, Hume phrases the objection as follows: 'a mental world or Universe of ideas requires a cause as much as does a material world or Universe of objects."[9] Hume himself provides the obvious answer to this—that it is no objection to explaining X by Y that we cannot explain Y. But then he suggests that the Y in this case, the mind, is just as mysterious as the ordered Universe. Men never 'thought it satisfactory to explain a particular effect by a particular cause which was no more to be accounted for than the effect itself.'[10] On the contrary, scientists have always thought it reasonable to postulate entities merely to explain effects, so long as the postulated entities accounted simply and coherently for the characteristics of the effects. The existence of molecules with their characteristic behaviour was 'no more to be accounted for' than observable phenomena, but the postulation of their existence gave a neat and simple explanation of a whole host of chemical and physical phenomena, and that was the justification for postulating their existence.

5. Next, Hume argues that if we are going to use the analogy of a

human agent we ought to go the whole way and postulate that the god who gives order to the Universe is like men in many other respects. 'Why not become a perfect anthropomorphite? Why not assert the deity or deities to be corporeal, and, to have eyes, a nose, mouths, ears, etc.'[11] The argument from design is as we have seen, an argument by analogy. All analogies break down somewhere; otherwise they would not be analogies. In saying that the relation of A to B is analogous to a relation of A* to a postulated B*, we do not claim that B* is in all respects like B, but only in such respects as to account for the existence of the relation and also in other respects except in so far as we have contrary evidence. For the activity of a god to account for the regularities, he must be free, rational, and very powerful. But it is not necessary that he, like men, should only be able to act on a limited part of the Universe, a body, and by acting on that control the rest of the Universe. And there is good reason to suppose that the god does not operate in this way. For, if his direct control was confined to a part of the Universe, scientific laws outside his control must operate to ensure that his actions have effects in the rest of the Universe. Hence the postulation of the existence of the god would not explain the operations of those laws: yet to explain the operation of all scientific laws was the point of postulating the existence of the god. The hypothesis that the god is not embodied thus explains more and explains more coherently than the hypothesis that he is embodied. Hume's objection would however have weight against an argument from regularities of copresence which did not appeal to the operation of regularities of succession. For one could suppose an embodied god just as well as a disembodied god to have made the animal kingdom and then left it alone, as a man makes a machine, or, like a landscape gardener, to have laid out the galactic clusters. The explanatory force of such an hypothesis is as great as that of the hypothesis that a disembodied god did these things, and argument from analogy would suggest the hypothesis of an embodied god to be more probable. Incidentally, a god whose prior existence was shown by the existence of regularities of copresence might now be dead, but a god whose existence was shown by the present operation of regularities of succession could not be, since the existence of an agent is contemporaneous with the temporal regularities which he produces.

6. Hume urges—why should we not postulate many gods to give order to the Universe, not merely one? 'A great number of men join in building a house or a ship, in rearing a city, in framing a commonwealth, why may not several deities combine in framing a world?'[12] Hume again is aware of the obvious counter-objection to his suggestion—'To multiply causes without necessity is . . . contrary to true

philosophy'.[13] He claims however that the counter-objection does not apply here, because it is an open question whether there is a god with sufficient power to put the whole Universe in order. The principle, however, still applies whether or not we have prior information that a being of sufficient power exists. When postulating entities, postulate as few as possible. Always suppose only one murderer, unless the evidence forces you to suppose a second. If there were more than one deity responsible for the order of the Universe, we should expect to see characteristic marks of the handiwork of different deities in different parts of the Universe, just as we see different kinds of workmanship in the different houses of a city. We should expect to find an inverse square law of gravitation obeyed in one part of the universe, and in another part a law which was just short of being an inverse square law—without the difference being explicable in terms of a more general law. But it is enough to draw this absurd conclusion to see how ridiculous the Humean objection is.

7. Hume argues that there are in the Universe other things than rational agents which bestow order. 'A tree bestows order and organisation on that tree which springs from it, without knowing the order; an animal in the same manner on its offspring.'[14] It would therefore, Hume argues, be equally reasonable if we are arguing from analogy, to suppose the cause of the regularities in the world 'to be something similar or analogous to generation or vegetation.'[15] This suggestion makes perfectly good sense if it is the regularities of copresence which we are attempting to explain. But as analogous processes to explain regularities of succession, generation or vegetation will not do, because they only produce regularities of copresence —and those through the operation of regularities of succession outside their control. The seed only produces the plant because of the continued operation of the laws of biochemistry.

8. The last distinct objection which I can discover in the *Dialogues* is the following. Why should we not suppose, Hume urges, that this ordered Universe is a mere accident among the chance arrangements of eternal matter? In the course of eternity matter arranges itself in all kinds of ways. We just happen to live in a period when it is characterised by order, and mistakenly conclude that matter is always ordered. Now, as Hume phrases this objection, it is directed against an argument from design which uses as its premiss the existence of the regularities of copresence. 'The continual motion of matter . . . in less than infinite transpositions must produce this economy or order, and by its very nature, that order, when once established supports itself for many ages if not to eternity'.[16] Hume thus relies here partly on chance and partly on the operation of regularities of succession (the preservation of order) to account for the existence of regularities

of copresence. In so far as it relies on regularities of succession to explain regularities of copresence, such an argument has, as we saw earlier, some plausibility. But in so far as it relies on chance, it does not, if the amount of order to be accounted for is very striking. An attempt to attribute the operation of regularities of succession to chance would not thus be very plausible. The claim would be that there are no laws of nature which always apply to matter; matter evinces in the course of eternity all kinds of patterns of behaviour, it is just chance that at the moment the states of the Universe are succeeding each other in a regular way. But if we say that it is chance that in 1960 matter is behaving in a regular way, our claim becomes less and less plausible as we find that in 1961 and 1962 and so on it continues to behave in a regular way. An appeal to chance to account for order becomes less and less plausible, the greater the order. We would be justified attributing a typewritten version of collected works of Shakespeare to the activity of monkeys typing eternally on eternal typewriters if we had some evidence of the existence of an infinite quantity of paper randomly covered with type, as well as the collected works. In the absence of any evidence that matter behaved irregularly at other temporal periods, we are not justified in attributing its present regular behaviour to chance.

In addition to the objections which I have stated, the *Dialogues* contain a lengthy presentation of the argument that the existence of evil in the world shows that the god who made it and gave it order is not both totally good and omnipotent. But this does not affect the argument from design which, as Cleanthes admits, does not purport to show that the designer of the Universe does have these characteristics. The eight objections which I have stated are all the distinct objections to the argument from design which I can find in the *Enquiry* and in the *Dialogues*, which claim that in some formal respect the argument does not work. As well as claiming that the argument from design is deficient in some formal respect, Hume makes the point that the analogy of the order produced by men to the other order of the Universe is too remote for us to postulate similar causes.[17] I have argued earlier that if there is a weakness in the argument it is here that it is to be found. The only way to deal with this point would be to start drawing the parallels or stressing the dissimilarities, and these are perhaps tasks more appropriate for the preacher and the poet than for the philosopher. The philosopher will be content to have shown that though perhaps weak, the argument has some force. How much force depends on the strength of the analogy.

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[1]I am most grateful to Christopher Williams and to colleagues at Hull for their helpful criticisms of an earlier version of this paper.

[2]David Hume, *Dialogues Concerning Natural Religion*, ed. H. D. Aiken (New York, 1948), p. 28.

[3]I understand by a 'normal scientific explanation' one conforming to the pattern of deductive or statistical explanation utilised in paradigm empirical sciences such as physics and chemistry, elucidated in recent years by Hempel, Braithwaite, Popper and others. Although there are many uncertain points about scientific explanation, those to which I appeal in the text are accepted by all philosophers of science.

[4]St Thomas Aquinas, *Summa Theologiae*, Ia, 2, 3. Translated by Timothy McDermott, O.P. (London, 1964).

[5]*Ibid., loc. cit.*

[6]David Hume, *An Enquiry Concerning Human Understanding*, ed. L.A. Selby Bigge. Second Edition, 1902, p. 136.

[7]David Hume, *Dialogues Concerning Natural Religion*, ed. H. D. Aiken (New York, 1948), p. 23.

[8]For this argument see also *The Enquiry*, pp. 147f.

[9]*Dialogues*, p. 33.

[10]*Ibid.*, p. 36.

[11]*Ibid.*, p. 40.

[12]*Ibid.*, p. 39.

[13]*Ibid.*, p. 40.

[14]*Ibid.*, p. 50.

[15]*Ibid.*, p. 47.

[16]*Ibid.*, p. 53.

[17]See, for example, *Dialogues*, p. 18 and p. 37.