

A Critique of the Cosmological Argument

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I.

[1] The so-called "cosmological proof" is one of the oldest and most popular arguments for the existence of God. It was forcibly criticized by Hume, Kant, and Mill, but it would be inaccurate to consider the argument dead or even moribund. Catholic philosophers, with hardly any exception, appear to believe that it is as solid and conclusive as ever. Thus Father F. C. Copleston confidently championed it in his Third Programme debate with Bertrand Russell, and in America, where Catholic writers are more sanguine, we are told by a Jesuit professor of physics that "the existence of an intelligent being as the First Cause of the universe can be established by rational scientific inference." [Note 1]

I am absolutely convinced [the same writer continues] that any one who would give the same consideration to that proof (the cosmological argument), as outlined for example in William Brosnan's *God and Reason*, as he would give to a line of argumentation found in the *Physical Review* or the *Proceedings of the Royal Society* would be forced to admit that the cogency of this argument for the existence of God far outstrips that which is found in the reasoning which Chadwick uses to prove the existence of the neutron, which today is accepted as certain as any conclusion in the physical sciences.

[2] Mild theists like the late Professor Dawes Hicks and Dr. [A. C.] Ewing, who concede many of Hume's and Kant's criticisms, nevertheless contend that the argument possesses a certain core of truth. In popular discussions it also crops up again and again -- for example, when believers address atheists with such questions as "You tell me where the universe came from!" Even philosophers who reject the cosmological proof sometimes embody certain of its confusions in the formulation of their own position. In the light of all this, it may be worth while to undertake a fresh examination of the argument with special attention to the fallacies that were not emphasized by the older critics.

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II.

[3] The cosmological proof has taken a number of forms, the most important of which are known as the "causal argument" and "the argument from contingency," respectively. In some writers, in Samuel Clarke for example, they are combined, but it is best to keep them apart as far as possible. The causal argument is the second of the "five ways" of Aquinas and roughly proceeds as follows: we find that the things around us come into being as the result of the activity of other things. These causes are themselves the result of the activity of other things. But such a causal series cannot "go back to infinity." Hence there must be a first member, a member which is not itself caused by any preceding member -- an uncaused or "first" cause.

[4] It has frequently been pointed out that even if this argument were sound it would not establish the existence of God. It would not show that the first cause is all-powerful or all-good or that it is in any sense personal. Somebody believing in the eternity of atoms, or of matter generally, could quite consistently accept the conclusion. Defenders of the causal

argument usually concede this and insist that the argument is not in itself meant to prove the existence of God. Supplementary arguments are required to show that the first cause must have the attributes assigned to the deity. They claim, however, that the argument, if valid, would at least be an important step towards a complete proof of the existence of God.

[5] Does the argument succeed in proving so much as a first cause? This will depend mainly on the soundness of the premise that an infinite series of causes is impossible. Aquinas supports this premise by maintaining that the opposite belief involves a plain absurdity. To suppose that there is an infinite series of causes logically implies that nothing exists now; but we know that plenty of things do exist now; and hence any theory which implies that nothing exists now must be wrong. Let us take some causal series and refer to its members by the letters of the alphabet:

A -> ... X -> Y -> Z

[6] Z stands here for something presently existing, e.g. Margaret Truman. Y represents the cause or part of the cause of Z, say Harry Truman. X designates the cause or part of the cause of Y, say Harry Truman's father, etc. Now, Aquinas reasons, whenever we take away the cause, we also take away the effect: if Harry Truman had never lived, Margaret Truman would never have been born. If Harry Truman's father had never lived, Harry Truman and Margaret Truman would never have been born. If A had never existed, none of the subsequent members of the series would have come into existence. But it is precisely A that the believer in the infinite series is "taking away." For in maintaining that the series is infinite he is denying that it has a first member; he is denying that there is such a thing as a first cause; he is in other words denying the existence of A. Since without A, Z could not have existed, his position implies that Z does not exist now; and that is plainly false.

[7] This argument fails to do justice to the supporter of the infinite series of causes. Aquinas has failed to distinguish between the two statements:

- (1) A did not exist, and
- (2) A is not uncaused.

[8] To say that the series is infinite implies (2), but it does not imply (1). The following parallel may be helpful here: Suppose Captain Spaulding had said, "I am the greatest explorer who ever lived," and somebody replied, "No, you are not." This answer would be denying that the Captain possessed the exalted attribute he had claimed for himself, but it would not be denying his existence. It would not be "taking him away." Similarly, the believer in the infinite series is not "taking A away." He is taking away the privileged status of A; he is taking away its "first causiness." He does not deny the existence of A or of any particular member of the series. He denies that A or anything else is the first member of the series. Since he is not taking A away, he is not taking B away, and thus he is also not taking X, Y, or Z away. His view, then, does not commit him to the absurdity that nothing exists now, or more specifically, that Margaret Truman does not exist now. It may be noted in this connection that a believer in the infinite series is not necessarily denying the existence of supernatural beings. He is merely committed to denying that such a being, if it exists, is uncaused. He is committed to holding that whatever other impressive attributes a supernatural being might possess, the attribute of being a first cause is not among them.

[9] The causal argument is open to several other objections. Thus, even if otherwise valid, the argument, would not prove a single first cause. For there does not seem to be any good ground for supposing that the various causal series in the universe ultimately merge. Hence

even if it is granted that no series of causes can be infinite the possibility of a plurality of first members has not been ruled out. Nor does the argument establish the present existence of the first cause. It does not prove this, since experience clearly shows that an effect may exist long after its cause has been destroyed.

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III.

[10] Many defenders of the causal argument would contend that at least some of these criticisms rest on a misunderstanding. They would probably go further and contend that the argument was not quite fairly stated in the first place -- or at any rate that if it was fair to some of its adherents it was not fair to others. They would in this connection distinguish between two types of causes -- what they call "causes *in fieri*" and what they call "causes *in esse*." A cause *in fieri* is a factor which brought or helped to bring an effect into existence. A cause *in esse* is a factor which "sustains" or helps to sustain the effect "in being." The parents of a human being would be an example of a cause *in fieri*. If somebody puts a book in my hand and I keep holding it up, his putting it there would be the cause *in fieri*, and my holding it would be the cause *in esse* of the book's position. To quote Father [G. H.] Joyce:

If a smith forges a horse-shoe, he is only a cause *in fieri* of the shape given to the iron. That shape persists after his action has ceased. So, too, a builder is a cause *in fieri* of the house which he builds. In both cases the substances employed act as causes *in esse* as regards the continued existence of the effect produced. Iron, in virtue of its natural rigidity, retains in being the shape which it has once received; and, similarly, the materials employed in building retain in being the order and arrangement which constitute them into a house. [Note 2]

[11] Using this distinction, the defender of the argument now reasons in the following way. To say that there is an infinite series of causes *in fieri* does not lead to any absurd conclusions. But Aquinas is concerned only with causes *in esse* and an infinite series of such causes is impossible. In the words of the contemporary American Thomist, R. P. Phillips:

Each member of the series of causes possesses being solely by virtue of the actual present operation of a superior cause. . . . Life is dependent, *inter alia*, on a certain atmospheric pressure, this again on the continual operation of physical forces, whose being and operation depends on the position of the earth in the solar system, which itself must endure relatively unchanged, a state of being which can only be continuously produced by a definite -- if unknown -- constitution of the material universe. This constitution, however, cannot be its own cause. That a thing should cause itself is impossible: for in order that it may cause it is necessary for it to exist, which it cannot do, on the hypothesis, until it has been caused. So it must be in order to cause itself. Thus, not being uncaused nor yet its own cause, it must be caused by another, which produces and preserves it. It is plain, then, that as no member of this series possesses being except in virtue of the actual present operation of a superior cause, if there be no first cause actually operating none of the dependent causes could operate either. We are thus irresistibly led to posit a first efficient cause which, while itself uncaused, shall impart causality to a whole series

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The series of cause which we are considering is not one which stretches back into the past; so that we are not demanding a beginning of the world at some definite moment reckoning back from the present, but an actual cause now operating, to account for the present being of things. [Note 3]

[12] Professor Phillips offers the following parallel to bring out his point:

In a goods train each truck is moved and moves by the action of the one immediately in front of it. If then we suppose the train to be infinite, i.e. that there is no end to it, and so no engine which starts the motion, it is plain that no truck will move. To lengthen it out to infinity will not give it what no member of it possesses of itself, viz, the power of drawing the truck behind it. If then we see any truck in motion we know there must be an end to the series of trucks which gives causality to the whole. [Note 4]

[13] Father Joyce introduces an illustration from Aquinas to explain how the present existence of things may be compatible with an infinite series of causes *in fieri* but not with an infinite series of causes *in esse*:

When a carpenter is at work, the series of efficient causes on which his work depends is necessarily limited. The final effect, e.g. the fastening of a nail is caused by a hammer: the hammer is moved by the arm: and the motion of his arm is determined by the motor-impulses communicated from the nerve centres of the brain. Unless the subordinate causes were limited in number, and were connected with a starting-point of motion, the hammer must remain inert; and the nail will never be driven in. If the series be supposed infinite, no work will ever take place. But if there is question of causes on which the work is not essentially dependent, we cannot draw the same conclusion. We may suppose the carpenter to have broken an infinite number of hammers, and as often to have replaced the broken tool by a fresh one. There is nothing in such a supposition which excludes the driving home of the nail.

[14] The supporter of the infinite series of causes, Joyce also remarks, is

asking us to believe that although each link in a suspended chain is prevented from falling simply because it is attached to the one above it, yet if only the chain be long enough, it will, taken as a whole, need no support, but will hang loose in the air suspended from nothing.

[15] This formulation of the causal argument unquestionably circumvents one of the objections mentioned previously. If Y is the cause *in esse* of an effect, Z, then it must exist as long as Z exists. If the argument were valid in this form it would therefore prove the present and not merely the past existence of a first cause. In this form the argument is, however, less convincing in another respect. To maintain that all "natural" or "phenomenal" objects -- things like tables and mountains and human beings -- require a cause *in fieri* is not implausible, though even here Mill and others have argued that strictly speaking only changes require a causal explanation. It is far from plausible, on the other hand, to claim that all natural objects require a cause *in esse*. It may be granted that the air around us is a cause *in esse* of human life and further that certain gravitational forces are among the causes *in esse* of the air being where it is. But when we come to gravitational forces or, at any rate, to material particles like atoms or electrons it is difficult to see what cause *in esse* they require. To those not already convinced of the need for a supernatural First Cause

some of the remarks by Professor Phillips in this connection appear merely dogmatic and question-begging. Most people would grant that such particles as atoms did not cause themselves, since, as Professor Phillips observes, they would in that event have had to exist before they began existing. It is not at all evident, however, that these particles cannot be uncaused. Professor Phillips and all other supporters of the causal argument immediately proceed to claim that there is something else which needs no cause *in esse*. They themselves admit thus, that there is nothing self-evident about the proposition that everything must have a cause *in esse*. Their entire procedure here lends substance to Schopenhauer's gibe that supporters of the cosmological argument treat the law of universal causation like "a hired cab which we dismiss when we have reached our destination."

[16] But waiving this and all similar objections, the restatement of the argument in terms of causes *in esse* in no way avoids the main difficulty which was previously mentioned. A believer in the infinite series would insist that his position was just as much misrepresented now as before. He is no more removing the member of the series which is supposed to be the first cause *in esse* than he was removing the member which had been declared to be the first cause *in fieri*. He is again merely denying a privileged status to it. He is not denying the reality of the cause *in esse* labelled "A." He is not even necessarily denying that it possesses supernatural attributes. He is again merely taking away its "first causiness."

[17] The advocates of the causal argument in either form seem to confuse an infinite series with one which is long but finite. If a book, Z, is to remain in its position, say 100 miles up in the air, there must be another object, say another book, Y, underneath it to serve as its support. If Y is to remain where it is, it will need another support, X, beneath it. Suppose that this series of supports, one below the other, continues for a long time, but eventually, say after 100,000 members, comes to a first book which is not resting on any other book or indeed on any other support. In that event the whole collection would come crashing down. What we seem to need is a first member of the series, a first support (such as the earth) which does not need another member as its support, which in other words is "self-supporting."

[18] This is evidently the sort of picture that supporters of the First Cause argument have before their minds when they rule out the possibility of an infinite series. But such a picture is not a fair representation of the theory of the infinite series. A finite series of books would indeed come crashing down, since the first or lowest member would not have a predecessor on which it could be supported. If the series, however, were infinite this would not be the case. In that event every member would have a predecessor to support itself on and there would be no crash. That is to say: a crash can be avoided either by a finite series with a first self-supporting member or by an infinite series. Similarly, the present existence of motion is equally compatible with the theory of a first unmoved mover and with the theory of an infinite series of moving objects; and the present existence of causal activity is compatible with the theory of a first cause *in esse* as much as with the theory of an infinite series of such causes.

[19] The illustrations given by Joyce and Phillips are hardly to the point. It is true that a carpenter would not, in a finite time-span, succeed in driving in a nail if he had to carry out an infinite number of movements. For that matter, he would not accomplish this goal in a finite time if he broke an infinite number of hammers. However, to make the illustrations relevant we must suppose that he has infinite time at his disposal. In that case he would succeed in driving in the nail even if he required an infinite number of movements for this purpose. As for the goods train, it may be granted that the trucks do not move unless the

train has an engine. But this illustration is totally irrelevant as it stands. A relevant illustration would be that of engines, each moved by the one in front of it. Such a train would move if it were infinite. For every member of this series there would be one in front capable of drawing it along. The advocate of the infinite series of causes does not, as the original illustration suggests, believe in a series whose members are not really causally connected with one another. In the series he believes in every member is genuinely the cause of the one that follows it.

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IV.

[20] No staunch defender of the cosmological argument would give up at this stage. Even if there were an infinite series of causes *in fieri* or *in esse*, he would contend, this still would not do away with the need for an ultimate, a first cause. As Father Copleston put it in his debate with Bertrand Russell:

Every object has a phenomenal cause, if you insist on the infinity of the series. But the series of phenomenal causes is an insufficient explanation of the series. Therefore, the series has not a phenomenal cause, but a transcendent cause ...

An infinite series of contingent beings will be, to my way of thinking, as unable to cause itself as one contingent being.

[21] The demand to find the cause of the series as a whole rests on the erroneous assumption that the series is something over and above the members of which it is composed. It is tempting to suppose this, at least by implication, because the word "series" is a noun like "dog" or "man." Like the expression "this dog" or "this man" the phrase "this series" is easily taken to designate an individual object. But reflection shows this to be an error. If we have explained the individual members there is nothing additional left to be explained. Supposing I see a group of five Eskimos standing on the corner of Sixth Avenue and 50th Street and I wish to explain why the group came to New York. Investigation reveals the following stories:

- Eskimo No. 1 did not enjoy the extreme cold in the polar region and decided to move to a warmer climate.
- No. 2 is the husband of Eskimo No. 1. He loves her dearly and did not wish to live without her.
- No. 3 is the son of Eskimos 1 and 2. He is too small and too weak to oppose his parents.
- No. 4 saw an advertisement in the New York Times for an Eskimo to appear on television.
- No. 5 is a private detective engaged by the Pinkerton Agency to keep an eye on Eskimo No. 4.

[22] Let us assume that we have now explained in the case of each of the five Eskimos why he or she is in New York. Somebody then asks: "All right, but what about the group as a whole; why is it in New York?" This would plainly be an absurd question. There is no group over and above the five members, and if we have explained why each of the five members is in New York we have ipso facto explained why the group is there. It is just as absurd to ask for the cause of the series as a whole as distinct from asking for the causes of individual members.

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V.

[23] It is necessary to add a few words about the proper way of formulating the position of those who reject the main premise of the cosmological argument, in either of the forms we have considered. It is sometimes maintained in this connection that in order to reach a "self-existing" entity it is not necessary to go beyond the universe: the universe itself (or "Nature") is "self-existing." And this in turn is sometimes expanded into the statement that while all individual things "within" the universe are caused, the universe itself is uncaused. Statements of this kind are found in Buchner, Bradlaugh, Haeckel, and other free-thinkers of the nineteenth and early twentieth century. Sometimes the assertion that the universe is "self-existing" is elaborated to mean that it is the "necessary being." Some eighteenth-century unbelievers, apparently accepting the view that there is a necessary being, asked why Nature or the material universe could not fill the bill as well or better than God.

[24] "Why," asks one of the characters in Hume's Dialogues, "may not the material universe be the necessarily existent Being? . . . We dare not affirm that we know all the qualities of matter; and for aught we can determine, it may contain some qualities, which, were they known, would make its non-existence appear as great a contradiction as that twice two is five."

[25] Similar remarks can be found in Holbach and several of the Encyclopedists.

[26] The former of these formulations immediately invites the question why the universe, alone of all "things," is exempted from the universal sway of causation. "The strong point of the cosmological argument," writes Dr. Ewing, "is that after all it does remain incredible that the physical universe should just have happened . . . It calls out for some further explanation of some kind." The latter formulation is exposed to the criticism that there is nothing any more necessary about the existence of the universe or Nature as a whole than about any particular thing within the universe.

[27] I hope some of the earlier discussions in this article have made it clear that in rejecting the cosmological argument one is not committed to either of these propositions. If I reject the view that there is a supernatural first cause, I am not thereby committed to the proposition that there is a natural first cause, and even less to the proposition that a mysterious "thing" called "the universe" qualifies for this title. I may hold that there is no "universe" over and above individual things of various sorts; and, accepting the causal principle, I may proceed to assert that all these things are caused by other things, and these other things by yet other things, and so on, ad infinitum. In this way no arbitrary exception is made to the principle of causation. Similarly, if I reject the assertion that God is a "necessary being," I am not committed to the view that the universe is such an entity. I may hold that it does not make sense to speak of anything as a "necessary being" and that even if there were such a thing as the universe it could not be properly considered a necessary being.

[28] However, in saying that nothing is uncaused or that there is no necessary being, one is not committed to the view that everything, or for that matter anything, is merely a "brute fact." Dr. Ewing laments that "the usual modern philosophical views opposed to theism do not try to give any rational explanation of the world at all, but just take it as a brute fact not to be explained." They thus fail to "rationalize" the universe. Theism, he concedes, cannot completely rationalize things either since it does not show "how God can be his own cause or how it is that he does not need a cause." Now, if one means by "brute fact" something for which there exists no explanation (as distinct from something for which no explanation is in our possession), then the theists have at least one brute fact on their hands, namely God. Those who adopt Buchner's formulation also have one brute fact on their hands, namely "the universe." Only the position I have been supporting dispenses with brute facts altogether. I don't know if this is any special virtue, but the defenders of the cosmological argument seem to think so.

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Notes

1. J. S. O'Connor, "A Scientific Approach to Religion," *The Scientific Monthly* (1940), p. 369; my italics.
2. *The Principles of Natural Theology*, p. 58.
3. *Modern Thomistic Philosophy*, Vol. II, pp. 284-85.
4. *Ibid.*, p. 278.