

# THE GREAT IDEAS ONLINE

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. . . being made merely in the image of God, but not otherwise resembling him enough to be mistaken by anybody but a very near-sighted person. —Mark Twain



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## **NATURAL THEOLOGY, CHANCE, AND GOD \***

*by Mortimer Adler*

Part II of II

### **3. The central error in modern Christian apologetics**

In the domain of theology, there are only three alternative categories of work: philosophical theology, dogmatic theology, and Christian or Jewish or Muslim apologetics. What has very recently come to be called “natural theology” is not a fourth alternative, for it is nothing but Christian apologetics.

In the light of what has just been said, one exception must be noted, a great Christian theologian, Aquinas was also a brilliant Aristotelian philosopher. In the *Summa Theologica* of Aquinas there are many philosophical insights that he might not have formulated had he been merely a pagan disciple of Aristotle. However, these insights are not derived from or dependent on any article of Christian faith. For that reason they can be regarded as contributions to philosophical theology, even though they are not the work of a pagan mind.

I wish to call attention to one such insights because it is pivotal to the proof of God’s existence as that is formulated in purely philosophical theology. It is the insight that being or existence is the proper effort of God. The italicized word “proper” signifies that God and God alone, is the cause of being or existence. In the causation of being, he is not the first cause, because there are no second or other causes. All other causes, all of them natural causes, are causes of becoming or perishing. Only what is being itself can cause existent entities to exist. Such causation is supernatural. It does not occur in nature.

When God is understood not only as the Supreme Being but also as the creator (or exnihlator) of the cosmos, he must also be understood as a supernatural being and as a supernatural cause.

This involves a philosophical analysis of causation that makes a sharp distinction between the causation of being and the causation of becoming. That goes along with the differentiation between the operation of final causes in the processes of becoming that are productions of human art and the nonoperation of such causes in the phenomena of becoming that are natural processes.

The insight about God as the sole cause of being is unlike the proposition that the perfection of God as the Supreme Being includes moral as well as ontological perfection. Anselm's purely philosophical argument is that the Supreme Being—a being than which no greater can be thought—entails all the ontological perfections. Only a person of Christian (or Jewish or Muslim) faith would add God's moral perfection. That additional affirmation is an article of religious faith in a loving and benevolent God. It is totally beyond the reach of reason or purely philosophical thought.

If we put together these two contributions to purely philosophical theology made by Anselm and Aquinas we should be able to see the radical difference between the God of Aristotle (only a prime mover and only a final cause) and the God of Anselm and Aquinas (a creator ex nihilo of the cosmos). Understanding that difference should help us to realize the inappropriateness of using Aristotelian arguments in the five ways advanced by Aquinas in Question 2, Article 3, of his *Summa Theologica* (GBWW 1: 19, 12-14; 11: 19, 12-14).

Any logically valid argument for the existence of God must choose one of two assumptions: either the world and time had a beginning, or they always existed and never came into being out of nothing. Neither of these

two assumptions can be proved true on rational grounds, as Aquinas and later Kant argued. The first assumption is an article of Jewish, Christian, and Muslim faith. But to make that assumption in purely philosophical theology begs the question, for if we assume that the cosmos and time came into being out of nothing, we are also assuming that it was created ex nihilo, and that God as creator (exnihilator) exists, which was the proposition to be proved. Hence, to avoid begging the question, any purely philosophical proof of God's existence must assume that the world and time always existed and exists everlastingly. In other words, only if we assume that the world and time never began or came into being out of nothing, do we have a genuine problem of proving God's existence as the preservative, not originative, cause of the existence of the cosmos at every moment of its existence.

The chief error that I am concerned to expose in many works of modern Christian apologetics is the error of supposing that in order to defend Christian faith they must show that there is nothing contingent in cosmic processes and in biology and evolution; in other words, that nothing happens by chance or coincidence. Instead it is thought necessary to assert that everything happens according to a fully worked out design in the mind of God.

The underlying root of this error is an inadequate analysis of the processes of becoming. (1) If God created the cosmos, that is exnihilation—bringing the cosmos into existence out of nothing. (2) Biologic; procreation is a mode of becoming, one in which no cause of being operates. (3) Artistic production, or human making, is unlike both exnihilation and biological procreation.

When this threefold differentiation is fully understood, it will be seen that Bishop Paley's profound error was to regard God's creation of the cosmos as like a watchmaker's production of a timepiece. That is not only

a false analogy but grossly anthropomorphic. The cosmos is not work of art on God's part any more than it is a work of procreation.

On the contrary, the cosmos is something other than the mechanist of a clock, all of whose motions are necessitated by the design impose upon it by its human artificer. God is not the divine artificer, and the cosmos is not a work of divine art. Moreover, if nothing happened by chance and there was nothing contingent in the cosmos, no valid proof of God's existence could be philosophically constructed. I will explain why this is so in the next section.

#### **4. A sound a posteriori argument: from a radically contingent cosmos to an exnihulating deity**

Concepts are abstracted from sense-experience. They are all empirically derived. Hence we cannot have a concept of God. But not all the notions with which the intellect operates in thinking are concepts. There are, in addition, theoretical constructs, fictions of the mind that in the Middle Ages were called *entia rationis*. As in physics black holes and neutrinos are theoretical constructs, so in theology God is a theoretical construct.

Since all concepts are empirically derived, they do not raise question about the existence of their objects. The concept of dog or cow abstracted from perceptual instances of dogs and cows, and so we do not ask whether what we have in mind when we use the word dog or cow actually exists.

But when we are dealing with theoretical constructs in mathematics, physics or in theology, the question of existence is inescapable. Do black holes really exist? Do neutrinos? Does that which we have in mind when we use the word God exist in reality?

Anselm mistakenly thought that because we cannot

think of God as nonexistent while thinking of him as the Supreme Being, therefore God exists. The non sequitur is obvious. Anselm has instructed us about how to formulate a theoretical construct for the proper name “God”, but the question still remains whether what we have in mind with this theoretical construct is only a fiction of the mind or a really existent being—an *ens reale*, not just an *ens rationis*. On the other hand, unicorn is a fiction of the mind that, so far as all the evidence goes, just that. There are no perceptual instances of unicorns and no proof that they exist, even if not perceived.

With respect to theoretical constructs, the rule of inference by William of Ockham operates in theology in the same way that it operates in physical science. Ockham’s rule—and razor—is that unless the existence of what is signified by our theoretical constructs is indispensable to explain observed phenomena or existences, the theoretical construct being thus tested is merely a fiction of the mind. Ockham’s razor cuts out all unnecessary entities. It prevents us from committing the fallacy of reification—of adding to the world of real existences by positing entities that we have no reason to think exist. Ockham’s rule is a principle of parsimony.

When we have the theoretical construct of God in our mind, even a God that is thought of as necessarily existing, we have to give reasons for positing the existence of the entity named. Since we cannot affirm the existence of God *a priori* by saying that God’s existence is self-evident because we must think of the Supreme Being as necessarily existing, only an *a posteriori* argument for God’s existence is valid. It is reasoning from the nature of the cosmos to the existence of God. Obeying Ockham’s rule, we can posit the real existence of God, of whom we have a theoretical construct in our mind, because the existence of God is necessary to explain the existence of the cosmos.

The only valid argument for the existence of God is thus the inverse of the a priori ontological argument. It is reasoning from the nature of the cosmos to God, not from the nature of God to God's existence. The crucial point in this a posteriori argument is the radical contingency of the cosmos. Let me now explain how that is different from merely superficial contingency.

We usually think of the physical entities that come into being at one time and perish at another as contingent beings. If they existed necessarily, they could not come into being at one time and perish at another. But they are only superficially contingent. They do not come into being out of nothing, and when they perish, they do not pass into nothingness.

Biological progenitors cause the becoming of their progeny. They can cease to be and cease to function as causes while their progeny continue in being. When their progeny die as the result of the counteracting causes that operate against the inertia of being that has kept them alive, their perishing is merely a transformation of their matter—dust and ashes and skeletal bones instead of a living organism. The living organism has been replaced by matter in other forms, not by sheer nothingness. In contrast to such superficial contingency, we find radical contingency in the cosmos as a whole. Unless the cosmos were caused to exist at every moment of its existence, it would be replaced by the absolute void of nothingness.

How do we know that the cosmos is radically contingent? We know that all living organisms are superficially contingent because we know that they come into being at one time and perish at another. As pointed out earlier, in order to avoid begging the question, we must assume that the cosmos has everlasting existence, without a beginning or an end in time. What reason, then, do we have for thinking that this everlasting cosmos is radically contingent and in need of a cause of its existence?

Were this everlasting cosmos a necessary rather than a radically contingent existence—if it were incapable of not existing—we would have no ground for positing the existence of an exnihilitating deity as the cause of its existence. Only if the cosmos is capable, at every moment of its existence, of not existing at all, would we have to posit the existence of a cause of its being, a cause that exnihilates it or preserves it from passing into nothingness.

The three crucial premises in the valid a posteriori argument for God's existence are as follows:

(1) God and God alone causes being or existence. All natural cause are causes of becoming or perishing.

(2) What does not exist necessarily and does not have the ground of its existence in itself needs a cause of its existence in another being at every moment of its existence.

(3) Whatever is capable of being otherwise (because it involves event: that happen by chance or free choice) is also capable of not being at all and so needs a cause of its existence at every moment of its existence.

In the light of Ockham's rule, we are, therefore, justified in positing (or affirming) the existence of a supernatural Supreme Being as the exnihilitating cause of the existence of the cosmos, which would cease to exist if it were not thus creatively caused.

Still one question remains: What grounds do we have for thinking that the cosmos could be otherwise—that its processes involve chance or coincidence? That is a question of fact, which we will deal with in the next section. Suffice it to say here that if we find an affirmative answer to that question tenable, then the a posteriori argument is grounded in facts about the



cosmos.

That school in modern Christian apologetics, which follows Bishop Paley in viewing the cosmos as if it were a work of art designed by a divine artificer, denies that anything happens by chance in the cosmos and so denies its radical contingency.

## **5. Creation, contingency, and chance**

Whether or not contingency and chance exist in the cosmos is a question of scientifically discoverable fact. It is not a question to be answered by arguing that chance and contingency in the cosmos are incompatible with Christian faith in a morally perfect God who created the cosmos as an act of benevolent love.

Before we turn to the answer given by twentieth-century natural science, let us consider the relevance of certain questions about creation that were asked in the Middle Ages in sacred dogmatic theology. In his *Summa Theologica* Thomas Aquinas asks the question whether God could have created other universes than this particular cosmos, and even whether he could have created a better one than this. Aquinas rejects a negative answer to the first question on the ground that a negative answer would entail the denial of God's freedom in the act of creation. Creation is an act of God's free choice, not something necessitated by God's nature.

That this actual cosmos is only one of a number of possible universes is a mark of its radical contingency, if it is true that whatever can be otherwise is capable of not being at all. The truth of that proposition is not self-evident, but I think it is true beyond a reasonable doubt, if not beyond the shadow of a doubt.

The Christian faith that God created man in his own image by giving human beings immaterial intellects and, with that, also free will is a further indication that in the

course of human affairs the totally unpredictable is present. The power of free choice is the power to choose otherwise at any moment, no matter how one does in fact choose at that moment; it is also the power not to choose at all. The course of human history would be quite otherwise if human beings, exercising free will, had chosen it to be so.

The paleontological discoveries of Harvard professor Stephen Jay Gould provide us with ample scientific evidence of chance at work in the course of biological evolution. Twentieth-century particle physics and its cosmology, as influenced by the general theory of relativity, provide similar evidence of chance at work in the eighteen billion years since the Big Bang; and the Big Bang itself, which is not the exnihilation of the cosmos, is itself an unpredictable event.

The doctrine of the miscalled “natural theology,” beginning with Paley and coming down to our own day, represents poorly conceived Christian apologetics that has its intellectual background in Newtonian classical mechanics. It is inconsistent with the scientific facts discovered, and scientific theories formulated, in the twentieth century.

I have earlier referred to a book of Polkinghorne, *Science and Creation* (1989). It is a work of Christian apologetics, not a work in pagan philosophical theology. It is written by a person of Christian faith who is also a mathematical physicist. Polkinghorne is not alone. His book includes a bibliography of other works in twentieth-century Christian apologetics that tend to confirm the views that he himself advances.

For Polkinghorne, there is no incompatibility whatsoever between the presence of chance, randomness, and contingency in the cosmos and God’s creation of it. Let me quote a few passages from his book.

The way that an element of randomness is seen to create openness to the future assigns a more positive role to chance in the process of the world than is acknowledged by those like Monod who see its operation as destructive of all significance....

This chapter has portrayed a world whose processes can assemble complexity within a decaying environment and where random events can prove to be the originators of pattern. Such a world is a world of orderliness but not of clockwork regularity, of potentiality without predictability, endowed with an assurance of development but with a certain openness as to its actual form. It is inevitably a world with ragged edges, where order and disorder interlace each other and where the exploration of possibility by chance will lead not only to the evolution of systems of increasing complexity, endowed with new possibilities, but also to the evolution of systems imperfectly formed and malfunctioning. The former superior entities will earn the epithet “successful” by their survival in the competition for constituent resources; the latter inferior entities will disappear from the evolving scene. It is just such a world that we live in....

In other words, God chose a world in which chance has a role to play, thereby both being responsible for the consequences accruing and also accepting limitation of his power to control...

Yet the order and disorder which intertwine in the process of the world show that the universe upheld by the divine Word is not a clear cold cosmos whose history is the inevitable unfolding of an invulnerable plan. It is a world kept in being by the divine juggler rather than by the divine Structural Engineer, a world whose precarious process speaks of the free gift of Love. We are accustomed to

think of the vulnerability accepted by the Word in the incarnation, a vulnerability potentially present in the baby lying in the manger and realized to the full in the man hanging on the cross. What is there revealed of the divine in the human life of Jesus is also to be discerned in the cosmic story of creation.

To this I would only add that Polkinghorne explicitly rejects what he regards as the outmoded as well as erroneous Christian apologetics of Paley and the anthropomorphic image of God as analogous to a watchmaker, producing a mechanical work of art that is intelligible to an extent that the cosmos known to twentieth-century physics and biology is not.

## **6. Theoretical physics and philosophical theology**

A few Christian apologists in the twentieth-century, such as Polkinghorne, are knowledgeable in the field of twentieth-century theoretical physics. But, with the possible exception of Heisenberg, few if any twentieth-century theoretical physicists manifest any competence in philosophy and appear to be totally ignorant of philosophical theology.

One would not expect them to be persons of Christian faith or apologists for Christianity, but one would expect them to be silent about matters beyond their ken. They should at least be aware of the limitations of theoretical physics and not make unfounded remarks on the basis of their knowledge of that limited subject.

Einstein was a great theoretical physicist and great human being, but not a wise man. The possession of wisdom depends to some extent on clear philosophical thought. Einstein once said that what was not measurable by physicists was of no interest to them, or had no meaning for them; he also said (in his attack on quantum indeterminacy) that God, a being not measurable by physicists, does not throw dice. He said that he did not

believe in a “personal” God, using the word personal as if it meant the same thing as anthropomorphic. Man is a person because he is in the image of God, not the reverse. In theology, the word person signifies a being with intellect and free will.

Hawking is a great theoretical physicist, both in quantum mechanics and in cosmology. But his philosophical naiveté and his ignorance of philosophical theology fills his *A Brief History of Time* with unfounded assertions, verging on impudence. Where Einstein had said that what is not measurable by physicists is of no interest to them, Hawking flatly asserts that what is not measurable by physicists does not exist—has no reality whatsoever.

With respect to time, that amounts to the denial of psychological time which is not measurable by physicists, and also to everlasting time—time before the Big Bang—which physics cannot measure. Hawking does not know that both Aquinas and Kant had shown that we cannot rationally establish that time is either finite or infinite. When he treats the Big Bang as if it were the beginning of time, not just the beginning of measurable time, he shows his ignorance of God as cause of being and of creation as an act of exnihilation, which the Big Bang is not.

Furthermore, Hawking’s book is filled with references to God and to the mind of God, both not measurable by physicists, and so nonexistent by Hawking’s own assertion about what has and what lacks reality. To discourse seriously about a nonexistent being without explicitly confessing that one is being fanciful or poetical is, in my judgment, impudence on the author’s part.

Most theoretical physicists are guilty of the same fault when, in quantum theory, they fail to distinguish between a measurable indeterminacy and the epistemic

indeterminability of what is in reality determinate. The indeterminacy discovered by physical measurements of subatomic phenomena simply tells us that we cannot know the definite position and velocity of an electron at one instant of time. It does not tell us that the electron, at any instant of time, does not have a definite position and velocity. They, too, convert what is not measurable by them into, the unreal and the nonexistent. The definite position and velocity of the electron at any moment of time is not measurable because of the intrusive effect of the measurements themselves, though this effect may not itself be discernible.

In view of the ever-increasing specialization in all fields of learning and therefore in higher education, we probably cannot look forward to a future in which theoretical physicists will also be persons who have sufficient grounding in philosophy and in philosophical theology, in order to avoid their making unfounded assertions about matters beyond their field of specialization. But they should at least be aware of their limited knowledge and be silent about matters beyond it.

On the other hand, we should also expect Christian apologists in the twentieth century to be aware of what has been discovered in this century about the physical cosmos and about biological evolution. Only thus will they avoid the errors of their predecessors in modern times who lived in a universe that was described by Newtonian classical mechanics, which we now realize is insufficient to describe the universe we have since been able to discern.

\* From The Great Ideas Today, Encyclopaedia Britannica (1992)

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**As always, we welcome your comments.**

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