God, Creation and Mr Davies

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I INTRODUCTION

'In my opinion science offers a surer path to God than religion,' declares P. C. W. Davies in his recent, popular God and the New Physics ([1983], p. ix). This is a bold claim in a day in which the conventional wisdom dictates that theology and science are two mutually irrelevant disciplines, whose respective findings have no implications for those of the other. As one who has tried to cross the line from the other direction, I can only agree with Davies, though perhaps for different reasons, that no serious religious thinker can ignore the tenets of the so-called new physics. The philosopher of religion who is a theist ought to adhere to a synoptic world view which embraces the universe as the object of empirical study, and he should not be surprised if theological doctrines like creatio ex nihilo come to be confirmed by the empirical sciences. By the same token, the scientist, at least insofar as he chooses to reflect philosophically, ought to be open to the metaphysical implications of his theories and not to wear the blinders of a narrow scientism which disdains such considerations.

The risk of engaging in such interdisciplinary synthesis is, of course, making blunders in the field with which one is less familiar. Davies often seeks to correct the theologian's concept of God and the universe on the basis of current physical theory. Such admonitions are welcome; but parity requires that when Davies himself enters upon the province of the philosopher of religion then he, too, must be patient of correction. Now whatever other merits Davies's book may have, it seems to me that correction is in order with regard, at least, to his discussion of the cosmological argument for a temporal first cause of the universe. For Davies's critique of that argument seems to be based at several points on misunderstandings which appear to vitiate his objections.

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2 DAVIES'S CRITIQUE OF THE COSMOLOGICAL ARGUMENT

The argument, which Davies admits assumes many different versions and is susceptible to a variety of subtle interpretations, can nonetheless, he thinks, be boiled down to the following reasoning: 'Every event . . . requires a cause. There cannot be an infinite chain of causes, so there must be a first cause of everything. This cause is God' (p. 33). Davies argues against each of the two premisses, as well as the coherence of God's being the first cause of the universe. Let us examine his objections to each.

3 OBJECTIONS TO THE SECOND PREMISE

Surprisingly, Davies's main attack comes not against the seemingly more vulnerable second premiss, but against the first. Against the second premiss he lodges two objections: (i) so long as each individual member of the succession is explained, the succession is ipso facto explained, and (ii) the concept of the entire universe of existing things is self-referentially paradoxical. Unfortunately, both of these objections seem clearly to be based on misunderstandings. With regard to the first objection, Davies appears to conflate three types of cosmological argument: the kalam argument for a temporally first cause, the Thomist argument for an essentially ordered first cause, and the Leibnizian argument for a sufficient reason of the universe.¹ Only the proponents of the kalam argument contended against the possibility of an infinite temporal regress of causes, and they on the basis of the various absurdities this would entail. But Davies mistakenly turns to Aquinas's argument against an essentially ordered infinite regress of causes in the Second Way in order to expound the reasoning underlying the second premiss. Not only is Thomas's argument irrelevant to the question of whether an infinite temporal regress can exist, but Davies muddies the waters further by interpreting Aquinas along the lines of the Leibnizian argument, citing Samuel Clarke to prove that while an infinite chain of causes and effects could exist, still it requires some explanation. He then turns to the much-quoted argument from Hume to point out that if each member of an infinite succession is explained by a prior member, then the whole collection needs no cause. But all this is clearly beside the point insofar as the possibility of an infinite temporal regress is concerned.

The remaining objection to the second premiss builds on the misconceptions of the first. Appealing to Russell's Paradox in set theory, Davies claims that the notion of the entire universe of existing things is likewise paradoxical. But his reasoning is not at all clear and appears to be based on a misreading of Clarke, who had asserted that if God does not exist, then the universe contains all things that exist. But this is only paradoxical if one adds that the universe is a thing. The theist would not, in any case, as Davies

¹ See my typology of these three distinct forms in William Lane Craig [1980], pp. 282–95.
intimates, hold that God is the cause of all things, since God is Himself a thing and He does not cause Himself. But no incoherence seems involved in holding God to be the cause of all things in the universe. At any rate, the temporal first cause argument does not commit one even to this, except insofar as all things are derived from the first effect. So Davies’s objection seems to be irrelevant.

4 OBJECTIONS TO THE FIRST PREMIS

As for the first premiss of the cosmological argument for a temporal first cause, Davies has failed to give it its most persuasive formulation. In the Arabic and subsequent versions of the argument, the first premiss was that whatever begins to exist has a cause. *Ex nihilo, nihil fit* would appear to be something of a metaphysical first principle. Davies himself on occasion so construes the first premiss, rephrasing it as ‘every object that has come into existence has been produced by something’ (p. 33). This question—Can something come out of nothing?—is one to which Davies repeatedly returns throughout the book. He explains that the standard Big Bang model of the universe requires not merely that all matter and energy came into existence at the Big Bang, but that space and time themselves came into being at that moment (pp. 16–18). Davies is exercised to show that it is physically possible that the universe originated uncaused out of nothing, spacetime springing spontaneously into being in accordance with a theory of quantum gravity.

Davies attempts to render this remarkable thesis more plausible by appealing to the spontaneous production of subatomic particles in a vacuum fluctuation. In this phenomenon, a gamma ray converts spontaneously into an electron and a positron; similarly, if two such particles collide, they convert into pure energy. Clearly, however, this quantum phenomenon, even if an exception to the principle that every event has a cause, provides no analogy to something’s coming into being out of nothing. Though physicists speak of this as particle pair creation and annihilation, such terms are philosophically misleading, for all that actually occurs is conversion of energy into matter or vice versa. As Davies admits, ‘The processes described here do not represent the creation of matter out of nothing, but the conversion of pre-existing energy into material form’ (p. 31).

In order to strengthen the analogy, however, Davies entertains the possibility that the universe could have been created from a state of zero energy. The positive energy associated with motion or mass could be exactly counterbalanced by the negative energy of attraction, such as that due to certain gravitational or electromagnetic fields, so that on balance the total energy is zero. Unfortunately, Davies’s examples only serve to underscore that *ex nihilo* creation is not at issue here: in an intense electric field surrounding an atomic nucleus no new input of energy is required for spontaneous pair production when the negative energy generated by the
new pair of particles offsets the energy of their masses; or again, in the
gravitational field associated with a black hole the energy locked up in the
curved space can be converted into particle pairs. The examples only show
that in such cases no new influx of energy is required in addition to the
energy already present.

But in his attempt to push as close to spontaneous becoming *ex nihilo* as
possible, Davies hypothesizes that all the matter in the universe sprang into
being without any new input of energy (its total energy being zero) out of
empty space by a quantum conversion of the energy of curved space into
matter on the analogy of particle pair production. Now apart from other
difficulties that might be raised concerning this suggestion, it is important
that it be realized that Davies’s hypothesis necessarily presupposes an
absolutistic view of space, according to which space is a sort of container
existing independently of existents in it. For on a relational view of space, an
empty space is a chimera, since space is a relational nexus established by
physical existents. For the relationalist, mathematical models of empty
spacetimes, whether these be Euclidean or non-Euclidean, are just that:
mere conceptual constructs having no ontological counterparts. Now while
it is true that the General Theory of Relativity does posit a slight curvature
of spacetime not due to the presence of matter, it is not clear whether this is a
residual defect in the theory or a vindication of absolutism.¹ Unfortunately,
Davies takes no cognisance of these opposing views of space, but seems to
presuppose uncritically an absolutistic view. As one who has philosophical
sympathies for a relational view of space, however, I find myself sceptical of
Davies’s picture of an empty, curved spacetime which then spontaneously
produces the material universe; this would appear to be a mathematical
model only which has no correspondence with reality. At the very least, we
can say that Davies has moved from a mathematical model to ontology
without justification or critical reflection.

However this may be, the point remains that on an absolutistic view of
space, empty space is far from nothing; it is a concrete thing with a variety of
properties. Davies recognizes that his hypothesis still leaves unexplained the
origin of the curved spacetime itself. He admits that it explains nothing to
say the singularity created spacetime, for the singularity is not itself a thing,
but simply the boundary of spacetime. Does the origin of spacetime
therefore require a supernatural cause? In order to avoid that conclusion,
Davies presents a scenario which, he claims, ‘should not be taken too
seriously’, but which nevertheless seems to have a powerful attraction for

¹ See discussion in Adolf Grünbaum [1957]; an enlarged excerpt is reprinted in J. J. C. Smart
(ed.): *Problems of Space and Time*, Problems of Philosophy Series (New York: Macmillan Co.,
1964), pp. 313–17. Despite his objection, it is not clear from Grünbaum’s discussion that the
relationist could not eliminate the last vestige of absolutism from the General Theory by
laying down the finitude of space as a boundary condition governing the solution of the
unmodified field equations of the Theory. The relationalist might view such an assumption as
a metaphysical necessity; in any case, such a solution shows that a relational General Theory
is possible.
Davies (p. 214). He has reference to a quantum theory of gravity, according
to which spacetime itself could spring uncaused into being out of absolutely
nothing. While admitting that there is ‘still no satisfactory theory of
quantum gravity’, such a theory ‘would allow spacetime to be created and
destroyed spontaneously and uncaused in the same way that particles are
created and destroyed spontaneously and uncaused. The theory would
entail a certain mathematically determined probability that, for instance, a
blob of space would appear where none existed before. Thus, spacetime
could pop out of nothingness as the result of a causeless quantum transition’
(p. 215).

Now we have already seen that particle pair production furnishes no
analogy for this radical *ex nihilo* becoming as Davies seems to imply above.
Davies greatly misleads his reader when he claims that ‘Particles . . . can
appear out of nowhere without specific causation’ and again, ‘Yet the world
of quantum physics routinely produces something for nothing’ (pp. 215,
216). On the contrary, the world of quantum physics *never* produces
something for nothing.

But to consider the case on its own merits: quantum gravity is so poorly
understood that the period prior to $10^{-43}$ sec, which this theory hopes to
describe, has been compared by one wag to the regions on the maps of the
ancient cartographers marked ‘Here there be dragons’: it can easily be
populated with all sorts of fantasies. In fact, there seems to be no good reason
to think that such a theory would involve the sort of spontaneous becoming
*ex nihilo* which Davies suggests. A quantum theory of gravity has the goal of
providing a theory of gravitation based on the exchange of particles
(gravitons) rather than the geometry of space, which can then be brought
into a Grand Unification Theory that unites all the forces of nature into a
supersymmetrical state in which one fundamental force and a single kind of
particle exist. But there seems to be nothing in this which suggests the
possibility of spontaneous becoming *ex nihilo*.

Indeed, it is not at all clear that Davies’s account is even intelligible. What
can be meant, for example, by the claim that there is a mathematical
probability that nothingness should spawn a region of spacetime where none
existed before? It cannot mean that given enough time a region of spacetime
would pop into existence at a certain place, since neither place nor time exist
apart from spacetime. The notion of some probability of something’s
coming out of nothing thus seems incoherent.

I am reminded in this connection of some remarks made by A. N. Prior
concerning an argument put forward by Jonathan Edwards against
something’s coming into existence uncaused. This would be impossible,
said Edwards, because it would then be inexplicable why just any and
everything cannot or does not come to exist uncaused. One cannot respond
that only things of a certain nature come into existence uncaused because
prior to their existence they have no nature which could control their
coming to be. Prior made a cosmological application of Edwards’s reasoning
by commenting on the steady state model's postulating the continuous creation of hydrogen atoms *ex nihilo*:

It is no part of Hoyle's theory that this process is causeless, but I want to be more definite about this, and to say that if it is causeless, then what is alleged to happen is fantastic and incredible. If it is possible for objects—objects, now, which really *are* objects, 'substances endowed with capacities'—to start existing without a cause, then it is incredible that they should all turn out to be objects of the same sort, namely hydrogen atoms. The peculiar nature of hydrogen atoms cannot possibly be what makes such starting-to-exist possible for them but not for objects of any other sort; for hydrogen atoms do not have this nature until they are there to have it, i.e. until their starting-to-exist has already occurred. That is Edwards' argument, in fact; and here it does seem entirely cogent . . . (Prior [1968], p. 65).

Now in the case at hand, if originally absolutely nothing existed; then why should it be spacetime that springs spontaneously out of the void, rather than, say, hydrogen atoms or even rabbits? How can one talk about the probability of any particular thing's popping into being out of nothing?

Davies on one occasion seems to answer as if the laws of physics are the controlling factor which determines what may leap uncaused into being: 'But what of the laws? They have to be "there" to start with so that the universe can come into being. Quantum physics has to exist (in some sense) so that a quantum transition can generate the cosmos in the first place' (p. 217). Now this seems exceedingly peculiar. Davies seems to attribute to the laws of nature themselves a sort of ontological and causal status such that they constrain spontaneous becoming. But this seems clearly wrong-headed: the laws of physics do not themselves cause or constrain anything; they are simply propositional descriptions of a certain form and generality of what does happen in the universe. And the issue Edwards raises is why, if there were absolutely nothing, it would be true that any one thing rather than another should pop into being uncaused? It is futile to say it somehow belongs to the nature of spacetime to do so, for if there were absolutely nothing then there would have been no nature to determine that spacetime should spring into being.

Even more fundamentally, however, what Davies envisions is surely metaphysical nonsense.¹ Though his scenario is cast as a scientific theory,

¹ The reason Davies does not seem to feel the force of such considerations is that he is not to all appearances a scientific realist, but adheres to some sort of an operationalist view of science, according to which scientific theories are not purporting to get at the truth about reality, but are simply fruitful and productive ways of looking at the world. Indeed, he intimates that one of the ways in which science is superior to religion is that religion is concerned about truth, whereas science is not so burdened. Such a perspective allows him to propose the most metaphysically extravagant hypotheses, since he is not alleging that these are actually descriptive of reality. I must confess that my concern is to get at the truth, and I am gratified by the resurgence of scientific realism in our day. And I suspect that Davies is not so anti-realist after all, that he believes, for example, that the universe really is expanding, that the microwave background radiation is really a relic of an earlier, denser state of the universe, *etc.* Hence, metaphysical concerns are entirely appropriate and must be raised.
someone ought to be bold enough to say that the Emperor is wearing no clothes. Either the necessary and sufficient conditions for the appearance of spacetime existed or not; if so, then it is not true that nothing existed; if not, then it would seem ontologically impossible that being should arise out of absolute non-being. To call such spontaneous springing into being out of non-being a 'quantum transition' or to attribute it to 'quantum gravity' explains nothing; indeed, on this account, there is no explanation. It just happens.

It seems to me, therefore, that Davies has not provided any plausible basis for denying the truth of the cosmological argument's first premiss. His analogy of particle pair production only served to underline the truth of the first premiss, his attempt to extend this analogy to empty space's production of matter presupposed uncritically an absolutistic view of space and only reconfirmed the first premiss’s truth, and his final appeal to quantum gravity to explain the origin of that empty space appears, at least to this author, to be incoherent and metaphysically impossible. It would therefore seem that Davies has failed to supply any compelling objection to either of the cosmological argument’s two premisses.

5 COHERENCE OF THE ARGUMENT’S CONCLUSION

But Davies is not through with the cosmological argument yet. For he now argues that even if we allow the conclusion of the argument—that the universe must have a cause—still there is a 'logical difficulty' in identifying that cause as God; for we could then ask, 'What caused God?' (p. 37). The cosmological argument is self-contradictory because it is founded on the assumption 'that everything requires a cause, yet ends in the conclusion that at least one thing (God) does not require a cause' (p. 37). If we say God has no cause, why not simply say the universe has no cause?

I was disappointed to find this tired argument on the lips of a sophisticated scientist. Even Davies's own statement of the cosmological argument did not assert that everything has a cause, but that every event, or better, everything that begins to exist has a cause. I know of no prominent theist who held that everything, including God, has a cause, outside the Enlightenment rationalists who by 'cause' often meant merely 'explanation'. God, who never began to exist, requires no cause, whereas the universe, which did spring into being out of nothing a finite time ago, does.

The 'most serious objection' to the cosmological argument, however, yet remains, in Davies’s opinion (p. 38). It is 'usually accepted,' says Davies, that a cause always precedes its effect in time. But since time itself began at the Big Bang, it is meaningless to speak of God’s creating the universe, for if there was no 'before', there can be no cause of the Big Bang. Davies reports that when lecturing on cosmology, he is often asked what caused the Big
Bang; his response is that the question is meaningless, since cause and effect cannot be applied to a timeless state (p. 39).¹

Unfortunately, this objection does not seem to have near the weight which Davies ascribes to it. Philosophical discussions of causation deal regularly with the notion of simultaneous causation, especially in debates on causal directionality, the issue being to find a definition which enables one to identify A as the cause and B as the effect even when A and B are simultaneous. Even in everyday life, we experience simultaneous causation all the time; for instance, a heavy ball’s resting on a cushion causing a depression in the cushion, to borrow an example from Kant. But if this is so, God’s causing the world to come into being is simultaneous with the world’s coming into being. The first moment of time is the moment of God’s creative act and of creation’s coming to be.

Of course, if time begins at creation, it follows that God without creation exists timelessly, even if after creation He exists in time. But Davies objects to either a timeless or a temporal God. Against a timeless God, he argues that many of God’s attributes make sense only in a temporal context. A timeless God ‘cannot be a personal God who thinks, converses, feels, plans, and so on for these are all temporal activities’ (pp. 133–4; cf. pp. 38–9). Such a God could not act in time, nor could He be considered a self and, hence, a person. On the other hand, Davies objects to a temporal God because (i) a temporal God is subject to change and must therefore be caused to change, in contradiction to the cosmological argument which holds God to be the cause of all things; (ii) a temporal God cannot be the creator of time nor can He be omnipotent, since He must be spatial as well as temporal, space and time being inseparable.

But again, these difficulties do not seem so ‘grave and fundamental’ as Davies thinks (p. 134). Of course, a timeless God does not possess a discursive mental life; but Davies himself acknowledges that knowing is not a temporal activity, so that a timeless God could know all things. Moreover, so long as His feelings do not change, I see no reason feelings could not be attributed to a timeless God. Similarly, His plans and decisions are eternal and unchanging. It is odd that Davies, who subscribes to a B-theory of time, according to which past, present, and future are equally real and becoming is purely mind-dependent, should have difficulty concerning how a timeless God could act in time. On a B-theory the whole temporal series subsists (tenselessly) so that all events in the timeline are available to and could be timelessly caused by God. A timeless God’s acting in time presents a difficulty only for the A-theorist, who holds the future to be unreal and temporal becoming to be characteristic of reality. As for God’s selfhood,

¹ Cf. his remarks:
‘But what does it mean to say that God caused time to come into existence, when by our usual understanding of causation a cause must precede its effect? Causation is a temporal activity. Time must already exist before anything can be caused. The naive image of God existing before the universe is clearly absurd if time did not exist—if there was no “before.”’ (p. 44.)
Davies's objection is based on a flawed conception of personal identity, according to which personal identity without memory is 'jibberish' (p. 91). Presumably, since a timeless God has no literal memory, He cannot have personal identity. But all this seems clearly wrong: memory is useful only for the recognition of personal identity, but is not constitutive of it. And for a timeless person, memory would not even be necessary for that, since who he is, he is unchangingly. Davies himself goes on to say that the essential ingredient of mind is information (p. 98), and since he grants that a timeless God could be omniscient, I fail to see what reason remains for denying such a being the status of mind.

His misgivings about a temporal God seem no more serious. A temporal God would change in very incidental ways (say, knowing what time it is now), but could remain essentially immutable. Such changes would not in any way seem to violate the principle that God is the cause of every being in the universe. The notion that a temporal God must also be in space is a non sequitur which is due, I think, to Davies's uncritical ontologizing of mathematical constructs once more, this time of a Minkowski spacetime diagram on which one axis represents space and the other time. But on a relational view of time, a series of mental events alone suffices to establish a temporal sequence. A disembodied mind could therefore be in time without being in space. Hence, there is no reason to believe that a temporal God must be in space. Neither need He be subject to temporal dilation and contraction as posited by the Special Theory of Relativity, for as the Creator and Sustainer of the entire cosmos He has a universal frame of reference which yields for him a cosmic time traced back to the inception of the universe.

For my part, I consider the most satisfactory account of God's relation to time to be that He exists timelessly without creation and temporally subsequent to creation. Nothing Davies has said would seem to render such a doctrine incoherent.

In any case, these musings lead Davies to one of his most bizarre conjectures: as an alternative to positing God as the first cause of the universe, he suggests that the universe created itself via an exercise of backward causation (pp. 39–40). On an A-theory of time, according to which the future does not exist, this is tantamount to saying that nothing causes something to come out of nothing, which, to my mind at least, seems to be more metaphysical nonsense. On a B-theory, to which Davies adheres, however, the universe does not literally come into being at all, so that there seems to be no rationale for seeking a causal explanation of its 'beginning'. For to say the universe began to exist means only that the world line of the universe (or all world lines in the universe) has a front edge. But the world line as a whole just subsists (tenselessly). There therefore seems to be no reason for saying that later parts of the world line cause earlier parts to exist.

1 Cf. pp. 110–11. He never thinks to ask whether God could not have brought the universe into being retrocausally.
Moreover, since the later parts are themselves caused by the earlier parts, we wind up with a sort of circular causation that explains nothing, but seems to be the reductio ad absurdum of this view.

Oddly enough, Davies thinks that retrocausation of the universe’s beginning 

ex nihilo 

could not occur naturally. There would have to be some sort of ‘raw materials’ for the retrocause to work on. I must confess bewilderment at why Davies finds it plausible to think that the spacetime universe could have popped into being out of nothing utterly uncaused, but balks at the notion of a universe which is retrocausally brought into being from nothing. At least in the latter case there is an efficient cause, if not a material cause; but the former scenario lacks any causal conditions whatsoever. Or does it? Davies here suggests that space and time are themselves built out of ‘more primitive, more abstract, entities’ (p. 40). A quantum theory of gravity might suggest that ‘... the big bang could have been the event when the “cogwheels” engaged coherently and organized themselves into apparently continuous spacetime. ... Beyond the big bang (not “before” for there was no before) lay the disorganized “cogwheels”—physical things, but not in space or time’ (p. 40).¹ Now if this is correct, then we do not have becoming 

ex nihilo 

after all, as Davies elsewhere alleges. But in any case, one cannot help but wonder whether these speculations are not ontologizing once more, taking abstract, mathematical concepts and treating them like concrete entities. Retrocausation, therefore, does not seem to provide a plausible alternative analysis of the origin of the universe.

But Davies has one final gambit: perhaps the cause of the universe is a sort of ‘mother’ universe on the analogy of an elastic sheet in which bumps occur, which grow into balloons, which finally separate free of the sheet to become new universes. In this way, our universe has a cause, but, Davies emphasizes, it is natural.

Such a view, however, runs contrary to the initial conditions in the Big Bang model, since our universe then did not, after all, begin from a state of infinite density. But according to Davies, at least, in the Big Bang gravity was so intense as to make such a state unavoidable (p. 56). More fundamentally, however, we seem to have here again Davies’s uncritical ontologizing, one mathematical construct spawning another. And in any case, a person who is prepared to accept the philosophical arguments in support of the second premiss of the cosmological argument—that an infinite regress of events is impossible—would simply point out that his reasoning also applies to the ‘mother’ universe as well, so that Davies has only postponed the inevitable beginning by an extra step.

Nevertheless, I think Davies’s example does make an instructive point. The determined naturalist cannot be compelled to ascribe a supernatural origin to the universe on the basis of scientific evidence alone because he can always posit some unknown or even unknowable natural cause to take care of

¹ Note that the theist could similarly argue that God was beyond, not before, the Big Bang.
it. I prefer, therefore, to think of the scientific evidence as confirmatory of a position which is reached by way of philosophical argument or held by theological persuasion. But even leaving such extra-scientific considerations aside, why should we prefer naturalistic to supernaturalistic accounts of the world's origin? No doubt Davies would say that scientific explanations must by their very nature be naturalistic. One need not dispute that issue here; but the point is that the converse is not true, that all naturalistic explanations are scientific. Indeed, hypotheses concerning 'mother' universes and the like, while naturalistic, are emphatically not scientific, since they are admittedly beyond the range of all verification and falsification. Qua science, naturalistic accounts which appeal to entities beyond all scope of investigation due to our confinement to the present universe enjoy no privileged position over supernaturalistic accounts. Why then should we be obliged to prefer the naturalistic account?

The answer to this question takes us to what I believe is the key to Davies's book and thinking, though it is tucked away in a brief chapter near the book's end: the impermissibility of miracles. Davies draws a dichotomy between 'the scientist' and 'the religious person' precisely on this score: "The religious person . . . finds nothing incongruous about miraculous events because they are simply another facet of God's action in the world. In contrast the scientist, who prefers to think of the world as operating according to natural laws, would regard a miracle as a "misbehaviour," a pathological event which mars the elegance and beauty of nature. Miracles are something that most scientists would rather do without" (p. 197). The simplistic bifurcation between religious and scientific persons and the loaded terminology suggest that what we have here is an expression of scientism, a dogged refusal to permit any event or reality not conforming to natural law. Such an attitude is simply a matter of personal taste, lacking philosophical justification, for at the very most all the scientist conceivably has the right to say concerning some purported miraculous event is that it is naturally impossible—but that is agreed on all hands and cannot prejudice a priori the historical question of the event's actuality. Indeed, the scientist cannot even say that such an event would 'violate' a law of nature, since natural laws have implicit ceteris paribus conditions that no interfering factors (such as a supernatural agent) are at work.¹

Now the bearing of Davies's attitude toward the miraculous on questions of cosmology becomes apparent when we reflect that ascribing the origin of the universe to the action of a supernatural being is to assert, in effect, that the creation of the world is a miracle. And this Davies simply will not permit. Hence, he shows himself remarkably open to entertaining the existence of a non-supernatural God, while eschewing a supernatural deity: "Those who invoke God as an explanation of cosmic organization usually have in mind a supernatural agency, acting on the world in defiance of

¹ The outstanding discussion on this issue is that of Stephen S. Bilinskyj [1982].
natural laws. But it is perfectly possible for much, if not all of what we encounter in the universe to be the product of intelligent manipulation of a purely natural kind: within the laws of physics' (p. 208). Davies envisions a sort of cosmic intelligence, beginningless and infinite, but not omnipotent, since he cannot act outside the laws of nature. 'He would be the creator of everything we see, having made matter from pre-existing energy, organized it appropriately, set up the conditions necessary for life to develop, and so on, but he would not be capable of creation out of nothing (ex nihilo) as Christian doctrine requires. We might call this being a natural rather than a supernatural God' (p. 209).

Clearly for Davies the laws of nature must be preserved inviolate at all costs. Nothing must be allowed to mar the beauty of natural law, whose harmony, simplicity, and symmetry Davies eloquently extols (pp. 221–2). This is in the end why, I believe, Davies will go to such metaphysically extravagant lengths—even to the universe's springing into being uncaused out of nothing—in order to avoid classical theism. What makes this doubly tragic, in my mind, is that Davies not only thereby passes over classical theism as a rational and, I think, philosophically (if not scientifically) superior explanation of the universe's origin, but that he appears to do so on such flimsy grounds, since a supernatural God in acting miraculously in the world does not technically violate the laws of nature at all. Indeed, their beauty speaks of the beauty of the Mind that ordained them.

6 Conclusion

In conclusion, Davies's position appears to be simply the faith of a naturalist. We have seen that Davies's objections to the first cause cosmological argument seem to be unsound. His objections to the second premiss concerning the impossibility of an infinite regress were based on apparent misunderstandings of the argument. His objections to the first premiss made appeal to inadequate analogies and finally seemed to be based on a metaphysical absurdity. His arguments for the incoherence of God as the cause of the universe seemed plainly misconceived or not incapable of solution, and his rejection of classical theism was seen to rest ultimately upon a personal distaste for the miraculous, a distaste apparently born out of a misunderstanding of the nature of miracles. It seems to me, therefore, that at least insofar as Davies's objections are concerned, the person who accepts the existence of God on the basis of the cosmological argument remains rationally justified in doing so.

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