

WILLIAM HASKER

HOW TO MAKE A WORLD

INTRODUCTION

If you were going to make a world, how would you go about it? But maybe that is not a good question. Perhaps the supposition is too remote from what is possible to be seriously entertained. If so, let us consider a less distant possibility. Suppose, then, that you were to undertake to construct a medieval village, perhaps as a set for a film about medieval times. How would you go about doing that?

To begin with, you would need to do quite a lot of study—assuming, as we shall, that you intend your village to be extremely realistic, so realistic as to be convincing even to scholars of the period. You would read widely about known examples of medieval villages; you would visit some excavation sites, as well as contemporary restorations that are considered authentic. You would study the materials and techniques of medieval building, and learn as much as possible about the lives of the villagers. Armed with this knowledge, you would map out carefully in detail the plan of the village, with special attention to the sites which will provide settings for important scenes in the movie. Next, you would assemble your team of workers to construct the village, and instruct them carefully in the techniques of medieval building—techniques they will need either to follow, or to simulate with modern tools and materials. Finally, you will need to locate sources for the needed materials, materials which should not in any way betray the fact that their provenance is from the twenty-first century rather than the eleventh. And now at last the actual construction can begin, carefully overseen by you to ensure accuracy in following the plan and to avoid any tell-tale traces of modern workmanship or materials.

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Something very like this, I suppose, is the way you would proceed if given that assignment. But of course, this is not the only way to construct a medieval village. Consider in contrast the situation of the king of a small country, actually living in the eleventh century. The king has come to think that it would be advantageous for his kingdom if there were a village at a particular, heretofore unoccupied, site in his territory. The site lies along a river which carries much traffic, and also along a trade route; an outpost located there will exercise some control over both, and will also be well-placed in case of a possible military incursion by the troops of the neighboring monarch. The king decides that, all in all, a settlement of loyal subjects on the site would be much to his advantage.

How then will the king proceed? Of first importance will be enlisting a sufficient number of subjects for the construction and subsequent population of the projected settlement. The king will need to make sure that enough of the settlers are skilled in the required building methods; no doubt their cooperation can be secured by promises of free land and other royal patronage. He will lay down some minimal requirements for the village; it must, for example, include fortifications which will be defensible in the event of enemy attack. He will arrange for the provision of such building materials as are not available locally. Having done this much, he can safely turn his attention to other matters; he has no need to do detailed planning, or even to supervise the work beyond sending one of his ministers from time to time to inspect and report on progress made.

It is clear that, given tasks that are in many ways similar, you and our hypothetical king have gone about those tasks in radically different ways. For our present purposes, it will be helpful to have a bit of terminology to represent these different approaches. Your approach in building the movie-set village can fairly be described as *meticulous control*: your aim is to closely monitor every stage of the process, in the interest of a result that is as authentic, and as serviceable for the purpose, as possible. The king's approach could hardly be more different. As a label for his way of proceeding, I suggest the term *purposeful randomness*. His actions are indeed purposeful: he specifically desires a village at that precise location, and takes the steps necessary to bring it about. But having made the very general sorts of preparations we have outlined, he has little interest or concern for most of the details; he is willing to let all that be settled by the (so far as he is concerned) random decisions and interactions of the people on the ground. However, those matters turn out, he will get what he wants, and the rest is of no concern to him.

Now, having characterized the different approaches of you as movie-set designer and the king in these ways, it is clear that these same types of approaches could be applied to the execution of many other complicated tasks—tasks such as planting

a forest, holding a group picnic, or executing a painting (think Jackson Pollock). To be sure, there are many intermediate possibilities along the spectrum from “pure randomness” to “total control.” But for our purposes, it will make matters clearer to focus on just the two options we have discussed. At this point we need to consider a pair of questions: When one is the initiator of such a task, what considerations would make one of the two approaches preferable to the other? And on the other hand, when one is confronted by the result of such a project, how should one go about determining which of the two approaches was used? In many contexts considerations of economy of materials may favor a policy of meticulous control; random processes may reach their intended objective only after a number of false starts, with each attempt consuming resources without immediate benefit. Economy of time can also be a consideration: those monkeys, typing randomly, may in the end produce the complete works of Shakespeare, but the time that would be required (many times the age of the universe up until now) is truly daunting. To be sure, the economy of time and materials is bought at a cost, in the form of the greater demands on the time and attention of the project director. The most important indicator for a policy of meticulous control, however, is a task that is very precisely specified and is extremely unlikely to be achieved through random methods. (The works of Shakespeare again, or the task of designing a new model automobile.)

Indicators favoring a policy of purposeful randomness are in many ways the complements of those favoring meticulous control. It may be that the greater costs in time and resources of a random approach either would not obtain in a particular case, or are unproblematic. A random approach may be feasible if the specifications are not especially demanding and could well be achieved by a random process. (Somewhat ironically, the king’s requirement for an actual medieval village is less demanding, for him in his context, than is your requirement for a simulation.) There is however one interesting additional indicator in favor of a random approach. Such an approach may be indicated if the instigator of the project has a special need or desire for the active involvement of other persons or agencies in the production of the final result. The king not only needs to have the village constructed; he needs for the inhabitants to willingly commit themselves to living there for the indefinite future. And this is more likely to be achieved if they are actively involved in both the planning and the actual construction of the village. In other cases, the active involvement of a variety of participants may be seen as good in itself and may outweigh some imperfections in the final result. (Note, however, that purposeful randomness, as defined here, does not exclude possible intervention on the part of the director if the project threatens to go seriously off target.)

Now we turn to our second question: given the result of such a project, how can we determine which of the two categories, meticulous control or purposeful randomness, better describes the process by which it was achieved? We must assume here the lack of the sort of access to the actual process that would provide an immediate answer. (No one observing the actual construction of your village would think that much of a role was being played by randomness.) On the other hand, we must assume that there was indeed some individual or group that instigated the project; otherwise neither of our two categories would be applicable. And we need to make some assumptions, however tentative, about the goal of the project. Given those assumptions, what indicators should lead us to conclude that the process was an instance, on the one hand of meticulous control, or on the other of purposeful randomness?

In general, the considerations in play here will be mirror images of the ones that would guide the instigator in selecting one policy or the other. If the process appears to have reached the intended goal directly, with minimum expenditure of time and materials, this points towards a high degree of control. If on the other hand a great deal of time was consumed, with multiple false starts and wastage of materials, this points to a more random approach. Especially important, of course is the question whether the goal of the project is one that could reasonably be expected to be reached by a random method. If the goal appears to be highly specific, and to be in effect unreachable through a random process, a high degree of control is indicated. (To be sure, such judgments are dependent on an accurate assessment both of the nature of the goal and of the potentials of the sorts of random processes that might have been involved.) Finally, we may consider what we know or reasonably surmise about the instigator's preferences, which might lead him or her to prefer one approach or the other.

RANDOMNESS AND CREATION

With all this in place, we turn at last to the principal topic of this discussion—which is not, of course, your creation of a medieval village but rather the creation of the universe by God. And here our question is one of considerable interest and perhaps even theological importance: To what extent should we view the creation process as one of meticulous control, and to what extent (if any) should we discern in it an element of purposeful randomness? We begin by assuming that the universe is indeed the creation of God—the theistic God, more precisely the Christian God. We also assume that an important objective was for the creation to contain persons who bear the divine image—beings able to exercise reason and moral agency, and

to come to know and love God. Given these assumptions, what conclusions can we reach concerning the modality of creation as meticulously controlled or as to some extent random?

If we consider such matters as economy of time and materials, what we know about the world leans heavily in the direction of randomness. Placing the origin of *homo sapiens* at 200,000 years before the present, and estimating the age of the universe at 14 billion years, we get the result that the existence of our species has occupied about one part in 70,000 of the time elapsed to date! Put differently: if we think of the time since the Big Bang as one year, humans have been around for about seven and a half minutes! To be sure, we may conjecture that other sapient creatures, on other planets, may have come into being earlier than our own race.¹ Furthermore, our existence (and that of those hypothetical others) may extend into the future for a considerable time, further increasing the proportion of cosmic time in which there are created image-bearers. Nevertheless, even allowing for these conjectures the One who purposed our existence does not seem to have had economy of time as a major consideration in bringing us about!

Nor do economy of space or of materials speak in favor of meticulous control. The early days of science fiction, with a lush, tropical Venus and a chilly but still inhabitable Mars, with its famous canals, are long gone. The Search for Extra-Terrestrial Intelligence, carried out for many years now with expert planning and at considerable cost, has so far yielded no evidence of intelligent life beyond our solar system. The search for planets orbiting distant stars, now proceeding apace, has identified many such planets. As yet, however, we have been able to identify only a few roughly earth-size, rocky planets in the “habitable zone” around their stars that allows for liquid water—planets that might be plausible candidate homes for alien life. To be sure, these negative results are far from conclusive. The negative result of the SETI project might be explained if advanced civilizations no longer rely on electromagnetic communications of the sort that the project has attempted to detect. The comparatively smaller size of earthlike planets makes them harder to detect than the massive Jupiter-analogs that have mostly been found up until now. (Even now, improved observational techniques are enabling the detection of

¹ But perhaps not very much earlier. The heavier elements, necessary for the formation of rocky planets suitable for life, must first be formed in the interior of a star. (The primitive universe consisted mainly of hydrogen and helium.) The first-generation stars went through their life-cycles and perished in supernova explosions, spreading those heavy elements throughout the universe and making them available for the formation of second-generation stars and their surrounding rocky planets. (So that you and I are quite literally made of “star-dust”!) The time required for this indicates that a sizable portion of the history of the universe up until now must have passed without life of any kind we are acquainted with.

more small to medium-sized planets.) But even making the most optimistic assumptions, it is impossible to avoid the conclusion that vast reaches of space, and enormous amounts of cosmic real estate, are devoid of life. There are the regions of space too saturated with destructive radiation for life to survive. There are the stars without planets, and the many others harboring only gas giants, or perhaps smaller, rocky planets either too near or too distant from their primaries to be feasible as homes for life. An old, and no doubt wise, saying has it that “God must love the common people; he made so many of them.” Perhaps we should add to this that “God must really, really like nature; he made such an awfully lot of it!”

Next, we turn our attention to the only biological life we do know about, on this our own planet. And here, even more than in the case of the broader cosmic history, we find ourselves in a very different situation than that of our forebears a few centuries ago. For them no imaginable random process showed any promise of being able to bring about the wonders of life as we know them; it seemed evident that living creatures, including humankind, represent a goal that is “highly specific, and in effect unreachable through a random process.” It may still be possible to argue that this is the case, but argument *is* needed: evolutionary theory, as it has been elaborated since Darwin, offers an account of the development of life through random processes that is by no means wholly implausible. At any rate, it is evident (we shall assume) that an evolutionary process has occurred, and we need to consider what it says to us about the question of control versus randomness.

Once again, the time scale involved seems to tell in favor of randomness; economy of time does not seem to have been any sort of consideration for the Creator. To be sure, that an objective is achieved through a long, slow natural process does not in itself necessarily tell against careful control. (Think of the lengthy process by which fine wines are brought to maturity.) One has to look at the process itself. But what we know about that process further underscores the impression of randomness. There are all of the false starts, with numerous deleterious mutations for every one that leads to an evolutionary advance. And the advance (as we take it to be) does not seem to take the form of a direct progression towards a desired objective. The old image of the “rise of mankind” through a linear series of more and more human-like creatures is now complicated by the discovery that there were a number of different lineages of hominids, coexisting and perhaps competing with one another at the same times and in the same regions.² Furthermore, at least one such lineage—the so-called “hobbits” (*homo floresiensis*)—seems to have endured

² See Kate WONG, “The Human Pedigree,” *Scientific American*, February 2009, 60–63; also Katherine HARMON, “Shattered Ancestry,” *Scientific American*, February 2013, 42–49.

until comparatively recent times.³ Stephen Jay Gould used to invite the audiences at his lectures to join him in the chant: “Human uniqueness is a contingent fact of history.” His point was that there is no inherent necessity in the fact that there is just one intelligent species inhabiting the planet. Rather, this situation came about through the competition among a number of candidate species, several of which could very likely have survived and prospered under different circumstances. There is of course also the fact that evolution has produced some distinctly nasty and unpleasant creatures. Proponents of Intelligent Design cite the malaria organism as an instance of “irreducible complexity” that cannot be the result of an unguided process of evolution, but must rather reveal the active intervention of a Designer. Many of us, I surmise, would be more comforted to suppose that such malignant life forms are the product of evolution left to take its own course, rather than attributing to the Lord the specific intention to let such a scourge loose on the world. Even among the “good” organisms there appear to be numerous instances of sub-optimal design, features resulting from the contingencies of evolutionary history which function less well than would seem to be possible for similar types of organisms designed from scratch. One famous example of this is the Panda’s Thumb: the panda is distinguished among mammals in having a thumb and *five* fingers, making a total of six digits. The explanation for this is that the “thumb” is not a true digit at all. It arose at a time in evolutionary history when all five digits were already committed in a different direction; the “thumb” represents an enlargement of a bone present in the wrist of other mammals, the radial sesamoid. It does well enough in stripping the edible leaves from bamboo branches, but lacks the flexibility and multi-purpose functionality of a true thumb. Not bad as an improvisation, one might say, but hardly the sort of thing a competent designer would have deliberately chosen to produce. There are also many less than optimal features in the human body. Biologist and paleontologist Neil H. Shubin states it graphically, if with a touch of exaggeration:

Take the body plan of a fish, modify it using genes altered from those that build the body of a worm, dress it up to be a mammal, then tweak and twist that mammal to make a creature that walks upright, talks, thinks and has superfine control its fingers,

³ Kate WONG, “Rethinking the Hobbits of Indonesia,” *Scientific American*, November 2009, 66–73. Earlier estimates putting the age of “hobbit” fossils at 18,000 years have now been pushed back to 50,000 years; see Bruce BOWER, “Hobbits died out earlier than thought,” *Science News*, April 30, 2016.

and we have a recipe for disaster. We can dress up this fish only so much before paying a price.⁴

Challenged with examples such as these, of adaptations which seem inferior or even positively malignant, Intelligent Design advocates tend to say such things as “I don’t claim to discern the intentions of the Creator.”⁵ This is superficially plausible, but it risks being inconsistent or even disingenuous. It is only by positing intentions that the notion of design makes any sense at all. Otherwise, any outcome is equivalent to any other; at most, we have a statistically improbable result, but no design. And the notion that we have no idea at all what sorts of things to expect from the Lord flies in the face of the totality of Christian practice, and of Jewish practice before that. In the end, the choice cannot be avoided: either attribute to the Designer the deliberate production of sub-optimal and even malignant results, or acknowledge that the creative goals were achieved by a process involving a large element of randomness.

Stephen Jay Gould suggests yet another dimension to evolutionary randomness—or, as he calls it, contingency. Speaking of an important transition in evolutionary history, he writes:

Groups may prevail or die for reasons that bear no relationship to the Darwinian basis of success in normal times. Even if fishes hone their adaptations to peaks of aquatic perfection, they will all die if the ponds dry up. But grubby old Buster the Lungfish, former laughing-stock of the piscine priesthood, may pull through ... because a feature evolved long ago for a different use has fortuitously permitted survival during a sudden and unpredictable change in rules. And if we are Buster’s legacy, and the result of a thousand other similarly happy accidents, how can we possibly view our mentality as inevitable, or even probable?⁶

Gould’s point is that the survival of lineages at crucial junctures may be largely a matter of luck, because it can depend on features of an organism (such as Buster’s lungs) that bear little relation to adaptation in the normal sense, but suddenly become relevant due to a drastic change in the environmental circum-

⁴ Neil H. SHUBIN, “This Old Body,” *Scientific American*, January 2009, 64–67. For additional detail, see SHUBIN’s *Your Inner Fish: a Journey into the 3.5-Billion-Year History of the Human Body* (New York: Pantheon, 2008).

⁵ Michael J. Behe writes that a “problem with the argument from imperfection is that it critically depends on a psychoanalysis of the unidentified designer”; see his *Darwin’s Black Box: The Biochemical Challenge to Evolution* (Downers Grove, IL: InterVarsity Press, 1996), 223.

⁶ Stephen Jay GOULD, *Wonderful Life: The Burgess Shale and the Nature of History* (New York: Norton, 1989), 48.

stances. Such evolutionary accidents are what determines the overall course and direction of evolution, and they render the outcome radically contingent. Gould concludes from this that any notion of evolution as fulfilling a divine purpose must be abandoned. If evolution took the form of a gradual but inevitable progression towards a pre-determined goal (as many thought of it in the 19th and much of the 20th centuries), we might interpret it as God's way of creating the world he desired. But such ideas go out the window once we recognize the radical contingency of life's history: God at the beginning of the process could have had little if any idea of what it would ultimately produce. "Replay the tape [of life's history] a thousand times ... and I doubt that anything like *Homo sapiens* would ever evolve again."⁷

Gould's conclusion is premature. Christians affirm that God has fulfilled His purposes through processes of human history that are highly contingent, so why not through a contingent process of evolutionary history? In either case, we will need to assume that God has been actively involved in the process, steering it towards his intended goal, though we may know very little in detail about such interventions. But there is also another way in which Gould's point can be countered. Another paleontologist, Simon Conway Morris, argues that Gould has overestimated the importance of contingency in evolution. Conway Morris does not deny contingency, but he emphasizes the phenomenon of evolutionary convergence, in which he same or similar results are obtained through diverse pathways. (The camera-type eye has evolved independently at least six times.) He contends that "contingency in individual history has little bearing on the likelihood of the emergence of a particular biological property."⁸ Conway Morris argues, with copious detail, that "barring the physically impossible and adaptationally compromised, it appears that as a general rule all evolutionary possibilities in a given 'space' will inevitably be 'discovered'.⁹ He concludes that "if we had not arrived at sentience [i.e., intelligence] and called ourselves human, then probably sooner rather than later some other group would have done so, perhaps from within the primates, perhaps from further afield, even much further afield."¹⁰ Conway Morris, unlike Gould, does not dismiss the idea of creation as fulfilling God's purposes; he affirms that "the

⁷ Ibid., 289.

⁸ Simon CONWAY MORRIS, *The Crucible of Creation: The Burgess Shale and the Rise of Animals* (Oxford: Oxford University Press, 1998), 139. Somewhat ironically, Conway Morris is one of the heroes of Gould's *Wonderful Life*, because of his involvement in the study of the Burgess Shale, the unique fossil-bed which is a principal subject of that book.

⁹ Simon CONWAY MORRIS, *Life's Solution: Inevitable Humans in a Lonely Universe* (Cambridge: Cambridge University Press, 2003), 139.

¹⁰ Ibid., 310.

complexity and beauty of 'Life's Solution' can never fail to astound. None of it presupposes, let alone proves, the existence of God, but all is congruent. For some it will remain as the pointless activity of the Blind Watchmaker, but others may prefer to remove their dark glasses. The choice, of course, is yours."¹¹

In view of this all-too-rapid survey, we can perhaps draw some provisional conclusions concerning the modality of creation as controlled or random. As noted, the profligate use of both time and materials does not in any way suggest meticulous control on the part of the creator. To be sure, one could argue that for an eternal God, who has literally "all the time in the world," economy of time would not be a consideration. Nor would an omnipotent God have a need to economize on materials. But the actual processes involved, so far as we understand them, speak to us much more of randomness than of close supervision. (Conway Morris's counter argument to Gould does not deny randomness; rather, it asserts that the random process would naturally tend to produce certain kinds of results, such as intelligence.) That is not to say that specific divine intervention in those processes is excluded; our evidence does not warrant a firm negative conclusion on this point. But whatever interventions may have been involved have occurred against a background context which included large amounts of apparent randomness.

These conclusions, however, are only provisional; the theological questions involved need further consideration. Furthermore, we need at this point to define the precise nature of the randomness or contingency involved more carefully than has been done so far. In describing the medieval monarch's project we stated that the decisions and interactions of the villagers as they carry out their task of construction are "random, *so far as he is concerned*." Those decisions are of course not completely random; they are made for reasons, and may for all that we have said be determined by prior sufficient causes. Whether that is so or not does not matter to the king: those causes, if they exist, are beyond his ken and cannot enter into his deliberations. But of course, this will not be true for the Creator. If determining factors are present, either in the creation as a whole or in some part of it, he will know this and will take it into account in his creative plans. So we need to consider: Is any randomness that seems to exist the manifestation of a genuine metaphysical indeterminism, or is it merely epistemic, the result of our failure to grasp the full nexus of causal connections?

¹¹ Ibid., 330.

RANDOMNESS AND PROVIDENCE

Up until this point no reference has been made to Professor Łukasiewicz's outstanding essay "Divine Providence and Chance in the World."¹² Such reference was not needed because there is little if any disagreement between his theoretical reflections on the concept of chance and the empirical considerations which have been surveyed above.¹³ But in his final sections, on the understanding of God and divine providence that fits best with his reflections concerning randomness, there is overlap, and to some extent disagreement, between our conclusions.

In considering the theological implications of apparent randomness it will be helpful to assess them in the light of what many of us have concluded are the three main options for our view of divine providence: theological determinism or Augustinianism, middle knowledge or Molinism, and open theism. (Łukasiewicz also recognizes these as significant options; later we shall need to devote attention also to his own preferred alternative, "open probabilistic theism.") As we consider the question of chance as real vs. merely apparent, it will be useful to recall an interchange that occurred between Peter van Inwagen and Alvin Plantinga. Plantinga was investigating the possibility of "deep chance"—of events that have no causal explanation and are not planned or intended by anyone, including God. He notes that van Inwagen has proposed that God might issue disjunctive decrees—decrees of the form: *Let it be that A or B, and I really don't care which.*¹⁴ Plantinga, however, sees a difficulty here. He invites us to

... suppose God, as Christians think, is omniscient. Add that omniscience entails knowing what would happen if God issued a disjunctive decree. If God issues the decree

Let it be that A or B, and I don't care which,

God would know which of A or B would occur or be actual. ... Suppose what God knows is that if he issues that decree, it is A that would occur. Under those conditions, would there really be any relevant difference between God's issuing the decree

Let it be that A or B, and I really don't care which

¹² This issue. Page references in the text are to this essay.

¹³ I have argued elsewhere the advantages of my emergentist conception of the soul over the creationist view advocated by Łukasiewicz, see William HASKER, *The Emergent Self* (Ithaca, NY: Cornell University Press, 1999); also William HASKER, "The Case for Emergent Dualism," in *The Blackwell Companion to Substance Dualism*, ed. Jonathan J. Loose, Angus J. L. Menuge, and J. P. Moreland (Oxford: Wiley-Blackwell, 2018), 62–72. There is no need to rehearse that discussion here.

¹⁴ See van INWAGEN's essay "The Place of Chance in a World Sustained by God," in *God, Knowledge, and Mystery: Essays in Philosophical Theology* by Peter van Inwagen (Ithaca, NY: Cornell University Press, 1995), 57–60.

and his issuing the decree

*Let it be that A?*¹⁵

Plantinga is not sure what to say about this, so he leaves the issue unresolved. But, clearly, he has a point. Under the circumstances as stated, it really does seem that there is no difference between the two decrees—or in other words, the “disjunctive” element in the first decree has no real significance.

But as Plantinga realizes, his objection would not apply to all theists who might consider the possibility of disjunctive decrees. It would not apply to open theists, who consider that omniscience does *not* include knowledge of future contingent propositions, either because there are no true future contingent propositions, or because, while there are such propositions, it is logically impossible for anyone, even God, to know them. On the other hand, Plantinga’s reasoning would certainly apply to theological determinists or Augustinians. And it would also apply to Molinists, assuming that Molinists would attribute to God knowledge of counterfactuals of chance, in addition to counterfactuals of creaturely freedom.

Given these three options for the theology of divine providence, Augustinianism, Molinism, and open theism, we now need to consider how proponents of each of these views might respond to the evidence we have surveyed concerning contingency and apparent randomness in the process of creation. To begin with the simplest case, proponents of open theism are well situated to accept at face value the randomness that seems apparent in the scientific account of the history of the cosmos and of life on earth. This is not merely because the view already accepts the occurrence of contingent events that are not foreknown by God (namely, free choices made by creatures), though that point plays an important role. Beyond that, open theists are uniquely well placed to recognize that God in his creation intends to bring about an Other—or rather, many Others—that, sustained in being by divine power and goodness, make their own distinctive contributions to the way things are.¹⁶ Why else, one might ask, should a Creator take the risk of bringing about the existence of beings that might actually attempt, however unsuccessfully, to thwart the divine intentions, bringing into the world the reality of

¹⁵ Alvin PLANTINGA, “Response,” *European Journal for Philosophy of Religion* 5, no. 3 (Autumn 2013): 43.

¹⁶ For a bit more on this, see my “The Need for a Bigger God,” in *God in an Open Universe: Science Metaphysics, and Open Theism*, ed. William Hasker, Thomas Jay Oord, and Dean Zimmerman (Eugene, OR: Pickwick Publications, 2011), 15–29. This idea is also discussed in Robin COLLINS, “Divine Action and Evolution,” in *The Oxford Handbook of Philosophical Theology*, ed. Thomas P. Flint and Michael C. Rea (Oxford: Oxford University Press, 2009), 241–61, 244–45.

harm and loss? We are created, so we are told, to display God's glory—but open theists will suppose that it could not so well be displayed by a world that would “automatically” reflect the divine power and goodness, with no possibility of deviation, but also with no voluntary affirmation of the greatness and goodness of the Creator. This point most clearly applies to the existence of rational creatures endowed with the power of choice, but it can by analogy be applied also to the inanimate and to the merely sentient creation. To be the Creator and Sustainer of a universe that, in a real though limited sense, *creates itself*, seems to have been within the purview of the One who brought us into being through a complex and protracted evolutionary process. It was not only of human beings, but of the creation as a whole, that God said that it was “very good.” And how else can we account for the enormous extent of the creation, both in time and in space? As was previously noted, God must like nature, otherwise why would he have made so much of it? (And this, by the way, points to a problem for those who would interpret the value of the natural world solely in terms of its instrumental value in providing an arena for the lives of rational creatures. Indeed, it does that, but that cannot, one would think, be the full measure of its value for the Creator.)

When we turn from open theism to Augustinianism and Molinism, the situation becomes murkier. On these views, there are no disjunctive divine decrees, nor can there be, from the standpoint of the Creator, any genuine randomness or contingency in the creation. Everything that occurs is subject, not merely to meticulous control, but to *total control*: it happens precisely and in every detail exactly as was intended by the Creator.¹⁷ But how, then, are we to understand the apparently massive randomness and contingency in the creation as we know it? To be sure, there is no logical inconsistency here; a creation that is under total and detailed divine control could still, logically, exhibit the sorts of randomness that seem apparent in the world. Our scientific observations cannot establish either the presence or the absence of divine determining decrees, or of divine middle knowledge. But how are we to make any kind of sense of this, on the face of it unlikely, combination? Why should a universe which in fact came about by a process which was minutely controlled, give such a strong impression of randomness in its origin?

One suggestion that is sometimes heard is that such an arrangement was necessary to preserve divine hiddenness. If the divine creation of the world had been immediately evident, as would be the case on a naive creationist account, our epistemic freedom would be impaired; we should have been unable to exercise rational freedom in coming voluntarily to acknowledge the power and wisdom of

¹⁷ According to Molinism the divine options for creation are limited by the counterfactuals of creaturely freedom. This point does not, however, invalidate the statement in the text.

the Creator. To preserve hiddenness, there needed to be such a lengthy, and apparently random, process of cosmic and biological evolution. I do not believe this response is promising.¹⁸ For one thing, the notion of divine hiddenness as a value to be preserved by the creation is controversial. One might equally well argue that God's "hiddenness" is a hiddenness in plain sight—that insofar as God's existence, wisdom and goodness are obscure to many of us much of the time, this is because of our own blindness, an epistemic impairment that is an unfortunate concomitant of our overall fallen condition. But leaving that aside, it simply does not pass muster that the overall structure of the creation is as it is in order to preserve an epistemic value of hiddenness in a way that would not have its effect until some 200,000 years of human existence had passed, including nearly two millennia of the Christian era—and then only to that comparatively small fraction of the human race who have the time, opportunity, and interest to scrutinize carefully the nature of that creation as controlled or as random.

Another, and perhaps in the end unavoidable, option here is for Augustinians and Molinists to appeal to sheer mystery—to affirm that everything in the creation, apparent randomness included, is exactly as the Lord intended for it to be, and that we cannot expect to understand his reasons for making it that way. In one sense, this is unanswerable; it is certainly not possible to prove that we *can* penetrate the intentions of the Creator. On the other hand, it still leaves open theism, among the three options, with a rather pronounced advantage. The appeal to mystery is not itself explanatory; rather, it amounts to the counsel to cease to look for or to expect any explanation. A theory which despairs of providing any explanation for a hugely important fact about the world is surely at an important disadvantage compared with a theory that does provide such an explanation, if the suggested explanation is in itself at all plausible.¹⁹

At this point, however, we need to examine Łukasiewicz' alternative, strong/open probabilistic theism. He is in agreement with the present paper in rejecting both determinism and Molinism. And much of what he has said is congenial to open theism, in particular his discussion of the advantages of including genuine randomness in the natural order. However, he also emphasizes the differences of his view from open theism: "God is timeless and knows from eternity the smallest details about the world" (30). In his concluding summary, he states three key concepts of Christianity concerning God's relation to the world:

¹⁸ For a similar criticism of this idea, see COLLINS, "Divine Action and Evolution," 246.

¹⁹ There is, of course, a great deal more that can be said, and has in fact been said, about both Augustinianism and Molinism. Our considerations here are limited strictly to the relationships between these views and the evidence for randomness in nature.

- (a) There is a perfect divine plan and every creature is subject to sovereign and unchangeable divine will.
- (b) God knows from eternity all events, even the smallest ones, which come to happen; for “all are open and laid bare to his eyes,” even those things which are yet to come into existence through the free action of creatures.
- (c) Divine care and love is direct and detailed: “for you love all things that exist, and detest none of the things that you have made; for you would not have made anything if you had hated it. How would anything have endured, if you had not willed it”? (*Catechism of the Catholic Church*, 2nd ed., no. 25)

Here the divergence from open theism is evident, in the first two of the three points. However, it is also rather difficult to see how Łukasiewicz’ own proposal agrees with (a). Earlier, he has stated:

The content of the idea of God-the-Creator is that God created the world *without any meticulous plan*, because He did not need such a plan. The omnipotent creative divine will needs no plans and is not limited by any possibilities (possible worlds), nor any necessities like, for example, the necessity of creating the best of all possible worlds. (24, emphasis added)

He claims, however, that his own conception “is congruent with (a) because it is claimed that nothing could happen or exist against God’s will; this also applies to chance events which are part of His plan” (30). It seems that these statements can be reconciled only if we make some rather strained interpretations. Conceivably, God created without any plan but arrived at a plan *after* he had learned about all the contingent events that would occur subsequent to his initial creative action. And the divine will is “unchangeable” in that this will has only been specified in detail *after* taking into account all those contingent events which might require a change of plans. It is fair to say that most who have subscribed to something like (a) did not have in mind anything like the interpretations Łukasiewicz’ assertions require.

With regard to (b), God’s knowledge of all events from eternity, this is possible because God is timeless, contemplating all of time, including that which as yet is future, from his unique eternal standpoint. This is indeed a view open theists reject; I submit they do so for good reasons. First, it is far from clear that locating God outside of time accomplishes anything with regard to the incompatibility between complete divine knowledge of the future and genuine free will for human beings. A widely held view is that foreknowledge may be incompatible with free will because God’s knowledge lies in the past, and as such cannot be changed in any respect. So if it is genuinely possible for a human agent to choose in any of two different ways, it must be possible either that (i) God’s past belief concern-

ing which choice would be made was mistaken, or (ii) God's past belief can be altered retrospectively—neither of which is at all possible. In fact, however, what causes the problem here is not that God's beliefs lie in the past, but rather that they are both infallible and inalterable. Neither of these considerations, however, is affected in any way by the switch to divine timeless knowledge. Surely timeless divine knowledge is no less infallible than temporal divine knowledge, nor are the contents of divine eternity subject to revision in the light of the actions of temporal beings—so the incompatibility remains.

There is another feature of divine timeless knowledge that is often overlooked, namely, that this knowledge *is of no use whatever to God in his providential governance of the world*. On this view, God “sees” the entire temporal order all at once, as it were in a single glance. Suppose that, in doing so, God spies a point at which something happens which God would have preferred to occur otherwise? Unfortunately, there is, logically speaking, nothing at all God can do about this! For the world history God is contemplating is the *actual* world history, the history that includes *all and only those events that actually occur*. To suppose that God somehow acts in such a way that these events do not, in fact, occur, is nonsensical. Whatever else God may have wished to do (or to have left undone), it is *always already too late*.²⁰ To be sure, the actual history which God surveys no doubt includes a great many points at which God decided what to do, or refrain from doing. These decisions, however, cannot possibly have been informed by God's timeless, eternal knowledge, for the reasons just given. What sort of knowledge did inform them is, however, left unexplained by proponents of divine timelessness.

The move to divine timeless knowledge also affects that knowledge in another way, one that is not particularly appealing. The move has the consequence that *God does not know what is happening right now*. It is a fact about the world's history that certain things *have already happened*, other events *are happening right now*, and still other events (some, perhaps only possible) *have not yet occurred*. For instance, the liturgy says, Christ *has* died, Christ *is* risen, Christ *will* come again. But a timeless God can know none of these things! To be sure, such a God would know that the death, resurrection, and return in glory of Jesus occur at certain points in human history—but God, unlike us, *cannot* know that the first two of these events *have already happened*, while the third has yet to occur. For in order to know this, God would need to *change*: he would need to know, first, that Jesus has not yet died, and subsequently that Jesus has in fact died—and this a timeless

²⁰ For a fuller development of this argument, see William HASKER, “Can Eternity Be Saved? A Comment on Stump and Rogers,” *International Journal for Philosophy of Religion* 87 (2020): 137–48, doi:10.1007/s11153-019-09719-w.

God cannot do! I suspect (and hope) that once this is fully realized, few Christians will find the notion of a timeless God plausible or attractive.²¹

A COMPARISON

Open theists will find much to celebrate in Professor Łukasiewicz's conclusions. Both will agree that "the traditional idea of God's perfection and providence is untenable ... [and] needs rectifying" (26). They agree that a rectified view will allow both for genuine chance events and for genuine (libertarian) free will. They will agree, in opposition to Thomas Flint, that "the idea of God whose 'providential success' depends on minute and irrelevant details, for instance on the number of protons, neutrinos, or hairs on one's head, is ... unconvincing. God cannot be viewed as the true Lord of absolutely everything in the universe if His 'strong' providence is hostage to such irrelevant, minute details" (29). True, questions may arise when it is asserted that "the idea of God's perfection entails that nothing can limit God's omnipotence and will. Neither lack of control over chance events, nor the eternal and immutable principles of morality, logic and mathematics, nor any metaphysical doctrine can do that because for God nothing is impossible." (27) Open theists may not subscribe to such a strong version of voluntarism, in which even the divine "essence is a spontaneous choice from a set of available possibilities" (27). (One might ask, who (or what) makes this "spontaneous choice"? Does the divine entity exist, prior to this choice, purely as a locus of unbounded, but completely unspecified, power?) But the effect of this on the other matters discussed in this essay is minimal, because Łukasiewicz insists that, once God's choice has been made, we must operate within the bounds God has established, and not (for instance) appeal to logical paradoxes to relieve problems of inconsistency our theorizing (27).

Pretty clearly, the most important difference between open theism and Łukasiewicz' view is the embrace by the latter, and the rejection by the former, of the doctrine of divine timelessness. Something has already been said about this, but we may add an additional, *ad hominem*, point: If we suppose, as Łukasiewicz

²¹ An escape from this objection is possible if one adopts a "four-dimensionalist" view of time, according to which past, present, and future literally all exist together in the "eternal present." On this view there is *no* fact of the matter concerning which time is "now"; rather, every time is "now" for those entities which occupy that particular time. Łukasiewicz, however, shows no signs of adopting four-dimensionalism, so it will not be discussed further here. A full array of arguments against divine timelessness will be found in R. T. MULLINS, *The End of the Timeless God* (Oxford: Oxford University Press, 2016).

does, that God chose between being temporal or timeless, why should we think he would have chosen timelessness?

The central theme of Łukasiewicz's model is the idea of God as "unlimited creative power," a God who has generously chosen to create a world containing both chance events and creatures with free will. Open theists will agree, perhaps with somewhat less emphasis on the divine voluntarism which characterizes his model. They will add to this a strong emphasis on the *relationality* of a God who, needing nothing, graciously established loving relationships with a world, and especially with the personal creatures whom he invites to be his children. Such a conception of God, we affirm, is altogether suitable for the Creator of our amazingly random, yet altogether purposeful world.

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HOW TO MAKE A WORLD

Summary

This paper investigates two modalities in which a complex task can be accomplished, here termed *meticulous control* and *purposeful randomness*. The paper considers which of these better describes the divine creation of the universe, as we know that creation through science. The paper also considers the bearing of this question on views about divine providence, including Łukasiewicz's "open probabilistic theism."

Keywords: creation; control; randomness; Łukasiewicz; probabilistic theism; open theism.

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Streszczenie

W tym eseju analizuję dwie modalności, dzięki którym można zrealizować złożone zadanie – nazywam je *szczegółową kontrolą* i *celową przypadkowością*. Rozważam, która z nich lepiej opisuje stworzenie przez Boga wszechświata, w świetle tego, co wiemy o stworzeniu na podstawie nauki. Badam również związek między tym zagadnieniem a poglądami na temat boskiej Opatrzności, w tym „otwartego teizmu probabilistycznego”, który proponuje Łukasiewicz.

Słowa kluczowe: stworzenie; kontrola; przypadkowość; Łukasiewicz; teizm probabilistyczny; teizm otwarty.