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The Problem of Creation

Thus far I have argued that monotheism is based on a separation between God and the created order. If the separation is as severe as Maimonides thinks, if God and creatures have nothing in common in any respect, another puzzle emerges: How can we maintain that the created order owes its existence to God? How can God create the world without having anything in common with it?

Following Aristotle, the scholastics held that causality is a relation in which the cause passes an attribute to the effect, as fire passes heat to an iron bar.¹ An immediate consequence of this view is that causal connection implies similarity between the thing that contributes the attribute and the thing that receives it. In the words of Maimonides (*GP* 2.22, p. 317):²

Any thing at random does not proceed from any other thing at random, but there subsists necessarily a certain conformity between the cause and its effect. Even in the case of accidents, one accident at random does not proceed from any other accident at random. . . . Similarly, form does not proceed from matter nor matter from form.

It was, after all, the inherent similarity between God and creatures that made Aquinas say that creatures represent God insofar as they possess some perfection. We saw, however, that Maimonides does not accept this view.³ If not, how can he maintain that God is responsible for the created order?

While the problem of creation originated from a scholastic understanding of causality, it is hardly unique to the philosophy of that period. Knowledge of causal connections is based on experience of

spatial/temporal phenomena. Even for some early modern thinkers, the cause must be contiguous with its effect. How, then, can we maintain that a being who is neither spatial nor temporal is the cause of things that are? The answer is that we cannot. According to Kant, causality is a relation that applies only to things in the phenomenal realm; thus any attempt to extend causality to cover the relation between noumena and phenomena constitutes a misuse of reason.⁴ If he is right, creation is not a causal connection, and there are no grounds for thinking that the creation of the world can be understood by looking at events that occur within it. As Aquinas said in a similar vein: "Creation cannot be called change except metaphorically."⁵

For philosophers in the Neoplatonic tradition, the standard way to deal with the problem of creation is to introduce a form of causality that is not limited to spatial/temporal phenomena and to put a series of intermediaries between God and earthly matter.⁶ According to this account, the world derives from successive emanations in the following way. God is engaged in self-thinking thought and generates the first intelligence. The first intelligence thinks about itself and God and generates the outermost sphere of the universe and the second intelligence. The second intelligence thinks about itself and the first intelligence and also generates a sphere and additional intelligence. This process is repeated until we reach the Active Intellect, which is the last stage in the heavenly realm. From there the forms of the sublunar realm are generated, and with them, the intelligence of human beings.

But it is rare that a problem can be solved by introducing additional entities. Even though the first intelligence is neither spatial nor temporal, it is still part of the created order. We will see that if the division between Creator and creation is as sharp as Maimonides thinks, emanation does not solve the problem of how a being that is simple and necessary can be the source of something that is complex and contingent. It is noteworthy that while Maimonides invokes emanation to explain prophecy, which involves the transmission of forms from one intelligence to another, he does not use it to explain the creation of the world as a whole.⁷

Though it is widely held that Maimonides' treatment of creation is one of his greatest achievements, there is little agreement among scholars about what that achievement consists in. The traditional interpretation holds that he defends a version of creation *ex nihilo*.⁸ The normal esotericist interpretation holds that he defends a version of necessary emanation from an eternal and unchanging

source.⁹ Another group holds that he defends a Neoplatonic view according to which the world was created from preexisting matter.¹⁰ In opposition to all three, Sarah Klein-Braslavy holds that he maintained a skeptical *epoche* that does not commit itself to any view in particular.¹¹

Why so much confusion on so central a point? The answer is not just Maimonides' cryptic writing style but the tendency of scholars to look at his discussion of creation in isolation from his commitment to negative theology. In a nutshell, I want to argue that his view of creation is based on (1) maximum separation between God and the created order, and (2) an inherent skepticism according to which we have reason to believe in a creation that is both *ex nihilo* and *de novo* but have no way to know or even guess what the details of creation are. This implies that Maimonides' treatment of creation parallels his treatment of God in that we have reason to believe *that* it occurred but no way to understand *how*. For Maimonides the "how?" of creation, by which I mean how God brought the world into existence, is just as mysterious as the "what?" of God.¹² In fact, the two are linked, because if we do not know what God is, we cannot know by what means God conferred existence on things. While there may be something to gain by learning what creation is not, there is nothing to gain by trying to speculate about an event that is completely beyond the limits of human experience. Perhaps this is why Judaism regards creation as an esoteric subject best discussed in private.

The Historical Background

At the beginning of Book 2 of the *Guide*, Maimonides claims to demonstrate that the existence of the world presupposes a timeless, changeless, unitary being who is neither a body nor a force in a body. On this issue, there is no difference between the prophetic and philosophic traditions (*GP* 2.33, p. 364)—at least as Maimonides understands them. What differences there are concern the question of whether the being presupposed by the world should be understood as an agent capable of spontaneous action or as the source of a necessary causal process like emanation. This in turn leads to the question of whether the world is contingent or the outcome of a process that could have produced only one result. Thus creation, to use Davidson's term, goes "hand in hand" with God's possessing free will.¹³ And free will goes hand in hand with commandment and revelation, essential parts of the biblical worldview.

On the other hand, eternity goes hand in hand with necessity. If everything comes to be as the result of a necessary process that leaves no room for choice, ideas like commandment and revelation have to be seriously reinterpreted. Not surprisingly, Maimonides claims (*GP* 2.25, pp. 328–29) that eternity undermines the foundation of the Law while creation upholds it.¹⁴ In broad terms, the debate is between something approximating the biblical conception of God and something approximating Plotinus' conception of the One.¹⁵ According to the first, the existence of the Creator does not necessitate the existence of creation; according to the second, it does.

Maimonides, of course, never mentions Plotinus and ascribes the theory of eternal emanation to Aristotle.¹⁶ Since the historical Aristotle does not invoke emanation, it is clear that what Maimonides has in mind is Aristotle as interpreted by Arabic Neoplatonists like Alfarabi and Avicenna. In view of his negative theology, Maimonides has no hope of demonstrating that one of these positions is true and the other false. Once we admit that God is unknowable, the issue is not whether we can demonstrate that God created the world but whether it is reasonable to believe it. Maimonides' task, then, is to show that creation is possible in the sense that no arguments force us to give it up and some arguments count in its favor.

So interpreted, his approach to creation is reminiscent of Kant's approach to free will. Since we cannot know that the will is free, the question for Kant is whether we are justified in assuming it is in order to satisfy the demands of morality. Put otherwise, the question is whether freedom is possible, not whether it is certain. In Kant's words (*CPR* B xxix), "Morality does not, indeed, require that freedom should be understood, but only that it should not contradict itself."¹⁷ Rather than prove the existence of freedom directly, Kant's strategy is to turn the tables on his opponents. In the *Foundations of the Metaphysics of Morals* (459), he tells us that "where determination according to natural laws comes to an end, there too all explanation ceases and nothing remains but defense, i.e., refutation of the objections of those who pretend to have seen more deeply into the essence of things." It is his opponents, then, who overstep the limits of reason by assuming that because freedom has no natural explanation, it makes no sense. His reply is that since we have been given no reason to think that natural causes exhaust the realm of possibility, his opponents' arguments do nothing to show that belief in freedom has to be given up. Since it does not have to be given up and morality presupposes it, a rational person can accept it.

This response clearly derives from Maimonides, whose primary strategy is stated at *Guide* 2.17, p. 298:

For at present we do not wish to establish as true that the world is created in time. But what we wish to establish is the possibility of its being created in time. Now this contention cannot be proved to be impossible by inferences drawn from the nature of what exists.

Like Kant, all Maimonides has to do to put his opponents on the defensive is show that creation is coherent even if we do not understand, and may never understand, the details of how it happened.¹⁸

When it comes to the history of the dispute, Maimonides claims (*GP* 1.71, p. 180) that philosophers have been discussing creation for 3,000 years and have still not resolved the issue. Later (*GP* 2.15, p. 291), he argues that even Aristotle realized he had no demonstration (*burhān*) of eternity and had to rely on mere arguments. With so much indecision, it is tempting to think that we can turn to the Bible for help. If this were true, Maimonides would be in a position to say, with Aquinas, that creation has to be taken on faith alone.¹⁹ But it is characteristic of Maimonides to be just as skeptical of the religious tradition as he is of the philosophic.

Even without Maimonides' warnings about the ambiguity of prophetic language, it is clear that the opening lines of Genesis raise more questions than they answer.

In the beginning God created the heaven and the earth. Now the earth was unformed and void, and darkness was upon the face of the deep; and the spirit of God hovered over the face of the waters.

To begin with, there is a long-standing dispute on whether the opening line should be read "In the beginning, God created . . ." or "When God was creating . . ." There is also a problem with the word *bara* (created). Since it is used only of divine creation and has no human analogue, it is difficult to know exactly what it refers to.²⁰ The words *tohu vavohu* (unformed and void) are grammatical nonsense. And what are we to make of the water over which the spirit of God hovers? Does God bring the world into being and *then* impose order, or is the imposition of order synonymous with the act of creation itself? We will see that Maimonides has his own interpretation of these verses, but he openly admits that some rabbinic sages took them in very different ways.²¹

As for Maimonides' predecessors, Saadia believed in creation *ex nihilo* while Ibn Gabirol believed in a preexisting material. Among his successors, Abravanel believed in creation *ex nihilo*, Gersonides

in creation from a preexisting material, and Moses of Narbonne in eternity. To repeat: Judaism does not have formal articles of faith. We can therefore agree with Marvin Fox that "there was no internal Jewish pressure on Maimonides to reach a single, fixed conclusion with respect to the problem of creation."²² The issue, then, is not one of trying to balance the claims of faith against those of reason but of examining arguments from both ends of the spectrum to see if the idea of creation is coherent.

The Three Primary Alternatives

The three alternatives discussed at *Guide* 2.13 are attributed to Moses, Plato, and Aristotle. The theory of Moses holds that every existent other than God was brought into existence "after having been purely and absolutely nonexistent" and that "through His will and His volition" God "brought into existence out of nothing all the beings as they are, time itself being one of the created things." It also holds that God acted alone "without the help of angels, spheres, or intelligences." So in addition to free will, Moses' theory is committed to a radical separation between Creator and creation. If this theory is true, God is the only thing in the universe that is eternal and the only thing responsible for creation.²³

What does it mean to say that God brought the world into existence *after* pure and absolute nonexistence? Since Maimonides agrees with Aristotle that time is an accident dependent on motion, and motion presupposes something that moves, the idea of a temporal succession "before" creation is incoherent. As Maimonides points out, the claim that God "was" before creation, where "was" indicates the passing of time, derives from the imagination and cannot be true. We can say that God exists prior to creation, but this expression involves logical rather than temporal priority. All it means is that the world exists in time and presupposes God while God is outside of time and presupposes nothing.²⁴

Harry Wolfson argues that Maimonides often describes creation *ex nihilo* as creation *after* nothing (*ba'd al-'adam*), not to indicate temporal passage but to avoid a possible misunderstanding.²⁵ Grammatically "God created the world out of nothing" resembles "Susan made the statue out of bronze." So unless one is careful, "nothing" will appear to be the material cause of being. But if nothing is pure and absolute, it cannot be the material cause of anything; it is, after all, nothing.²⁶ Put otherwise, creation *ex nihilo* does not mean that God transformed nothing into something. It means instead that with-

out God, nothing—not angels, spheres, or prime matter—would exist. According to Wolfson, Maimonides' "after nothing" is therefore the equivalent of Aquinas' *post non esse*. For both thinkers the point is not that creation involves the passage of time but that creation *ex nihilo* is not creation *from* something in the normal sense.

It is well known that Maimonides does not use a single expression to designate creation *ex nihilo*. After telling us that the Mosaic position asserts that the world was "after pure and absolute nonexistence," he starts to talk about creation "not from a thing" (*la min shay*) or "from no thing" (*min la shay*). Sometimes he abandons the "after nothing" formula entirely and talks about creation "out of nothing."²⁷ As Klein-Braslavy points out, he also drops the qualification "pure and absolute" when discussing the verb *bara* at *Guide* 2.30.²⁸

Part of the problem is that the philosophic tradition did not reach a consensus on how nothing should be understood. The realization that *nothing* need not be absolute and in some respects can "be" is as old as Plato's *Sophist*.²⁹ Thus the Greek *to me on* can mean either "the nonexistent" or "matter."³⁰ The same ambiguity applies to the term 'adam, which is why Maimonides feels the need to say "pure and absolute" when introducing the Mosaic position. Why would a philosopher who wrote with care begin with one expression and then shift to others?

The simple answer is that having told us that the Mosaic theory is committed to full-blown creation *ex nihilo*, he is under no obligation to keep repeating the same phrase. Note, for example, that by the time he gets to *Guide* 2.30, the "after nothing" formula is no longer essential because he has given several arguments to show that creation should not be confused with change. Given Maimonides' skepticism about language, he may have wanted to avoid a fixed vocabulary, or he may have thought that several expressions would drive the point home better than one. Aquinas, who has no taint of esotericism, did not settle on a single expression either.

I suggest that the real issue is not terminological but philosophic: Must creation have a material cause? The answer is yes *if* creation is a causal process analogous to change. Following Aristotle, most scholastics conceived of change as a process in which something loses one attribute and gains another. This implies a substrate that remains the same throughout, the subject of the change. If this is the paradigm we use to explain creation, the suggestion that absolute nonexistence can gain or lose an attribute and therefore be the subject of change is absurd. But again we must ask why the creation of

the world as a whole must resemble individual changes that take place within it. The thrust of Maimonides' argument is that nothing requires us to think it does.

In addition to an exchange of attributes, change involves movement of the subject from potency to act. In Maimonides' words (*GP* 2.14, p. 287): "The possibility of its changing precedes in time the change itself." But as he goes on to show in a later chapter (*GP* 2.17, p. 297), when we talk about creation *ex nihilo*, we are working with a different model, so that "neither the senses nor the intellect point to something that must be preceded by its possibility."³¹ Again creation is unique, and any attempt to explain it with reference to natural processes begs the question. Consider an example. Though wood is flammable before an agent actualizes its potential to burn, it does not follow that before creation, the world existed in an unformed state waiting for God to actualize its potential in a similar way.³² If creation is unique, it does not involve the transition from potency to act and would not require a trigger mechanism or preexisting material substratum. This does not mean that to believe in creation *ex nihilo* one has to give up belief in prime matter. A person can still hold, as Maimonides appears to, that prime matter is that out of which all other material things are formed. After all, changes that take place *within* the created order do require a material cause. It simply means that God created material things as well as the source from which they are generated.³³

What Maimonides has done is to refute an argument against creation that derives from Aristotle's *Physics* 8.1. Before the world existed, it was possible for it to exist. Possibility requires a material cause. Therefore there had to be a material cause for creation. His response is that the existence of possibility before the fact applies only to things that already exist or, in Maimonides' words, to "being that is stabilized."³⁴ Thus any application of this principle to creation oversteps the limits of reason. In a nutshell, creation does not follow the same pattern as human reproduction, the building of a house, or the growth of an acorn into an oak tree. It is not the shedding of one attribute and acquisition of another. Rather than a change in what exists, it is the origin of existence in the most radical sense. To say that God created the universe out of nothing implies that God's action bears no resemblance to anything we have seen or are capable of doing on our own.

There is one more issue to be discussed if we are to grasp the Mosaic position. We saw that for Maimonides, time is an accident depend-

ent on motion. Hence creation is not a temporal act that takes place *in* time or a process that can be measured *by* time; it is the origin of time and motion together. As Maimonides tells us again and again: "Time is a created and generated thing." The problem is that when Maimonides says that the world is created anew (*hudūth*), Pines' translation has him say that the world was created "in time." The result is that there are a number of passages where Maimonides appears to contradict himself in the most egregious fashion, saying first that time is created and second that creation takes place *in* time.³⁵

The problem can be resolved if we take Maimonides to be talking about creation *de novo*, which is to say creation that involves a radical beginning of time and motion together. To say that time is not absolute and depends on motion is perfectly compatible with saying that neither time nor motion are eternal. Or, as Richard Sorabji put it: "[T]alk of a beginning of time or of motion does not imply some earlier *time* at which they were absent."³⁶ All it implies is that a context in which time and motion can be measured has existed for finitely as opposed to infinitely many years. So there is nothing incoherent in saying (1) the age of the world is finite, (2) time is consequent on motion, and (3) there is no time before creation.

On the basis of arguments in the *Physics* (8.1) and *Metaphysics* (12.6), Aristotle would reject (2) and accept (1); but that does not mean that (1) and (2) are incompatible. According to Aristotle, time is composed of moments. A moment is a midpoint between "before" and "after." So if there were a first moment, there would have to be time before the first moment, which is absurd. Therefore the idea of a first moment is absurd. As a statement of what we normally mean by a moment of time, Aristotle is clearly right: A moment is a point in a continuum. But why should normal usage force us to deny the possibility of a first moment? To put the question another way, why is the idea of a moment that has no time before it incoherent? To repeat: It is not that this moment has empty time before it; it simply marks the beginning of time. Why, in other words, can we not follow Gersonides and use "before" in two different ways: one to mark a midpoint in the way Aristotle suggests and one to mark a limit as in "Before the first moment, there was no time?"³⁷ Along similar lines Aquinas argues that denying the existence of time before the first moment is on a par with saying "Above the heavens, there is nothing." In neither case do we generate absurdity.

The first person to point out the problem with Aristotle's view was Philoponus, who argued that the belief that every moment is a midpoint between two other moments assumes what Aristotle is try-

ing to prove — that the world is eternal.³⁸ To avoid the charge of circularity, Aristotle would have to show that there cannot be a first moment because there cannot be a first motion. He attempts to do this by arguing that motion requires the actualization of a potentiality. Since actuality, in Aristotle's opinion, is prior to potentiality in time, there must be something already actual for something else to move from potency to act.³⁹ In this case, there must be something already moving if something else is to exercise its potential for motion. If so, there must have been a motion before the first motion. Therefore the idea of a first motion is absurd, so motion is eternal. But if motion is eternal, time is eternal as well. The problem with this argument is its reliance on the categories of act and potency. If we accept explanation according to act and potency as the only option, and admit the priority of the former to the latter, the deck is stacked against spontaneity. But as we saw above, and will see in greater detail below, there is no reason to think that these categories are the only ones available.

Unfortunately some of Maimonides' commentators seem to think that because he believed in the dependence of time on motion, he could not accept the Mosaic position.⁴⁰ In other words, they argue that by *creation* Maimonides can only mean the eternal dependence of the world on God. I hope to show that this view is wrong both textually and philosophically. There is no question that Maimonides accepts the dependence of time on motion. If the Mosaic theory were incompatible with so elementary a point, it is hard to see what Maimonides would gain by discussing it for nearly fifteen chapters. Recall that the purpose of dialectic is to consider positions that reasonable people either can or do hold. At the very least, the Mosaic position falls into this category, which means that its view of time and motion is perfectly acceptable.⁴¹

At the close of *Guide* 2.13 Maimonides says that the Mosaic position is committed to two things: (1) "That there is nothing eternal in any way at all existing simultaneously with God," and (2) "That the bringing into existence of a being out of nonexistence is for the deity not an impossibility." Thus the Mosaic position is committed to a creation that is both *ex nihilo* and *de novo*.⁴² From my perspective, the importance of these claims is that they assert complete separation between God and the created order. The Platonic position accepts the latter type of creation but not the former; the Aristotelian position accepts neither. So not only is Maimonides defending the idea of a religion that involves commandment and revelation, he is still defending a rigorous view of monotheism.

Maimonides tells us that philosophers reject creation *ex nihilo* on the grounds that it is absurd: To say that God can create the world from nothing is like saying that God can create a square whose diagonal is equal to the side. We saw that the philosophers were right if we take creation *ex nihilo* to mean that God transforms nothing into something or that nonexistence *becomes* existence. From nothing we will only get nothing. But the Mosaic position does not hold that nonexistence is transformed or becomes something else. Rather it holds that God is the only factor responsible for creation. And this position, though not self-evident, is hardly absurd.⁴³ Contrary to what Maimonides tells us, there was a long tradition of philosophers who did affirm it.⁴⁴

Maimonides relates that to avoid creation *ex nihilo*, "the philosophers of whom we have heard reports" believe in "a certain matter that is eternal as the deity is eternal." In other words, they choose to compromise God's uniqueness by introducing another factor in creation that is related to God "as, for instance, clay toward a potter or iron toward a smith." Given a spectrum with uniqueness on one side and intelligibility on the other, the philosophers opt for intelligibility. In fact, the crux of the philosophers' opinion is that God can be understood according to principles derived from our experience of earthly phenomena.

The philosophers' objection would be valid if it could be shown that creation must have a material cause. But why should this be the case? Why should we assume that creation is a bigger version of generation or reproduction? Certainly the thrust of Maimonides' negative theology counts against this idea. I bring up negative theology because it is often assumed that Maimonides juxtaposes a religious tradition, which is given to flights of fancy, with a philosophic one, which is based on a critical understanding of the issues. But in the case of creation, the problem is not that the philosophers are too critical but that they are not critical enough: They assume that principles that apply to our experience of one part of the world must also apply to God and the creation of the world as a whole.⁴⁵

Maimonides divides the philosophers into two groups corresponding to Plato and Aristotle. The Platonic position holds that the world was created from matter and that the heavens are subject to generation and destruction just like things on earth. After describing it, Maimonides says that it is not the same as his because he believes that "the heaven was generated out of nothing after a state of absolute nonexistence." Later, at *Guide* 2.25, p. 329, he continues to say that "we shall not favor this opinion."

Finally we come to the position of Aristotle, who, like Plato, believes in eternal matter. But unlike Plato, Aristotle believes that the heavens are not subject to generation or destruction; the world as well as time and motion are eternal. Moreover, God is not subject to change in any way, so "it is impossible that a volition should undergo a change in Him or a new will arise in Him." In our terms, God cannot act spontaneously. As Maimonides characterizes the Aristotelian position, it consists of variations on a theme we encountered above: A new volition in God means change in God; change requires transition from potency to act; a transition of this sort is impossible in a perfect being. In one respect the Aristotelian position recognizes creation; it just defines creation as the eternal information of matter by a necessary causal process. According to *Guide* 2.16, p. 194, none of the three positions is free of difficulties, but "just as a certain disgrace attaches to us because of the belief in the creation in time, an even greater disgrace attaches to the belief in eternity."

Arguments for the Possibility of Creation

Maimonides' first line of argument against the Aristotelian position is that it assumes we can begin with knowledge of the world in its present state and reason backwards to knowledge of its origin. Against Aristotle he asserts (*GP* 2.17, p. 295):

No inference can be drawn in any respect from the nature of a thing after it has been generated, has attained its final state, and has achieved stability in its most perfect state, to the state of that thing while it moved toward being generated.

In support of this principle, he asks us to imagine that a male child is taken from his mother after several months and put on an island. Upon his reaching maturity, there would be no way for him to infer anything about reproduction or gestation. Told that he spent the first nine months of his life in the belly of another human being where he received food and air through a tube, he might respond with disbelief.

To evaluate this argument, several points need to be kept in mind. First, the analogy between the birth of a child and the creation of the universe is imperfect, since the former takes place in space and time and is plainly visible.⁴⁶ If Maimonides' argument is valid, *any* analogy between the creation of the universe and the occurrence of a specific event in it will fail. But the analogy does not have to succeed in every respect for Maimonides to make his point: If we cannot infer

something as simple as the circumstances of a child's birth from knowledge of the adult, it is all the more true that we cannot infer the details of creation from knowledge of the universe in its present state. If one inference is questionable, the other is outrageous.

Second, this argument does not show that creation must be explained by principles different from the ones that apply to the world in its present state; it simply shows that there is no reason to think that creation must be explained by the same principles. As we saw above, creation does not have to involve a transition from potency to act. Though potency and act apply to changes that take place within the world, the Aristotelians have offered no proof that they must apply to the origin of the world as well. The Aristotelians could always respond with an argument from ignorance: "If creation does not involve a transition from potency to act, what does it involve?" But Maimonides does not have to answer this question. At this stage, all he has to say is that Aristotle has assumed something that is open to doubt. Thus *Guide* 2.17, p. 298: "I shall accordingly show you, in a following chapter, how doubts can be cast on these methods so that no proof whatever can be established as correct by means of them."

The primary area of doubt concerns volition. According to Maimonides (*GP* 2.18, p. 301), the essence of the will consists in its ability to will or not will.⁴⁷ It should also be kept in mind that Maimonides is talking about the *possibility* to will and not will, not the *fact* of changing one's mind. In a being that responds to external stimuli, willing one thing now and a different thing later would involve change and therefore some kind of imperfection. But there is no reason why we have to think of God's will along the lines of a person looking at a menu and deciding what to eat for dinner. Accordingly, "The fact that it may wish one thing now and another thing tomorrow does not constitute a change in its essence and does not call for another cause." In short, God could will in a purely autonomous fashion. This does not imply arbitrariness, as Algazali suggested, but the absence of reliance on external impediments or inducements. Once external factors are out of the picture, we no longer have to regard the will as an effect of something else: It can be completely self-determined, so that the only thing operating on the will is the will itself. It follows that a being who wills in a purely autonomous fashion is not analogous to a being who wills as a result of change. The upshot is that there is no reason why we cannot admit the possibility of free will in an eternal being, and once we have free will, we can have purpose or intention as well.

What does it mean to say that a being can will one thing now and a different thing later without changing its essence? Although Maimonides does not provide much in the way of detail, he seems to be getting at a point made by Philoponus and taken up by Algazali and Aquinas: that willing change is not the same as changing one's will.⁴⁸ To use one of Aquinas' examples, if a doctor asks a patient to wait a day before taking a particular drug, it does not follow that the doctor has to will one thing today and a different thing tomorrow; it simply means that the doctor wants the patient to proceed in due course.⁴⁹ This situation is altogether different from one in which the doctor prescribes one treatment, sees that it does not work, and shifts to another treatment later on. For natural causes a delayed effect of this sort is impossible: Given the existence of the cause, the effect must follow. But for an agent with will, the determining factor is not the existence of the agent but the agent's intention to realize a particular end. Thus anyone who says that the eternity of the world follows from the eternity of the Creator assumes that the only way to think of the Creator is with categories taken from natural science. Once we admit that the reach of natural science is limited, there is no reason why we cannot think of God as free. Once we think of God as free, a distinction emerges between the act of will and the object willed in the act.⁵⁰ Though the former is unchanging, it does not follow that the latter is.

This does not mean that Maimonides knows what God's will is or how it operates. Nor does it mean that he has smuggled in the idea of a personal God while no one was watching. From the knowledge at our disposal and the limited perspective we have, there is no way we can infer the ultimate purpose God has in mind. The only thing Maimonides has shown is that one can give a coherent account of will and purpose in God and therefore that the Aristotelian arguments against will and purpose are not convincing (*GP* 2.18, p. 299).⁵¹ In short, he has shown that spontaneity is possible in God and therefore creation *de novo* is possible as well.

Arguments for the Likelihood of Creation

Beyond the issue of whether creation *de novo* is possible, Maimonides presents a series of arguments from the *Kalam* designed to show that it is the best explanation of the available evidence. Although he rejects these arguments as *proofs* of creation, he feels free to use them as considerations that count in its favor.⁵² The first claims that if we

start with an unchanging God and a necessary causal process, we might be able to account for the existence of *a* world but not for the distinctive features of this one, in particular the orbits of the planets.⁵³ According to the received wisdom, each sphere was supposed to impart regular motion to the one below it. But this theory broke down in a number of cases (*GP* 2.19, p. 307):

For we see that in the case of some spheres, the swifter of motion is above the slower; that in the case of others, the slower of motion is above the swifter; and that, again in another case, the motions of the spheres are of equal velocity though one be above the other. There are also other very grave matters if regarded from the point of view that these things are as they are in virtue of necessity.

The key word is *necessity*. According to Maimonides (*GP* 2.19, pp. 302–3), anyone who believes in the eternity of the world is committed to the view that whatever proceeds from God does so by necessity. Maimonides objects that if we cannot explain something as visible as planetary orbits, we have no demonstration and thus “the matter, as he [Aristotle] sets it out, does not follow an order for which necessity can be claimed.”⁵⁴

It should be noted that Maimonides has no quarrel with Aristotle on the physics of the sublunar realm. In fact, he claims that anyone who does not accept causal explanations of earthly phenomena is a fool. The reason is that causal explanations of earthly phenomena allow people to explain what they observe. What do you do when the available explanations lead you to expect something very different from what you observe? The problem is all the more difficult given that the motion of heavenly bodies is not random. Ptolemaic astronomy allowed people to form a reasonably good idea of where the planets would be. The difficulty, which Maimonides (*GP* 2. 24, p. 326) calls “the true perplexity,” is that Ptolemy’s epicycles and eccentric orbits could not be reconciled with Aristotle’s claim that all heavenly bodies rotate in uniform circular motion around a common center. In Maimonides’ opinion, epicycles and eccentric orbits are “entirely outside the bounds of reasoning and opposed to all that has been made clear in natural science.” Thus there was the appearance of order coupled with the failure of existing theories to account for it. His answer is to drop scientific explanations and turn to a form of voluntarism. The heavenly bodies behave as they do because a being that is endowed with will and purpose designed them that way (*GP* 2.19, p. 308): “For we say that there is a being that has particularized,

just as it willed, every sphere in regard to its motion and rapidity." To say that the heavenly bodies reflect will and purpose is to say that, from what we can tell, their order and arrangement could be different. The argument, then, is that without a satisfactory scientific explanation, there is no reason to think that the order and arrangement we observe are inevitable.

Isaac Husik objected to this argument on the grounds that Maimonides is no better off than his opponents.⁵⁵ Asked why Mercury moves this way and Jupiter that, all Maimonides can say is that God willed it to happen. To be sure, his "explanation" can never be disconfirmed; but for that very reason, it has no explanatory power. If the Aristotelians are in a quandary about how to explain planetary behavior, Maimonides is no better. Yet surely Husik missed the point. Maimonides does not claim to have a naturalistic explanation for planetary orbits. On the contrary, his point is that all naturalistic explanations known to him are inadequate. In fact, he is skeptical about the possibility of ever having an explanation that saves the phenomena. At *Guide* 2.24, pp. 326–27, he admits bewilderment and concludes that "regarding all that is in the heavens, man grasps nothing but a small measure of what is mathematical."⁵⁶ All that the argument from particularity claims is that heavenly phenomena are compatible with free will but not with emanation from an unchanging source. For if the theory of emanation were true, there should be no anomalies or contingencies at all. The argument from particularity does not purport to explain why God chose one arrangement rather than another.

This is, to say the least, a highly provisional argument. Maimonides admits at the end of *Guide* 2.24 that phenomena that seem irregular to him might be adequately explained by a new theory. But his concession has to be viewed in light of two facts. First, Maimonides is very doubtful that such a theory will be developed, since it would strain the limits of human knowledge as he understands them. Second, even if such a theory were to appear, it might make emanation from an unchanging source more plausible but would still not guarantee its truth.

Lacking an adequate astronomical theory, the Aristotelian position is clearly on the defensive. Suppose, for example, that a person who had never seen the motion of the heavenly bodies were told that they emanated from a perfect being by a causal process that does not allow for will or purpose. Suppose she were also told that motion proceeds from the outer to the inner spheres. Surely she would never ex-

pect to find data so confusing that even the best theories run into obstacles.

It is true, as Warren Harvey points out, that Maimonides talks about divine volition when he introduces the Aristotelian position at *Guide* 2.13: "All that exists has been brought into existence, in the state in which it is at present, by God through His volition."⁵⁷ But in the chapters that follow, Maimonides goes on to argue that strictly speaking, a will that lacks the possibility of spontaneous action is no will at all. As we saw, volition is the ability to will or not will. Insofar as the world proceeds from God by necessity (*GP* 2.20, p. 314), "this is not called purpose, and the motion of purpose is not included in it." To use Maimonides' example, this would be like saying that a person willed to have two arms and two legs. In fact, earlier in the same chapter he considers the possibility that necessary emanation could be combined with the idea of will and purpose, but he rejects it as a contradiction in terms. Once we grant that the world proceeds from God by necessity, everything from the motion of the heavenly bodies to the size of a fly's wing would be fixed for all eternity (*GP* 2.22, p. 319). Note, however, that while the particularity argument may tip the scales in favor of creation *de novo*, it does not address the question of creation *ex nihilo*. As things stand, a Platonist could use the same argument to support creation from a preexisting material.

A second but related argument takes the issue of particularity further. If we begin with God and a necessary causal process, not only can we not account for the motion of heavenly bodies, we cannot account for metaphysical complexity of any kind. Underlying this argument is an assumption that Maimonides claims is shared by Aristotle and everyone else (*GP* 2.22, p. 317): "It is impossible that anything but a single simple thing should proceed from a simple thing."⁵⁸ This assumption is an instance of the principle that the effect must be similar to the cause, or as Maimonides puts it, exhibit "a certain conformity." It might make sense to suppose that a simple intelligence could proceed from God by a causal process or that one simple intelligence could proceed from another simple intelligence. But even if there were a thousand stages in the process, the final product would have to be simple. And even if the final product were an intelligence contemplating other intelligences, we would still not have anything like the complexity we observe around us. How, then, can a sphere, which is a composite of matter and form and which contains a star that is also composite, proceed from something simple? Maimonides' answer is that it cannot, and that the only way to explain complexity in a causal fashion is to start with something complex.

What is the alternative? Again Maimonides claims that the particularity of the world is compatible with will and purpose but not with necessity. Yet this argument makes a bigger claim than the previous one: Unless God willed it, the universe would not contain any composite beings at all. In other words, we cannot explain the existence of spheres and stars, much less the existence of the sublunar realm, by supposing that forms emanate from God, because matter, which is the source of complexity, cannot proceed from form. As Maimonides asks (*GP* 2.22, p. 318): "What relation can there be between matter and that which being separate has no matter at all?"

Unlike the previous argument, this one seeks to show that the world is not eternal *and* that every composite being in the world owes its existence to the will of God. As Davidson remarks, the latter appears to support creation *ex nihilo*.⁵⁹ If God is simple and immaterial, no causal relation can explain the origin of a complex world. The only way we can explain it is to invoke something that does not imply similarity between the source of existence and the things that proceed from it. As we saw, an act of will can have properties very different from the object willed. It is possible to will now something that will not be realized for years to come or to will something that can never be realized. The decision to buy a house, for example, can be simple and instantaneous even though the object willed is often a mass of complications. Maimonides' hope is that by shifting to a voluntaristic explanation, he can hold on to divine simplicity and worldly complexity at the same time. The problem is that he can do so only by making the efficacy of God's will a mystery: Though the source of existence, it remains distinct from existence in every possible way.

When he first introduced the subject of creation, Maimonides set out to defend two things: creation *de novo* and creation *ex nihilo*. He admits that the arguments supporting creation *de novo* are not decisive but makes three claims on their behalf: (1) they establish the possibility of creation *de novo*, (2) they take into account the limits of human knowledge and do not require us to provide a natural explanation for everything we see, and (3) by defending free will in God, they uphold the foundation of the Law. Because they are tied to an outdated astronomy, the particularity arguments are no longer valid.

But if the scientific revolution rendered part of Maimonides' position obsolete, it provided support for other parts. In today's world few people believe that explanation in terms of act and potency is the only option available or that the eternity of the universe can be established *a priori*. In fact, the evidence at our disposal now points to

a temporal origin between 10 and 12 billion years ago. If we accept the relativity of space and time, then the idea of a common frame of reference between God and various parts of an expanding universe may be not only false but incoherent. It may also be incoherent to suppose that everything in the universe is moving at the same speed or can be measured by the same clock.⁶⁰

Still, we should be cautious in concluding that Maimonides would run to embrace the big bang theory. Maimonides took the newness of the world as evidence of free will in God, but modern science draws no such inference.⁶¹ More important, his warning about reasoning from the world in its present state to the circumstances of its origin has lost none of its validity. Scientific principles presuppose space and time. Once space and time exist, we can use those principles to explain how something goes from one state of its development to another. If Maimonides is right, we cannot use scientific principles to explain the origin of space and time in the most radical sense.

Pushing scientific explanations back to a point where temperatures were many billions of times greater than anything known to exist at present is a speculative endeavor to be sure. Even from a scientific standpoint, we may question whether the origin of the universe can be explained by conventional means. Thus Alan Guth seems to echo Maimonides in warning about the dangers of extrapolation:⁶²

If one continues the extrapolation backwards in time, one comes to a point of infinite density, infinite pressure, and infinite temperature—the instant of the big bang explosion itself, the time that in the laconic language of cosmologists is usually called “ $t = 0$.” It is also frequently called a *singularity*, a mathematical word that refers to the infinite values of the density, pressure, and temperature. It is often said—in both popular-level books and in textbooks—that this singularity marks the beginning of the universe, the beginning of time itself. Perhaps this is so, but any honest cosmologist would admit that our knowledge here is very shaky. The extrapolation to arbitrarily high temperatures takes us far beyond the physics that we understand, so there is no good reason to trust it. The true history of the universe, going back to “ $t = 0$,” remains a mystery that we are probably still far from unraveling.

As Guth goes on to explain in a footnote, if the extrapolation to $t = 0$ is not trustworthy, then a description like “one second after the big bang” is ambiguous. In fact, it is not even clear that time measurements, which are relative to each other, have any bearing on the idea of a “time zero” at all. But the issue involves more than speculation. According to Maimonides, there is no reason why we have to think of the origin of all causal sequences as a causal sequence obeying the same set of laws.

Maimonides' appeal to will and purpose is a bad account of the existence of the world *if* we interpret it as an attempt to provide the kind of explanation science does. A more generous reading would say that it is an attempt not to do science in the normal sense but rather to answer general questions about the universe in which science operates. On one side, he faced the Mutakallimun, who denied all causal connection and explained everything by direct appeal to the will of God. According to *Guide* 1.73, p. 202, "They assert that when a man moves a pen, it is not the man who moves it; for the motion occurring in the pen is an accident created by God in the pen." On the other side, he faced the Aristotelians, who argued that all observable phenomena can be explained by reference to laws that cannot possibly be otherwise. In Maimonides' world, there are causal connections worth investigating, but they are contingent and proceed from God's decision to create an orderly world. Though much of that order is beyond our comprehension, we are best advised to pursue scientific explanations as far as they go and recognize that at some point we will not be able to go any further. In Maimonides' world, then, scientific explanations are possible but not ultimate: They advance our understanding of the world but do not exhaust it.

Maimonides was not the first and will hardly be the last thinker to use the limit of scientific knowledge as grounds for affirming the possibility of free will. If the evidence for the big bang is compelling, he would accept it without hesitation. But honesty would force him to say that creation in his sense of the term still cannot be demonstrated because scientific principles are not designed to take us from a spatial/temporal world to a nonspatial/nontemporal origin. The issues at stake have nothing to do with Athens versus Jerusalem but with the limits of human knowledge and how to cope with them. Maimonides' contribution to this issue is to show that the question of origin is unlike any other question we may ask. To return to a familiar theme, the question of origin is unique, which means that the answers we give are always speculative.

A Courteous Bow to Platonism

In regard to creation *ex nihilo*, Maimonides is more guarded. After saying that he rejects the Platonic view at *Guide* 2.13, he claims at 2.25 that it is permissible to believe it. From his standpoint, the Platonic view has two points in its favor: (1) it affirms or at least is compatible with creation *de novo*, and (2) it is a reasonable interpretation of what Maimonides describes as "many obscure passages"

in the Torah and rabbinic literature. The passages he is talking about are noteworthy for visual imagery designed to appeal to the imagination. We saw that the opening lines of Genesis refer to darkness, a body of water, *tohu vavohu*, and the spirit of God hovering over the water. The sayings of Rabbi Eliezer talk about creation from God's garment and the snow under God's throne (*GP* 2.26, pp. 330–31). One way to make sense of these passages is to say that water or snow are colorful expressions used to refer to preexistent matter and therefore lend themselves to the Platonic view of creation.

At *Guide* 2.25, pp. 328–29, Maimonides says that he would not interpret Genesis according to its external sense if the Aristotelian and Platonic views could be demonstrated. Since in his opinion they cannot be demonstrated, the external sense is to be preferred.⁶³ That raises the question of what the external sense is. In my view it is the position Maimonides ascribes to Moses: a creation that is *de novo* and *ex nihilo*.⁶⁴ The issue of how to interpret the opening lines of Genesis is raised again at *Guide* 2.30, where Maimonides repeats that time cannot have a temporal beginning because it is itself a created thing; thus God does not precede the world in a temporal sense. He goes on to say that the first word of Genesis (*bereishit*) suggests creation *de novo*, a remark that implies again that creation *de novo* is not a temporal process but the origin of time in the most radical way.⁶⁵

He then argues that the preposition *et* should be taken to mean that God created, together with the heavens, everything that is in the heavens, and together with the earth, everything that is in the earth; in short, "everything was created simultaneously; then gradually all things became differentiated." If so, *creation* in the proper sense applies to the first act, which is simple and instantaneous.⁶⁶ Anything that happens after that involves categories like hot/cold, fast/slow, large/small, or high/low, but not the category of existence pure and simple.

The mention of elements, prime matter, and various form of chaos takes us back to the issue of hierarchy. We can explain the elements out of which things are composed, distinguish heavenly matter from earthly matter, describe the actions of the stars and intelligences, or reach all the way down to prime matter; in a modern context we can talk about hydrogen, helium, and enormous energy levels. But in the end, the only difference that matters is the ultimate one between Creator and creation. Along these lines, Maimonides (*GP* 2.30, p. 358) takes the word *bara* to refer to bringing the whole world into existence out of nonexistence. If I am right in taking nonexistence as *complete*

nonexistence, these considerations point in the direction of creation *ex nihilo*, the other half of the Mosaic position.

Why, then, does he allow people to believe the Platonic view? I submit that the answer has less to do with esotericism than with human psychology: The imagination balks at the idea of creation *ex nihilo*. Since it is tied to material things, it cannot conceive of creation except as a causal process that involves an agent and a patient. But if you understand creation *ex nihilo*, you will see that images like darkness, swirling waters, or exploding galaxies not only do not help, they introduce a number of distortions by suggesting that creation is a process occurring in space and time rather than the origin of space and time in the most radical sense. According to Maimonides (*GP* 2.12, pp. 279–80), “Just as the imagination cannot represent to itself an existent other than a body or a force in a body, the imagination cannot represent to itself an action taking place otherwise than through the immediate contact of an agent or at a certain distance and from one particular direction.” Along with space and time, distance and direction have no relevance to creation in Maimonides’ sense. As Saadia pointed out before Maimonides, our only access to the idea of creation is through reason.⁶⁷ The problem is that the level of reason needed to understand these arguments is rare, while the doctrine of creation is too important to give up.

Recognizing that not everyone would be able to accept creation *ex nihilo*, but wanting to preserve a workable idea of creation and a respect for rabbinic interpreters, Maimonides himself makes a concession: Though Platonism may not be correct on every point, it does not do serious damage to the biblical text and it preserves the idea of divine volition. This is another way to say that ultimately, divine volition and creation *de novo* are the real point. A person who accepts them can still view existence as a gift and still accept the possibility of revelation and commandment. Maimonides is willing to challenge rabbinic authority when he is sure that it contradicts something known to be true. In the case of creation *ex nihilo*, the only thing Rabbi Eliezer’s sayings contradict is a strong probability. Thus Maimonides has little choice but to allow them as an acceptable if not optimal reading of a notoriously obscure text.

Creation, Separation, and the Sabbath

Let us recall the problem with which we began: Causality is a relation linking two things in the same category; hence God cannot be the cause of the world. In Maimonides’ discussion of creation, he

follows the same line he established in his negative theology: Because causality involves similarity, it cannot account for the emergence of a complex world from a simple God. The alternative is to look at creation as an act, keeping in mind that attributes of action are not qualities that inhere in their subject. As we saw, multiple attributes can proceed from a simple source. Again the "how" of creation is beyond our comprehension. The point is that however we think of it, creation must preserve the freedom and uniqueness of the Creator.

Although it may seem that the distinction between creation as cause and creation as act is merely semantic, in fact the two lead to very different views of the world. The doctrine of emanation explains the procession of the sublunar realm from God by positing a series of intermediaries. What emanation gives us is a continuum in which God does not act directly on earthly matter but indirectly through a series of causal connections. Because the continuum does not contain any radical jumps, there is no reason why principles that apply to things in lower stages should not apply to things in higher—even to God in some respects. That is why the Aristotelians explain God in terms of act and potency. We saw, however, that Maimonides' view is different: Everything is created simultaneously by an act of God, and all differences between created things are neutralized before God. This act is a unique moment in the history of the world and cannot be understood by extrapolation from the present. Nor can the Actor be understood by looking at potters, blacksmiths, or overflowing fountains. Rather than a continuum between God and creation, there is an unbridgeable gap; rather than a causal force, a free agent, though once again free in a unique and purely autonomous way.⁶⁸

If God is free, the created order does not exist by necessity. In religious terms, existence is a gift. By *gift* I mean something we cannot get for ourselves and have no right to claim from God, something that God must choose to give us. In the terminology of scholasticism, existence is an accident.⁶⁹ From the idea of an accident or gift, there is a smooth transition to the celebration of the Sabbath, a day set aside to commemorate creation *de novo* and the Exodus from Egypt.⁷⁰ We saw that the Sabbath ends with a prayer praising God as the one who separates light from darkness, the sacred from the profane, and the Sabbath from the other six days of the week. In keeping with rabbinic tradition, Maimonides argues that observance of the Sabbath and abstention from idolatry are each equivalent to the sum total of all the other commandments.⁷¹ As we saw, belief in creation is the foundation of the Law.

The commandment mandating rest on the Sabbath is noteworthy for several reasons (Exodus 20:8–11):

Remember the Sabbath day, to keep it holy. Six days shalt thou labor, and do all thy work, but the seventh day is a Sabbath unto the Lord thy God; in it thou shalt not do any manner of work, thou, nor thy son, nor thy daughter, nor thy manservant, nor thy maidservant, nor thy cattle, nor thy stranger that is within thy gates; for in six days the Lord made heaven and earth, the sea, and all that is in them, and rested on the seventh day; wherefore the Lord blessed the Sabbath day, and hallowed it.

How could a perfect being rest? Maimonides argues at *Guide* 1.67 that rest does not necessarily imply fatigue: It can also mean to refrain, as in “He refrained from saying anything.” Maimonides therefore takes “God rested on the seventh day” to mean that on every day of the first six, events occurred that did not correspond to natural laws as we now understand them; but on the seventh, natural laws became permanent and are still in place. He then concludes by returning to the idea of divine volition: “Accordingly it means that His purpose was perfected and all His will realized.”

Why is rest important for us? It is not that Judaism looks askance at work or glorifies indolence. Adam and Eve were given work in the Garden of Eden (Genesis 2:15), and there is an old tradition that maintains that study of the Torah should be combined with a worldly occupation.⁷² From our perspective, work typically introduces hierarchical relations by distinguishing rich from poor, employer from employee, and native born from stranger. But rest dissolves these relations and with them the forms of inequality to which they often lead. According to the commandment, not only must people at every level of the social scale rest on the Sabbath, but beasts of burden and, according to Leviticus 25:4, the land as well. On this day, then, we are asked to relate to the rest of creation not as superiors but as partners, or more specifically, as fellow creatures. It could be said, therefore, that on the Sabbath more than any other day, we are asked to live according to the principle that all differences are neutralized before God.

My purpose in mentioning the Sabbath is not to engage in a homiletical exercise but to return to the question “Is a rigorous definition of monotheism compatible with a religion people can practice?” Clearly the symbolism involved in the Sabbath is consistent with the ideas underlying the Mosaic account of creation: freedom and separation. Instead of bringing God into the world by identifying a sacred dwelling place or earthly manifestation, it defines a period of

time in which we are asked to reflect on the uniqueness of God's activity. When the Sabbath is over, God is still in heaven and we are still on earth. While there is an old tradition that holds that the Sabbath provides a taste of the world to come, Maimonides claims that the person who observes it to the best of his ability obtains a reward in this life above and beyond anything in the next.⁷³

The irony is that the Sabbath does not ask one to endure pain, forgo pleasure, or put forth superhuman effort. According to the standard interpretation, it asks one to remember creation and the Exodus from Egypt, observe the ban on work, and take delight. I submit that there is nothing in Maimonides' definition of monotheism that compromises the integrity of the Sabbath, and nothing in observance of the Sabbath that calls monotheism into question. That does not mean that one can be deduced from the other, but it is false to say that as a philosopher, Maimonides upheld views of God at odds with his religious practice. Once we look upon existence as a gift, the whole system by which we praise God, offer supplications to God, and celebrate our place in God's creation begins to make sense. Not surprisingly, Maimonides lists belief in creation as a pillar of the Law, second in importance only to belief in the existence and unity of God.⁷⁴ Though his esotericism is notorious, it is hard to believe that a man who devoted much of his life to the exposition of the Law would make such a claim if he were not convinced that creation underlies the whole system of commandment and obligation.