

bigger nor smaller than they are, we do not know what was His wisdom in bringing into existence the universe at a recent period after its not having existed. The universe is consequent upon His perpetual and immutable wisdom. But we are completely ignorant of the rule of that wisdom and of the decision made by it. For, in our opinion, volition too is consequent upon wisdom; all these being one and the same thing—I mean His essence and His wisdom—for we do not believe in attributes. You shall hear much about this notion, when we shall speak of providence.⁴ By looking at the matter in this way, this disgracefulness is thus abolished.

As for Aristotle's remark that the nations were agreed in past time that the angels dwell in heaven and that the deity is in heaven—something similar occurs in the external meaning of the scriptural texts—this does not serve as an indication of the eternity of the heavens, as he wishes to consider it. But this has been said because it serves as an indication that | the heaven proves to us the existence of the separate intellects, who are the spiritual beings and the angels, and the heaven proves to us the existence of the deity, who is its mover and its governor, as we shall explain. We shall make it clear that there is no proof indicating to us the existence of the Maker, according to our opinion, like the indication deriving from the heaven.⁵ The latter also proves, as we have mentioned, according to the opinion of the philosophers, the existence of the Mover of the heaven and His not being either a body or a force subsisting in a body.

After having explained to you that our contention is possible and not—as is thought by him who affirms the eternity of the world—an impossibility, I shall return in the chapters that will follow, to explaining that our opinion can be shown, by means of speculation, to outweigh the other in the scales and to making manifest the disgraceful consequences necessarily deriving from his opinion.⁶

CHAPTER 19

It is clear to you from the doctrine of Aristotle, as well as from that of everyone who affirms the eternity of the world, that in his view that which exists has proceeded from the Creator in virtue of a necessity; that He,

4. Cf. Translator's Introduction.

5. The meaning seems to be that the proof in question is the most convincing of all.

6. The opinion of those who believe in the eternity a parte ante of the world is meant.

may He be exalted, is a cause and this world an effect and it was necessary that this should be so. Just as one does not ask with regard to Him, may He be exalted, why He exists or how He exists thus—I mean to say as One and incorporeal—so it may not be asked with regard to the world as a whole why it exists or how it exists thus. For all this, both the cause and the effect, exist thus necessarily, and nonexistence is not possible with regard to them in any respect nor their changing from the way they exist. Hence it follows necessarily from this opinion that of necessity everything must remain permanently as it is according to its nature and that nothing can change as far as its nature is concerned. For according to this opinion, it is impossible that a thing from among the existents should change as far as its nature is concerned. | Accordingly no thing has come into being in virtue of the purpose of One possessing purpose who chose freely and willed that all things should be as they are. For if they had come into being in virtue of the purpose of One possessing purpose, they would not have existed thus before they were purposed.

Now as for us, the matter is clear in our opinion: namely, that all things exist in virtue of a purpose and not of necessity, and that He who purposed them may change them and conceive another purpose, though not absolutely any purpose whatever. For the nature of impossibility is stable and cannot be abolished, as we shall make clear.

My purpose in this chapter is to explain to you, by means of arguments that come close to being a demonstration, that what exists indicates to us of necessity that it exists in virtue of the purpose of One who purposed; and to do this without having to take upon myself what the Mutakallimūn have undertaken—to abolish the nature of that which exists and to adopt atomism, the opinion according to which accidents are perpetually being created, and all their principles, which I have explained to you and which they only wished to use as an introduction in order to establish the method of particularization. Do not think that they have also said what I shall say. On the other hand, there is no doubt that they wished what I wish. They have also mentioned the same things that I shall mention and observed in them particularization. But in their opinion there is no difference between plants particularized through being red rather than white or through being sweet rather than bitter or between the heavens being particularized through having the shape they have instead of having been made square or triangular. They have established particularization by means of their premises, which you already know. I, on the other hand, shall establish particularization regarding the things with respect to which it ought to be

established by means of philosophic premises derived from the nature of that which exists.

I shall explain this method after first setting forth this premise: In every case in which things differing in any way from one another possess a common matter, there must of necessity be a cause other than, and different from, | the common matter — a cause that rendered it necessary that some of the things have a certain attribute, whereas some others have a different one. Or there may be several causes according to the number of the things differing from one another. This premise is unanimously agreed to both by those who believe in the eternity of the world and by those who believe in its having come into being in time. After having set forth this premise, I shall begin to explain what I wanted to explain by means of questions and answers concerning Aristotle's opinion.

We put a question to Aristotle, saying to him: You have demonstrated to us that the matter of everything that is beneath the sphere of the moon is one and common to everything. What then is the cause of the differences between the individuals of every species?

Then he gives us an answer to this, saying: The cause of the differences lies in the changes in the mixture of the compounds composed of this matter. For this common matter has in the first place received four forms, two qualities being consequent to each of these forms. In virtue of these four qualities, matter¹ was transformed into elements for that which is composed of it. For these elements² were first mixed through the action of the motion of the sphere and then they combined. Consequently, the differences in the compounds representing a mixture of the elements came about through the differing measures of the warm, the cold, the humid, and the dry. For in virtue of these various combinations, various dispositions to receive various forms come about in the compounds. Again through these forms, the compounds become disposed to receive other forms. And this continues constantly in this manner. Again the matter of the specific form, which is one, has great latitude with regard to quantity and quality, and the individuals of the species differ in a way corresponding to this latitude, as has been elucidated in the natural science. All this is correct and clear to whoever treats his own soul equitably and does not deceive it.

Thereupon we | again put a question to Aristotle, saying to him: Since

1. In the context it seems more likely that "matter" is the subject of this sentence rather than "the four forms." From the syntactical point of view there is nothing to choose between these two constructions.
2. In this case the subject seems to be "elements" rather than "matter."

the mixture of the elements is the cause of the various matters being predisposed to receive the various forms, what is it that prepared this first matter so that a part of it receives the form of fire and part of it the form of earth and that which is intermediate between these two parts is prepared to receive the forms of water and of air, while at the same time the matter of the universe is one and common to all things? Why is the matter of earth more fitted for the form of earth and the matter of fire for the form of fire?

Thereupon Aristotle gave an answer to this, saying: This has been made necessary by the differences between the various places, for these differences have made it necessary for this one matter to have various dispositions. For the part that is near the encompassing sphere, was endowed by the latter with an impress of subtlety and swiftness of motion and nearness to the nature of the sphere. Consequently it received, in virtue of this disposition, the form of fire. And the more distant matter is from the encompassing sphere in the direction of the center of the earth,³ the thicker and denser and less luminous it becomes, so that it becomes earth. The same cause obtains with regard to water and air. Thus this is necessary; for it is absurd that the matter in question should not be in a place, or that the encompassing sphere should be the center of the earth,⁴ and the center of the earth⁴ the encompassing sphere. This has been made necessary by particularization of matter by means of various forms; I mean by this the disposition to receive various forms.

Thereupon we put a question to him, saying: Is the matter of the encompassing sphere — I mean to say the heavens — the same as the matter of the elements?

He said: No. That⁵ is another matter and those are other forms. And the term "body," applied to the bodies that are with us and to the heavenly bodies, is equivocal, as has been explained by latter-day thinkers. All this has been demonstrated.

From here on listen, you who are engaged in the study of this my Treatise, to what I shall say. You already know Aristotle's demonstration that from the difference of acts | the difference of forms may be inferred. Consequently, inasmuch as the motions of the four elements are rectilinear and the motion of the sphere is circular, it is known that the matter of these elements is not the matter of the sphere. And this is correct according to natural speculation. And as you have also found that the elements whose motions are rectilinear differ from one another with regard to direction —

3. Or: of the world. 4. Or: of the world.

5. I.e., the matter of the heavenly spheres.

some of them moving upwards and the others downwards — and as it has likewise been found that in considering those that move in the same direction one is the more rapid and the other the slower, it is known that the elements differ with regard to their forms. And thereby it is known that there are four elements. If one has recourse to this very kind of inference, it also follows necessarily that the matter of all the heavenly spheres is one, as all of them have circular motion, and that the form of every sphere is different from that of every other sphere, as one moves from the East to the West and another from the West to the East and as they also differ in their rapidity or slowness.

Accordingly the following question should be put to him,⁶ and it should be said to him: Inasmuch as the matter in question is common to all the heavenly spheres and, on the other hand, since every substratum in them has been particularized so as to receive a certain form other than the forms received by the others, who is it that has particularized these substrata and has predisposed them to receive various forms? Is there beyond the sphere something else to which this particularization can be attributed except God, may He be cherished and exalted?

Here I shall call your attention to the depth of Aristotle's penetration and to his extraordinary apprehension and to the extent to which this objection undoubtedly pressed hard upon him so that he wished to escape from it by recourse to means in which the nature of that which exists did not help him. Even though he does not mention this objection, it appears from what he says that he wished to bring order for our benefit into the being of the spheres, as he has brought order for us into the existence of that which is beneath the sphere. He wished to do this in order that | the whole should exist in virtue of natural necessity and not in virtue of the purpose of one who purposes according to his will whatever it be and the particularization of one who particularizes in whatever way he likes. Now this task has not been accomplished by him, nor will it ever be accomplished. For he wished to give a cause for the fact that the sphere moves from the East and not from the West; and he wished to give a cause for the fact that some of them are swift of motion and others slow and that this is necessary because of the order of their position with regard to the highest sphere. He also wished to give a cause for the fact that every star⁷ from among the seven has a number of spheres, while this great number of fixed stars is to be found in one sphere. He wished to assign causes for all this so that these things would be ordered for us in a natural order that is

6. I.e., to Aristotle. 7. I.e., planet.

due to necessity. However, he has accomplished none of these undertakings. As a matter of fact, all that he has explained to us regarding what is beneath the sphere of the moon follows an order conforming to that which exists, an order whose causes are clear. One can say of it that it derives of necessity from the motion and the powers of the sphere. On the other hand, one can say of all that he has stated with regard to matters pertaining to the sphere, that he has assigned no clear cause with regard to this, and that the matter, as he sets it out, does not follow an order for which necessity can be claimed. 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. I shall deal with these points in a special chapter of this Treatise.⁸

To sum up: It was undoubtedly when Aristotle realized the feebleness of what he said in setting forth and expounding the ground and the causes⁹ of these things, that he prefaced his starting upon these investigations with a statement | that runs literally as follows: Now we desire to make a sufficient inquiry into two questions. For it is obligatory for us to inquire into them and to speak concerning them according to the capacity of our intellects, our knowledge, and our opinion. However, no one ought to attribute this undertaking to overboldness and temerity on our part, but rather should our desire and ardor for philosophy be admired. When, therefore, we seek out noble and important questions and are able to propound for them—though it be only to some small extent—a well-founded solution, it behooves the hearer to feel great joy and jubilation.¹⁰ This is literally what he says. It has thus become clear to you that he was indubitably aware of the feebleness of those assertions; and all the more so since the

8. Cf. II 24.

9. Maimonides uses the word *ta'îlîl* (which is related to *'illa*) as well as the term *sabab* (in the plural). Both *'illa* and *sabab* signify "cause" and are often synonymous. However, *sabab* sometimes means "intermediate cause," and Maimonides may have used it here in this sense in contradistinction to *'illa*. It is, however, equally possible that Maimonides' reference to both terms in this passage does not indicate an intention to differentiate them.

10. *De Caelo* ii.12.291b24 ff. The translation is rather free. In Guthrie's translation the passage reads: "There are two difficulties which might naturally be felt, and we must do our best to give the most plausible solution, looking upon a readiness to do so as evidence of modesty rather than of rashness, if the seeker, out of thirst for philosophy, rests content with but a little enlightenment in matters where we are surrounded by such unfathomable obscurities." Cf. Translator's Introduction.

science of mathematics had not been perfected in his time and since the motions of the sphere were not known in his time to the extent to which we know them today. It appears to me that his assertion in the "Metaphysics"¹¹ that a separate intellect should be supposed for every sphere is also made with a view to the notion in question: namely, in order that there should be there something that would particularize every sphere by means of some motion with which it would be endowed. We shall explain later on that he gains nothing by this. With regard to his saying in the text that I have set out for you, "according to the capacity of our intellects, our knowledge, and our opinion": I shall explain to you the meaning of this, a meaning that I have not seen set forth by any of the commentators. When saying "our opinion," he has in mind the point of view of necessity that is represented by the affirmation of the eternity of the world. When saying "our knowledge," he has in mind the clear and generally accepted point that each of those things¹² certainly has a cause and ground and that it is not a thing that happens by chance. When saying "our intellects," he has in mind our incapacity to assign causes for things of such perfection and accomplishment. But he | deemed that to a small extent these might be assigned, and he did this. For his statement regarding the rapidity of the universal motion and the slowness of the sphere of the fixed stars because of its opposite direction has recourse to a strange and bizarre cause. Similarly he says that as the distance of a sphere from the eighth sphere is greater, its motion is more rapid. However, this is not consistently so, as I have made clear to you.¹³ There is something even more striking: namely, that there are spheres beneath the eighth that move from the East to the West. These consequently must be more rapid than what is beneath them and likewise moves from the East to the West, even though the rapidity of the motion of the latter spheres moving from the East is near to that of the motion of the ninth sphere. However, as I have let you know, the science of astronomy was not in his¹⁴ time what it is today.

Know that on the basis of our opinion, that is, the opinion of the community of those who affirm the production of the world in time, all this becomes easy and is consistent with our principles. For we say that there is a being that has particularized, just as it willed, every sphere in regard to its motion and rapidity; but we do not know in what respect there is wisdom in making these things exist in this fashion. Now if Aristotle had been

11. Cf. *Metaphysics* xii.8.1074a15 ff.

12. I.e., the heavenly spheres and things pertaining to them.

13. Earlier in this chapter. 14. I.e., Aristotle's.

able—as he thought—to give us the cause for the differences between the motions of the spheres so that these should be in accordance with the order of the positions of the spheres with regard to one another, this would have been extraordinary. In that case the cause of particularization would have been constituted by the differences between the motions of the spheres, just as the cause of the differences between the elements lies in their various positions between the encompassing sphere and the center of the earth.¹⁵ However, things are not ordered thus, as I have explained to you.

A fact that makes even more clear than what has been said about the existence of particularization in the sphere, and with regard to which no one would be able to find a cause particularizing it other than the purpose of one who purposes, is the existence of the stars. For the fact that a sphere is always in motion and a star | is always fixed proves that the matter of the stars is not the matter of the spheres. In fact Abū Naṣr [al-Fārābī] in his glosses on the “Akroasis,”¹⁶ has made a statement of which the literal text is as follows. He said: There is a difference between a sphere and the stars, for a sphere is transparent whereas the stars are not transparent. The cause for this lies in the fact that there is a difference between the two matters and the two forms. But this difference is small. This is literally the text of his statement. I, however, do not say “small,” but say that they are very different. For I do not infer this from the fact of transparency but from the motions. Accordingly it has become clear to me that there are three kinds of matter and three kinds of forms: the bodies that are always by themselves at rest—these are the bodies of the stars; the bodies that are always in motion—these are the bodies of the spheres; the bodies that are sometimes in motion and sometimes at rest—these are the elements. Would that I knew what made the two kinds of matter,¹⁷ between which there is either an extreme difference—this is what it appears to be to me—or a small difference—as is stated by Abū Naṣr [al-Fārābī]—and who has provided the kinds of matter in question with the dispositions necessary for this union.

To sum up: It would be a strange thing that there should be two different bodies, one of which, being fixed in, but not mixed with, the other, should be localized in the latter in a particular place and attached to this second body; and that this should come about without its having been produced through the purpose of one who purposed it. And it is even stranger that there should exist the numerous stars that are in the eighth

15. Or: of the world. 16. I.e., Aristotle's *Physics*.

17. I.e., the matter of the spheres and the matter of the stars.

sphere, all of which are globes, some of them small and some big, one star being here and another at a cubit's distance according to what seems to the eye, or ten stars being crowded and assembled together while there may be a very great stretch in which nothing is to be found. What is the cause that has particularized one stretch in such a way that ten stars should be found in it and has particularized another stretch in such a way that no star should be found in it? Again the body of the whole sphere is one simple body in which there are no differences. What accordingly can be the cause for the fact that a certain part of the sphere should be | more fitted to receive the particular star found in it than another part? All this and everything that is of this sort would be very unlikely or rather would come near to being impossible if it should be believed that all this proceeded obligatorily and of necessity from the deity, as is the opinion of Aristotle. If, however, it is believed that all this came about in virtue of the purpose of one who purposed who made this thus, that opinion would not be accompanied by a feeling of astonishment and would not be at all unlikely. And there would remain no other point to be investigated except if you were to say: What is the cause for this having been purposed? What is known may be epitomized as follows: All this has been produced for an object that we do not know and is not an aimless and fortuitous act. In fact you know that the veins and nerves of any individual dog or ass have not happened fortuitously, nor are their measures fortuitous. Neither is it by chance that one vein is thick and another thin, that one nerve has many ramifications and another is not thus ramified, that one descends straight down and another is bent. All this is as it is with a view to useful effects whose necessity is known. How then can one who uses his intellect imagine that the positions, measures, and numbers of the stars and the motions of their various spheres are without an object or fortuitous? There is no doubt that all of these things are necessary according to the purpose of one who purposes. On the other hand, the supposition that all these things have been ordered in virtue of necessity and not in virtue of a purpose is very remote indeed from being conceivable. To my mind there is no proof of purpose stronger than the one founded upon the differences between the motions of the spheres and upon the fact that the stars are fixed in the spheres. For this reason you will find that all the prophets used the stars and the spheres as proofs for the diety's existing necessarily. Thus in the traditional story of *Abraham*, there occurs the tale, | which is generally known, about his contemplation of the stars. Again *Isaiah*, calling attention to the conclusions to be drawn from the stars, says: *Lift up your eyes on high, and see: who hath created these?*

and so on.¹⁸ Jeremiah says similarly: *He made the heavens.*¹⁹ Abraham says: *The Lord, the God of the heavens.*²⁰ And the chief of the prophets says: *Who rideth upon the heaven,*²¹ an expression we have explained.²² This is the correct proof, which is not exposed to doubt. The explanation thereof is as follows: With regard to all the differences in the things beneath the sphere and even though the matter subsisting in these things is one, as we have explained, you can make out that they were particularized through the powers of the sphere and through the various positions of matter with regard to the sphere, just as Aristotle has taught us. But who is the one who particularized the differences that are found in the spheres and the stars unless it be God, may He be exalted? If, however, someone says that the separate intellects did it, he gains nothing by saying this. The explanation of this is as follows: The intellects are not bodies, which they would have to be in order to have a local position in relation to the sphere. Why then should one particular sphere move in its motion induced by desire toward its separate intellect in an eastern direction, and another in a western? Do you consider that one particular intellect is to be found in an eastern direction and another in a western? Then there is the fact that one sphere is relatively slower, while another is more rapid; and this, as you know, does not correspond to the relations obtaining between the distances of the various spheres from each other. Thus, of necessity, one cannot avoid saying that the nature and substance of that particular sphere require that its motion be in a certain direction and with a certain velocity and that a necessary concomitant of its desire for a certain notion should manifest itself in this manner.²³ And this is what Aristotle says and explicitly states.

We have accordingly come back to the point we were dealing with at first. Accordingly we shall say: If the matter of all the spheres is one and the same, in virtue of what thing has any sphere been so particularized as to receive a nature other than the nature of any other sphere? How then is there to be found in that sphere a certain desire, different from the desire of that other sphere, that | obliges one to move in this direction and the other to move in another direction? There must of necessity be something

18. Isa. 40:26.

19. These words do not occur in Jeremiah. Cf., however, Jer. 32:17, 10:12, and 51:15.

20. Gen. 24:7. 21. Deut. 33:26. 22. Cf. I 70.

23. This translation seems to me to render more faithfully the construction of the Arabic sentence than the renderings of Ibn Tibbon and Munk. The latter's translation would read in English as follows: "... and that the result of its desire should be such a thing obtained in this manner."

that particularizes. This examination has thus conducted us to the investigation of two problems, one of which may be stated as follows: Is it of necessity obligatory or not, considering the existence of these differences, that these should be due to the purpose of one who purposed and not due to necessity? The second problem may be stated as follows: Supposing that all this is due to the purpose of one who purposed and who particularized the spheres in this way, is it obligatory that this should have been produced after its having been nonexistent, or is it not obligatory so that He who particularizes has never ceased doing this? This second opinion has also been affirmed by some²⁴ of those who believe in the eternity of the world. In the following chapters I shall begin to treat of these two problems, and I shall explain what is necessary to explain concerning them.

CHAPTER 20

Aristotle demonstrates regarding all natural things that they do not come about by chance—his demonstration being, as he has stated it: the fortuitous things do not occur either always or in the majority of cases;¹ the natural things, however, occur either always or in the majority of cases. Thus the heavens and all that is in them remain always in certain states that do not change, as we have explained, either in their essences or through change of place. As for the natural things that are beneath the sphere of the moon, some of them occur always and others in the majority of cases. Instances of what occurs always are the heating action of fire and the falling-down of a stone, while instances of what occurs in the majority of cases are the shapes and acts of the individuals of every species. All this is clear. Now if the particular things of the world are not due to chance, how can the whole of it be due to chance? This is a demonstration | proving that these beings are not due to chance. Here is the text of the statement of Aristotle in his refutation of those of his predecessors who believed that this world has happened to come about by chance and spontaneously, without a cause. He says:² Other people have thought that the cause of these heavens and all these worlds is to be sought in their spontaneity. They say that the

24. Or: one.

1. Cf. *Physics* ii.5.196b10 ff.

2. *Physics* ii.4.196a25 ff. The translation is by and large accurate.

revolution and the motion that has differentiated and constituted all things³ according to this order were due to their spontaneity. Now this is a point that arouses strong astonishment; I mean the fact that they say concerning animals and plants that they do not come about and are not produced by chance, but have a cause, which is either nature or intellect or some other similar thing—for not any haphazard thing is generated from every seed or sperm, but from this particular seed there comes into being an olive tree and from that sperm a human being—and that at the same time they say of the heavens and of the bodies that alone are divine among all the visible bodies, that they have come into being spontaneously and that they have no cause at all such as is possessed by the animals and the plants. This is the text of his statement. Then he starts to explain in a more lengthy passage the falsity of these imaginings.

Accordingly it is clear to you that Aristotle believes and demonstrates that none of these beings are through chance. Now what contradicts their having come into being⁴ through chance is their having come into being⁵ essentially—I mean their having a cause that renders it necessary for them to come into being in this particular fashion. It is because of this cause that they exist in the way they do. This is what has been demonstrated, and this is what Aristotle believes. But it is not clear to me that Aristotle believes that, because these beings have not come into being spontaneously, it follows necessarily that they have come into being in virtue of the purpose of one who purposed and the will of one who willed. For | to me a combination between existing in virtue of necessity and being produced in time in virtue of a purpose and a will—a combination uniting these two—comes near to a combination of two contraries. For the meaning of necessity, as Aristotle believes it, is that everything among the beings, which is not an artifact, cannot but have a cause necessitating that particular thing—a cause that has brought it into being as it is—and that this cause has a second cause and this second cause similarly a third one, until finally a first cause is reached from which everything is necessarily derived. This is so because of the impossibility of an infinite series of causes. However, he does not believe withal that the necessity in virtue of which the existence of the world is derived from the Creator—I mean to say from the First Cause—is like the necessity in virtue of which shadow is derived from a body or heat from fire or light from the sun, as those say of him who do not understand what he said. Rather does he believe that this necessity is somewhat like the necessity of the derivation of an intellectum from an intellect, for the

3. Or: the universe.

4. Or: their being.

5. Or: their being.

intellect is the agent⁶ of the intellectum in respect of its being an intellectum. For this First Cause—though it is according to him an intellect of the highest and most perfect rank of being so that he says that it wills what is necessarily derived from it and rejoices and takes pleasure in it—cannot will anything contrary to this.⁷ Now this is not called purpose, and the notion of purpose is not included in it. For a man may will to have two eyes and two hands, and rejoice in having them and take pleasure in it and cannot will anything contrary to this. However, that individual does not have two eyes and two hands because of a purpose on his part and because of his having particularized this shape and these actions. For the notions of purpose and of particularization only apply to a nonexistent thing for which it is possible to exist just as it was purposed and particularized and for which it also is possible not to exist in this fashion. I do not know whether | the discourse and speech of Aristotle that these things must necessarily have a cause was understood by certain latter-day men to refer to purpose and particularization, or whether they disagree with him on this and choose the opinion affirming purpose and particularization, deeming that it does not contradict the eternity of the world.

After what we have explained, I shall begin to treat of the opinion of these latter-day men.

CHAPTER 21

Know that among the latter-day philosophers who affirm the eternity of the world there are some¹ who maintain that God, may He be exalted, is the Agent² of the world, who chose that it should exist, purposed it, and particularized it so that it should be as it actually is. They think, however, that it is impossible that this should have happened at one particular time rather than at another; according to them the world has always been and will always be like this. They say: What compels us to conceive of an agent³ as unable to effect a thing unless the agent precedes the act in time is the fact that this necessarily happens to us when we effect something. This is so because in every agent of whom this may be

6. I.e., the efficient cause. 7. I.e., to what is derived from it.

1. The Arabic word may also refer to a single philosopher.

2. Or: Maker. The Arabic term used is applied to the efficient cause.

3. Cf. preceding note.

predicated, there is a certain privation; accordingly he is at first an agent in potentia and, when he acts, he passes into actuality. But the deity, may He be exalted, in whom there is no privation and nothing at all in potentia, does not precede His act, for He has always been an agent in actu. And just as there is a difference — and what a difference! — between His essence and ours, so is there a difference between the relation linking His act and Himself and the relation linking our act and ourselves. They draw the same analogy⁴ with regard to particularization and will. For there is no difference between your saying, when treating of this matter: an agent, one who wills, one who purposes, one who chooses freely, or one who particularizes. And they say | it is also impossible that His act or His will should change, as we have explained.⁵

It has already become clear to you, who are engaged in the study of this my Treatise, that these people have altered the term "necessity," but have let its meaning remain. Perhaps they intended to choose a more beautiful expression or to get rid of one that is shocking. For the meaning of the assertion, as maintained by Aristotle, that this being proceeds necessarily from its cause and is perpetual in virtue of the latter's perpetuity — that cause being the deity — is identical with the meaning of their assertion that the world derives from the act of the deity or exists in virtue of His purpose, will, free choice, and particularization, but that it has always been and will always be as it is — just as the sunrise is indubitably the agent of the day, though neither of them precedes the other in point of time. But this is not the meaning of purpose, as we propose to conceive it. For we wish to signify by the term that it — I mean the world — does not necessarily proceed from Him, may He be exalted, as an effect necessarily proceeds from its cause without being able to be separated from it or to change unless its cause or one of its modes also changes. Now if you understand the meaning of the term in this way, it is already known that it is absurd to say that the world necessarily proceeds from the being of the deity as an effect proceeds from its cause, and it is further known that the world has come about through an act of the deity or through His particularization.

Accordingly the matter is reduced to this, and the discussion finally leads us to an inquiry concerning the diversity existing in the heavens, with regard to which it has been demonstrated that it must necessarily have a cause. The inquiry concerns the question whether this cause is the ground of

4. The Arabic word also means "syllogism" and is sometimes used in the sense of "reasoning."

5. Cf. II 13.

this diversity, the latter having necessarily proceeded from the existence of this cause, or whether this cause is the agent that has brought about this diversity and has particularized it in the way in which we, the followers of *Moses our Master*, believe. We shall speak of this after we have first set forth a preface by which we shall explain to you the meaning of the necessity maintained by Aristotle so that you should conceive it. Thereupon | I shall begin to explain to you, with the help of speculation and philosophic proofs devoid of falsification, my preference in favor of the opinion according to which the world has been produced in time.

When he⁶ says that the first intellect necessarily proceeds from God, the second from the first, and the third from the second, and also when he holds that the spheres necessarily proceed from the intellects, and when he sets forth the famous order that you know from various passages in his writings — that order of which we have already expounded a part here⁷ — it is clear that he does not wish to signify thereby that first a certain thing was, and then, later, the thing necessarily proceeding from the first thing was produced in time. For he does not say that any of these was produced in time. By the term “necessity,” he merely means to signify causality; it is as if he said the first intellect is the cause of the existence of the second intellect, the second of the third, and so on till the last of them. The same applies to the discourse concerning the spheres and the first matter; according to him, none of these things precedes in time, or exists without, any of these other things. It is, to take an example, as if someone said that roughness, smoothness, hardness, softness, thickness, and absorbency, necessarily derive from the first qualities. For no one doubts that these qualities — I mean heat, cold, humidity, and dryness — produce roughness, smoothness, hardness, softness, thickness, absorbency, and other similar qualities. Accordingly they necessarily derive from the four first qualities, even though it is impossible that a body should exist endowed with the four first qualities and devoid of the secondary ones. It is in an exactly analogous way that Aristotle says, concerning that which exists in general, that in it this particular thing necessarily proceeds from that and so forth till the series ends with the First Cause, as he himself says, or the first intellect or however you may wish to call it. All of us aim at one and the same principle. But | he holds, as I have recounted to you, that everything that is other than it necessarily proceeds from it. We affirm that all these things have been made by Him in virtue of a purpose and a will directed toward this particular being, which did not exist and now became an

6. I.e., the Aristotelian philosopher. 7. Cf. II 4.

existent in virtue of His will, may He be exalted. Now I shall begin to set forth in the following chapters my proofs and my preference in favor of the world's having been produced in time according to our opinion.

CHAPTER 22

A proposition universally agreed upon, accepted by Aristotle and by all those who have philosophized, reads as follows: It is impossible that anything but a single simple thing should proceed from a simple thing. If the thing is composite, there may proceed from it several things according to the number of simple things of which the compound is composed. Thus, for instance, what proceeds from fire, in which two qualities—heat and dryness—have combined is the action of heating by means of its heat and that of drying by means of its dryness. Similarly in the case of a thing composed of matter and form, certain things proceed from it in respect to its matter and certain other things in respect to its form, if it is of multiple composition. In accordance with this proposition, Aristotle says that what first proceeded from God was constituted by a single simple intellect only.

A second proposition: 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, as would be the case if, for instance, a quantity would proceed from a quality, or a quality from a quantity. Similarly form does not proceed from matter nor matter from form. |

A third proposition: Every agent, acting in virtue of purpose and will and not in virtue of its nature, accomplishes many different acts.

A fourth proposition: A whole composed of various juxtaposed substances may more appropriately be termed a composition than a whole composed of various substances that have combined with one another. For instance, a bone, flesh, a vein, a nerve, are simpler than the whole of a hand or that of a foot composed of nerves, flesh, veins, and bones. This is too clear to require additional discourse.

After having set forth these premises, I say: With regard to Aristotle's statement that the first intellect is the cause of the second, the second of the

third, and so on — even if there were thousands of degrees, the last intellect would indubitably still be simple. How then can the composition have come to exist, the composition existing — as Aristotle believes — in the beings in virtue of necessity? We shall concede to him all that he says concerning a composition of various notions coming about in the intellects, as their intellecta are multiple, when the intellects get farther away from the First Cause. But even if we grant him this guess and conjecture, how can the intellects be a cause for the procession of the spheres from them? And what relation can there be between matter and that which being separate has no matter at all? And supposing that we concede that the cause of every sphere is, in the fashion stated, an intellect — inasmuch as there subsists composition in the intellect, which intellectually cognizes itself and what is other than itself, so that it is as it were composed of two things, from one of which another and lower intellect proceeds, whereas a sphere proceeds from the other — he should still be asked: How does a sphere proceed from the one simple thing from which it proceeds? | A sphere is composed of two kinds of matter and two forms: the matter and the form of the sphere itself and the matter and the form of the star fixed in the sphere. Now if this comes about in virtue of a procession, we cannot but require for this compound a composite cause, the procession of the body of the sphere being occasioned by one of its parts and that of the body of the star by the other. This would be so if the matter of the stars were all of it one and the same. However, the substance of the bright stars may be a certain substance and that of the dim ones may be another substance. It is also known that every body is composed of its matter and its form.

Accordingly it has become clear to you that these things do not conform to the conception of necessity that he sets forth. Similarly the diversity of the motions of the spheres does not agree with the order of their arrangement one beneath the other, in such a way that necessity could be claimed in this field. We have already mentioned this.¹ There is, furthermore, another point that ruins everything that has been established with regard to natural things if the state of the heavens is considered. For if the matter of all the spheres is one and the same, why is it not necessary for the form of one particular sphere to be transferred to the matter of another, in accord with what happens beneath the sphere of the moon because of the aptitude of matter? And why is one particular form permanently in one particular matter although the matter of all is common? Unless — by God! — someone asserts that the matter of every sphere is other than that of the others.

1. Cf. II 19.

In that case the form of the motion of the spheres would not be indicative of their matter. This would be the ruin of all principles. Furthermore, if the matter of all the stars is one and the same, whereby are their individuals differentiated—is it by their forms or by accidents? In either case it would be necessary that the forms or accidents in question should be transferred one after the other to each of the stars, in order that | the aptitude of matter not be set at naught. Hereby it has become clear to you that when we say the matter of the spheres or the matter of the stars, these expressions contain none of the meaning of that matter here, this being a case of the equivocal use of terms; and that every being from among the bodies of the spheres has an existence that is proper to it and that it does not have in common with anything other than itself. How then could it happen that the spheres have in common their circular motion and the stars their fixity?

If, however, we believe that all this has been produced through the purpose of one who purposed, made, and particularized it—as His wisdom, which cannot be grasped, required—none of these questions affect us, whereas they do affect him who claims that all this has come about through necessity and not through the will of one who wills. This is an opinion that does not agree with the order of that which exists, an opinion in favor of which no cause and no new persuasive proof have been brought forward. Withal very disgraceful conclusions would follow upon it. Namely, it would follow that the deity, whom everyone who is intelligent recognizes to be perfect in every kind of perfection, could, as far as all the beings are concerned, produce nothing new in any of them; if He wished to lengthen a fly's wing or to shorten a worm's foot, He would not be able to do it. But Aristotle will say that He would not wish it and that it is impossible for Him to will something different from what is; that it would not add to His perfection but would perhaps from a certain point of view be a deficiency. I shall sum up for your benefit, and though I know that many men imbued with a partisan spirit shall tax me because of this statement either with having but little comprehension of their argument or with deliberately deviating from it, yet shall I not, because of that, refrain from saying what I in my inadequacy have apprehended and understood. Accordingly this summing-up will be as follows:

Everything that Aristotle has said about all that exists from beneath the sphere of the moon to the center of the earth is indubitably correct, and no one | will deviate from it unless he does not understand it or unless he has preconceived opinions that he wishes to defend or that lead him to a denial of a thing that is manifest. On the other hand, everything that

Aristotle expounds with regard to the sphere of the moon and that which is above it is, except for certain things, something analogous to guessing and conjecturing. All the more does this apply to what he says about the order of the intellects and to some of the opinions regarding the divine that he believes; for the latter contain grave incongruities and perversities that manifestly and clearly appear as such to all the nations,² that propagate evil, and that he cannot demonstrate.

Do not criticize me for having set out the doubts that attach to his opinion. You may say: Can doubts disprove an opinion or establish its contrary as true? Surely this is not so. However, we shall treat this philosopher as his followers have enjoined us to treat him. For Alexander has explained that in every case in which no demonstration is possible, the two contrary opinions with regard to the matter in question should be posited as hypotheses, and it should be seen what doubts attach to each of them: the one to which fewer doubts attach should be believed. Alexander says³ that things are thus⁴ with respect to all the opinions regarding the divine that Aristotle sets forth and regarding which no demonstration is possible. For everyone who has come after Aristotle says that what Aristotle stated about them arouses fewer doubts than whatever else might be said about them. We have acted in this way when it was to our mind established as true that, regarding the question whether the heavens are generated or eternal, neither of the two contrary opinions could be demonstrated. For we have explained the doubts attaching to each of the opinions and have shown to you that the opinion favoring the eternity of the world is the one that raises more doubts and is more harmful for the belief that ought to be held with regard to the deity. | And this, in addition to the fact that the world's being produced in time is the opinion of *Abraham our Father* and our prophet *Moses*, may peace be on both of them.

As we have mentioned that opinions should be examined by means of the doubts they arouse, I see fit to explain to you something with regard to that.

2. Or: to all the religious communities.

3. On this quotation from Alexander of Aphrodisias, cf. Translator's Introduction.

4. Or: that he conducts things thus.

CHAPTER 23

Know that when one compares the doubts attaching to a certain opinion with those attaching to the contrary opinion and has to decide which of them arouses fewer doubts, one should not take into account the number of the doubts but rather consider how great is their incongruity and what is their disagreement with what exists. Sometimes a single doubt is more powerful than a thousand other doubts. Furthermore this comparison can be correctly made only by someone for whom the two contraries are equal. But whoever prefers one of the two opinions because of his upbringing or for some advantage, is blind to the truth. While one who entertains an unfounded predilection cannot make himself oppose a matter susceptible of demonstration, in matters like those under discussion such an opposition is often possible. Sometimes, if you wish it, you can rid yourself of an unfounded predilection, free yourself of what is habitual, rely solely on speculation, and prefer the opinion that you ought to prefer. However, to do this you must fulfill several conditions. The first of them is that you should know how good your mind is and that your inborn disposition is sound. This becomes clear to you through training in all the mathematical sciences and through grasp of the rules of logic. The second condition is to have knowledge of the natural sciences and to apprehend their truth so that you should know your doubts in their true reality. The third condition concerns your morals. For | whenever a man finds himself inclining — and to our mind it makes no difference if this happens because of his natural disposition or because of an acquired characteristic — toward lusts and pleasures or preferring anger and fury, giving the upper hand to his irascible faculty and letting go its reins, he shall be at fault and stumble wherever he goes. For he shall seek opinions that will help him in that toward which his nature inclines. I have drawn your attention to this in order that you should not be deceived. For someone may some day lead you into vain imaginings through setting forth a doubt concerning the creation of the world in time, and you may be very quick to let yourself be deceived. For in this opinion is contained the destruction of the foundation of the Law and a presumptuous assertion with regard to the deity. Be therefore always suspicious in your mind as to this point and accept the authority of the two prophets¹ who are the pillars of the well-being of the human species with

1. I.e., Abraham and Moses.

regard to its beliefs and its associations. Do not turn away from the opinion according to which the world is new, except because of a demonstration. Now such a demonstration does not exist in nature.

Furthermore, the student of this Treatise should not engage in criticism because of my using this rhetorical mode of speech in order to support the affirmation of the newness of the world. For Aristotle, the prince of the philosophers, in his main writings has likewise used rhetorical speeches in support of his opinion that the world is eternal. In such cases it may truly be said: *Shall not our perfect Torah be [worth as much] as their frivolous talk?*² If he refers in support of his opinion to the ravings of the Sabians, how can we but refer in support of our opinion to the words of *Moses* and *Abraham* and to everything that follows therefrom?

I have promised you a chapter in which I shall expound to you the grave doubts that would affect whoever thinks that man has acquired knowledge as to the arrangement of the motions of the sphere and as to their being natural things going on according to the law of necessity, things whose order and arrangement are clear. I shall now explain this to you. |

CHAPTER 24

You know of astronomical matters what you have read under my guidance and understood from the contents of the "Almagest." But there was not enough time to begin another speculative study with you. What you know already is that as far as the action of ordering the motions and making the course of the stars conform to what is seen is concerned, everything depends on two principles: either that of the epicycles or that of the eccentric spheres or on both of them. Now I shall draw your attention to the fact that both those principles are entirely outside the bounds of reasoning¹ and opposed to all that has been made clear in natural science. In the first place, if one affirms as true the existence of an epicycle revolving round a certain sphere, positing at the same time that that revolution is not around the center of the sphere carrying the epicycles — and this has been supposed with regard to the moon and to the five planets — it follows necessarily that there

2. B.T., Baba Bathra, 116a; Megillath Ta'anith, V.

1. The Arabic word used is *qiyās*; it means "syllogism" (and in a broader sense, "reasoning") or "analogy."

is rolling, that is, that the epicycle rolls and changes its place completely. Now this is the impossibility that was to be avoided, namely, the assumption that there should be something in the heavens that changes its place. For this reason Abū Bakr Ibn al-Šā'igh² states in his extant discourse on astronomy that the existence of epicycles is impossible. He points out the necessary inference already mentioned. In addition to this impossibility necessarily following from the assumption of the existence of epicycles, he sets forth there other impossibilities that also follow from that assumption. I shall explain them to you now.

The revolution of the epicycles is not around the center of the world. Now it is a fundamental principle of this world that there are three motions: a motion from the midmost point of the world, a motion toward that point, and a motion around that point. But if | an epicycle existed, its motion would be neither from that point nor toward it nor around it.

Furthermore, it is one of the preliminary assumptions of Aristotle in natural science that there must necessarily be some immobile thing around which circular motion takes place. Hence it is necessary that the earth should be immobile. Now if epicycles exist, theirs would be a circular motion that would not revolve round an immobile thing. I have heard that Abū Bakr has stated that he had invented an astronomical system in which no epicycles figured, but only eccentric circles. However, I have not heard this from his pupils. And even if this were truly accomplished by him, he would not gain much thereby. For eccentricity also necessitates going outside the limits posed by the principles established by Aristotle, those principles to which nothing can be added. It was by me that attention was drawn to this point. In the case of eccentricity, we likewise find that the circular motion of the spheres does not take place around the midmost point of the world, but around an imaginary point that is other than the center of the world. Accordingly, that motion is likewise not a motion taking place around an immobile thing. If, however, someone having no knowledge of astronomy thinks that eccentricity with respect to these imaginary points may be considered — when these points are situated inside³ the sphere of the moon, as they appear to be at the outset — as equivalent to motion round the midmost point of the world, we would agree to concede this to him if that motion took place round a point in the zone of fire or of air, though in that

2. I.e., Ibn Bājja. Cf. I 74, n. 10. The work to which the text refers is not known at present. On the philosophic criticism of the Ptolemaic system, cf. Translator's Introduction.

3. I.e., beneath.

case that motion would not be around an immobile thing. We will, however, make it clear to him that the measures of eccentricity have been demonstrated in the "Almagest" according to what is assumed there. And the latter-day scientists have given a correct demonstration, regarding which there is no doubt, of how great the measure of these eccentricities is compared with half the diameter of the earth, just as they have set forth all the other distances and dimensions. It has consequently become clear that the eccentric point around which the sun revolves | must of necessity be outside the concavity of the sphere of the moon and beneath the convexity of the sphere of Mercury. Similarly the point around which Mars revolves, I mean to say the center of its eccentric sphere, is outside the concavity of the sphere of Mercury and beneath the convexity of the sphere of Venus. Again the center of the eccentric sphere of Jupiter is at the same distance — I mean between the sphere of Mercury and Venus. As for Saturn, the center of its eccentric sphere is between the spheres of Mars and Jupiter. See now how all these things are remote from natural speculation! All this will become clear to you if you consider the distances and dimensions, known to you, of every sphere and star, as well as the evaluation of all of them by means of half the diameter of the earth so that everything is calculated according to one and the same proportion and the eccentricity of every sphere is not evaluated in relation to the sphere itself.

Even more incongruous and dubious is the fact that in all cases in which one of two spheres is inside the other and adheres to it on every side, while the centers of the two are different, the smaller sphere can move inside the bigger one without the latter being in motion, whereas the bigger sphere cannot move upon any axis whatever without the smaller one being in motion. For whenever the bigger sphere moves, it necessarily, by means of its movement, sets the smaller one in motion, except in the case in which its motion is on axis passing through the two centers. From this demonstrative premise and from the demonstrated fact that vacuum does not exist and from the assumptions regarding eccentricity, it follows necessarily that when the higher sphere is in motion it must move the sphere beneath it with the same motion and around its own center. Now we do not find that this is so. We find rather that neither of the two spheres, the containing and the contained, is set in motion by the movement of the other nor does it move around the other's center or poles, | but that each of them has its own particular motion. Hence necessity obliges the belief that between every two spheres there are bodies other than those of the spheres. Now if this be so, how many obscure points remain? Where will you suppose the centers of

those bodies existing between every two spheres to be? And those bodies should likewise have their own particular motion. Thābit⁴ has explained this in a treatise of his and has demonstrated what we have said, namely, that there must be the body of a sphere between every two spheres. All this I did not explain to you when you read under my guidance, for fear of confusing you with regard to that which it was my purpose to make you understand.

As for the inclination and deviation that are spoken of regarding the latitude of Venus and Mercury, I have explained to you by word of mouth and I have shown you that it is impossible to conceive their existence in those bodies. For the rest Ptolemy has said explicitly, as you have seen, that one was unable to do this, stating literally: No one should think that these principles and those similar to them may only be put into effect with difficulty, if his reason for doing this be that he regards that which we have set forth as he would regard things obtained by artifice and the subtlety of art and which may only be realized with difficulty. For human matters should not be compared to those that are divine.⁵ This is, as you know, the text of his statement. I have indicated to you the passages from which the true reality of everything I have mentioned to you becomes manifest, except for what I have told you regarding the examination of where the points lie that are the centers of the eccentric circles. For I have never come across anybody who has paid attention to this. However this shall become clear to you through the knowledge of the measure of the diameter of every sphere and what the distance is between the two centers as compared with half the diameter of the earth, according to what has been demonstrated by al-Qabīṣī⁶ in the "Epistle Concerning the Distances." If you examine those distances, | the truth of the point to which I have drawn your attention will become clear to you.

Consider now how great these difficulties are. If what Aristotle has stated with regard to natural science is true, there are no epicycles or eccentric circles and everything revolves round the center of the earth. But in that case how can the various motions of the stars come about? Is it in any way possible that motion should be on the one hand circular, uniform, and perfect, and that on the other hand the things that are observable should be observed in consequence of it, unless this be accounted

4. Thābit Ibn Qurra, a well-known mathematician, astronomer, philosopher, and translator, who belonged to the pagan community of Ḥarrān. He died in 900.

5. *Almagest* xiii.2.

6. A tenth-century astronomer.

for by making use of one of the two principles⁷ or of both of them? This consideration is all the stronger because of the fact that if one accepts everything stated by Ptolemy concerning the epicycle of the moon and its deviation toward a point outside the center of the world and also outside the center of the eccentric circle, it will be found that what is calculated on the hypothesis of the two principles is not at fault by even a minute. The truth of this is attested by the correctness of the calculations—always made on the basis of these principles—concerning the eclipses and the exact determination of their times as well as of the moment when it begins to be dark and of the length of time of the darkness. Furthermore, how can one conceive the retrogradation of a star, together with its other motions, without assuming the existence of an epicycle? On the other hand, how can one imagine a rolling motion in the heavens or a motion around a center that is not immobile? This is the true perplexity.

However, I have already explained to you by word of mouth that all this does not affect the astronomer. For his purpose is not to tell us in which way the spheres truly are, but to posit an astronomical system in which it would be possible for the motions to be circular and uniform and to correspond to what is apprehended through sight, regardless of whether or not things are thus in fact. You know already that in speaking of natural science, Abū Bakr Ibn al-Šā'igh⁸ expresses a doubt whether Aristotle knew about the eccentricity of the sun and passed over it in silence—treating of what necessarily follows from the sun's inclination, inasmuch as the effect of eccentricity is not distinguishable from | that of inclination—or whether he was not aware of eccentricity. Now the truth is that he was not aware of it and had never heard about it, for in his time mathematics had not been brought to perfection. If, however, he had heard about it, he would have violently rejected it; and if it were to his mind established as true, he would have become most perplexed about all his assumptions on the subject. I shall repeat here what I have said before.⁹ All that Aristotle states about that which is beneath the sphere of the moon is in accordance with reasoning;¹⁰ these are things that have a known cause, that follow one upon the other, and concerning which it is clear and manifest at what points wisdom and natural providence are effective. However, regarding all that is in the heavens, man grasps nothing but a small measure of what is mathematical; and you know what is in it. I shall accordingly say in the manner of poetical preciousness: *The heavens are the heavens of the Lord,*

7. I.e., of the epicycles and the eccentric circles. 8. I.e., Ibn Bājja. Cf. n. 2, this chap.

9. Cf. II 22. 10. *qiyās*; cf. n. 1, this chap.

but the earth hath He given to the sons of man.¹¹ I mean thereby that the deity alone fully knows the true reality, the nature, the substance, the form, the motions, and the causes of the heavens. But He has enabled man to have knowledge of what is beneath the heavens, for that is his world and his dwelling-place in which he has been placed and of which he himself is a part. This is the truth. For it is impossible for us to accede to the points starting from which conclusions may be drawn about the heavens; for the latter are too far away from us and too high in place and in rank. And even the general conclusion that may be drawn from them, namely, that they prove the existence of their Mover, is a matter the knowledge of which cannot be reached by human intellects.¹² And to fatigue the minds with notions that cannot be grasped by them and for the grasp of which they have no instrument, is a defect in one's inborn disposition or some sort of temptation. Let us then stop at a point that is within our capacity, and let us give over the things that cannot be grasped by reasoning¹³ to him who was reached by the mighty divine overflow so that it could be fittingly said of him: *With him do I speak mouth to mouth.*¹⁴ That is | the end of what I have to say about this question. It is possible that someone else may find a demonstration by means of which the true reality of what is obscure for me will become clear to him. The extreme predilection that I have for investigating the truth is evidenced by the fact that I have explicitly stated and reported my perplexity regarding these matters as well as by the fact that I have not heard nor do I know a demonstration as to anything concerning them.

CHAPTER 25

Know that our shunning the affirmation of the eternity of the world is not due to a text figuring in the *Torah* according to which the world has been produced in time. For the texts indicating that the world has been produced in time are not more numerous than those indicating that the deity is a body. Nor are the gates of figurative interpretation shut in our faces

11. Ps. 115:16.

12. In Ibn Tibbon's translation the passage has a different meaning: "The general proof from them is that they indicate the existence of their Mover, but the knowledge of other matters concerning them cannot be reached by human intellects."

13. *qiyās*. 14. Num. 12:8.