GUIDE 2:11
THE DIVINE SYSTEM OF EMANATION

Overview*: *How does God rule the world?

Maimonides conceived an arc for this chapter, Guide of the Perplexed 2:11. He *began* by explaining why he did not consider astronomy a science. It was a beneficial art or craft, especially for making calendars. It was, however, no more than a species of calculation, and its practitioners were mathematicians only. Even the greatest of them, including Claudius Ptolemy and the more recent astronomers that Maimonides had studied, could not explain what the stars were or why they moved. Those who thought that astronomy was a science had not grasped its limited purposes. For Aristotle, astronomical physics supplied proof for the existence of God. Maimonides' dismissal of astronomy concealed an attack on Aristotle's notion of a corporeal deity.

What Maimonides needed from astronomy was just a general survey of the stellar system. It would include the philosophers' vague hypothesis of the three parts of the universe (intellects, spheres, and the things of earth) and their even hazier concept of emanation as the means of divine rule. Those two concepts supplied the frame for Maimonides' new concept of emanation, which is the *core* of the chapter. Instead of astronomical "proofs," however, he used parables to explain how God distributes forces in the universe.

These ideas were not new. At the *end* of the chapter, Maimonides related their history. The Jews had originated them. That is why they do not contradict Jewish tradition. Nonetheless, they now looked foreign. He explained that because of the long exile, the Jews had forgotten this heritage. Having absorbed the Gentiles' opinions, their own ideas had come to seem strange to them.

Maimonides' turn against Aristotle gains strength in the next chapter, Guide 2:12. The philosophers could not understand emanation because they failed to draw the conclusions of their own philosophy. They could not free their minds from corporeality and its twin, the space-time-motion continuum. This meant that they could not conceive of God's *freedom* to will creation and to govern as He sees fit.

WHY MAIMONIDES DID NOT THINK THAT ASTRONOMY WAS A SCIENCE

> "WHEN a simple mathematician reads and studies these astronomical discussions, he believes that the form and the number of the spheres are facts established by proof. But this is not the case; for the science of astronomy does not aim at demonstrating them, although *it includes subjects that can be proved*; e.g., it has been proved that the path of the sun is inclined against the equator; this cannot be doubted. But it has not yet been decided whether the sphere of the sun is excentric or contains a revolving epicycle. The astronomer does not take notice of this *uncertainty*, for his object is simply to find a hypothesis that would lead to 1) a *uniform* and circular motion of the stars *without change*, acceleration, retardation, and which is, in its effects, 2) *in accordance with observation*. He will, besides, endeavor to find such a hypothesis which would require 3) the *least complicated motion* [*i.e*., parsimony] and the least number of spheres: he will therefore *prefer* a hypothesis which would explain all the phenomena of the stars by means of three spheres to a hypothesis which would require four spheres." (Guide 2:11. My italics and enumeration throughout this chapter-essay.)

Instrumentalism vs. positivism. If astronomy does not aim for truth, as Maimonides suggested in this passage, can we credit the claims of any of the other sciences? Does science lead to truth?

The philosopher Pierre Duhem (1861–1916) famously rejected positivist claims for science, arguing that truth cannot emerge from the principles used to generate scientific hypotheses. Science's methodological

foundation was too weak to produce certainty. Duhem's "instrumentalism" argued that science produces theories for merely "instrumental" purposes, *i.e*., they are helpful instruments, nothing more. They supply rules of *computation* or *suggestions* for how one might infer the existence of phenomena.

The challenge of instrumentalism was that "Scientific theories are useful, in that scientists are justified in using them, even if the entities they countenance are *fictional*" (Gad Freudenthal). The instrumentalists opposed the "realists" or "positivists," such as Karl Popper (1902-1994), who thought that scientific theories could and did describe reality and that science could progress toward truth.

Duhem's resistance to scientific claims could have flowed from his "deep Catholic convictions." He thought he had found in Maimonides a Jewish ally for his instrumentalist view of science, especially in Maimonides' deprecation of astronomy in Guide 2:11. Maimonides' "Semitic Peripatetism…in this milieu, surprises by its sagaciously skeptical tendencies."

Still, Duhem did not ignore Maimonides' distinctions. "Maimonides shares this view…celestial physics, according to him, is full of mysteries the knowledge of which God has kept unto Himself; but terrestrial physics, fully worked out, is available in the work of Aristotle."

It is true that for Maimonides, astronomy was not a science like Aristotelian physics, despite that the astronomers' calculations are "not at fault even by a minute," and that eclipses always occur when predicted (Guide 2:24). Nonetheless, the principles of astronomy lacked a scientific basis. Duhem, however, went much further than Maimonides: "Despite Kepler and Galileo, we believe today…, that the hypotheses of physics are mere mathematical contrivances devised for the purpose of *saving the phenomena*."

Unlike Pierre Duhem, Maimonides was not a skeptic regarding all scientific claims. The early twentieth-century debate between "realism" and "instrumentalism" would have meant little to Medieval thinkers, such as Maimonides, who did not have such strictly defined views of science's claims.

(**Instrumentalism**. Pierre Duhem, *To Save the Phenomena*, trans. Stanley L. Jaki, Chicago: University of Chicago Press, 1968, orig. 1908, esp. 59-62, 143-144, including a large extract from our chapter, Guide 2:11. Also see Duhem, *The Aim and Structure of Physical Theory*, 1906. **"Deep Catholic convictions,"** quoted from Stanley Jaki's *Introductory Essay*, Page 12. Also see Gad Freudenthal, "'Instrumentalism' and 'Realism' as Categories in the History of Astronomy: Duhem vs. Popper, Maimonides vs. Gersonides," *Centaurus* 45 (2003): 227-248, Blackwell Munksgaard, 2003. Duhem, Pierre. Michael Gardner, "Realism and Instrumentalism in Pre-Newtonian Astronomy," in *Testing Scientific Theories*, ed. John S. Earman, U. Minn., 1983, pp. 200-265. **Maimonides' doubts** about astronomy also do not make him a *systematic* skeptic, as some have recently concluded. **Duhem and the Jews**: According to the French *Wikipedia* entry on Duhem, he was: "*ouvertement anti-républicain, antisémite et anti-Dreyfusard*," i.e, "openly anti-republican, antisemitic and anti-Dreyfus." He aligned with Charles Maurras' *Action Française*, an explicitly anti-Semitic political movement, banned after the fall of the Vichy Regime in 1944, with Maurras sentenced to life imprisonment. **Saving the phenomena**. The Greek phrase of uncertain origin *Sozein ta phainomena* was the title of Duhem's book.)

A Likely Story. R. Shem Tov ben Joseph ben Shem Tov (fl. 1468-c. 1489) best articulated Maimonides' position on the instrumentalism or positivism of science, *avant la lettre*. He argued that Maimonides' view of the astronomical calculators (*baalei ha-tekhuna*) was part of the wisdom of *Maaseh Merkava*:

> "Regarding what the prophet said about the *Maaseh Merkavah*: '*And from within them was the likeness of four living creatures*,' (Ezek. 1:5) and that '*The likeness of a firmament was over the heads of the living creatures*' (1:22)—this is not said of *our world* of generation and corruption. The reason that '*likeness*' was not mentioned about the things of our earth was that those things are clear and contain no doubt. However, in matters of *astronomy* and matters of *divinity*, the prophet says '*likeness*' because they are *distant* from our knowledge, as we have no true knowledge of

> them….Things that can be known without a doubt, the prophet Ezekiel affirmed, are indeed doubtlessly so. [When] Ezekiel spoke of them *as they are*, he did not call them by the term '*likeness*' (*demut*). However, about *doubtful* matters, he did use the term '*likeness.*' Therefore, since there exists a doubt as to whether the number of spheres is four or more, he said, '*the likeness of four living creatures*.' Moreover, since there is doubt whether a sphere without stars exists (the hypothetical fifth outermost sphere of the universe), he also said, '*And the likeness of a firmament was over the heads of the living creatures*.' [Maimonides had said]: '*Understand this, for it is wondrous*.'"
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> (R. Shem Tov, p. 838-839, in the newly edited compendium of R. Ibn Tibbon's translation of the Guide, with his most famous medieval commentators, *Makhon L'idud L'yamod Hagot V'daat*, Bnei Brak, 838-839, 2025. My trans.)

Astronomical accounts were only, as Plato termed them, "a likely story." The roots of theology and astronomy are so uncertain that we can only produce such a likely story, a *demut*. They are "distant from our knowledge, for we have no true knowledge of them." Our thoughts about outer space or God are conjectures, not facts.

But nothing prevents us from eventually learning everything about the things of our earth. Scholars, like R. Shem Tov and Maimonides, could perhaps be called "instrumentalists" when it came to the divine sciences. But then, to be fair, we would have to call them "positivists" regarding the earth sciences.

(**Likely Story**: εἰκὸς μῦθος, *eikos mythos*, *Timaeus* 29d, in a very similar context to the above. It is a "likeness account" or a "story that is our best attempt at a likeness" to the creation of the world. *Eikos* in Greek, like *demut* in Hebrew, means an image, and so these are "*image*" stories, *imaginative* accounts).

The Craft of the Astronomical Calculators. Philosophers, going back to Plato and Eudoxus (4th Century BCE), understood that the astronomical calculators only created *geometrical models*. Those models were computational fictions, not cosmological truths. They produced accurate calendars that could calculate events, like new moons, as required by Jewish law. They also concocted zodiacal tables to support royal hopes for favorable times to commence battles. Maimonides rejected such astrological prognostications as entirely unreliable. (*Epistles* to *Yemen* and to *the Sages of Marseilles*).

The astronomers' craft had a small number of rules. The *first* was a principle of *unity*, based on their assumption of a unified, eternal, unchanging rotation of the cosmos. The *second* rule was to find ways to *save the astronomical appearances* seen in the night sky (*i.e.*, "saving the phenomena"). They achieved this by advancing *any* hypotheses that would satisfy observers, *no matter how many explanations* were required or how many entities (such as spheres) this took. The *third* rule was opposite to the preceding rules. It was the rule of *parsimony*. Given a choice, one should always choose the *simpler hypothesis*.

Beyond these three rules of *unity*, *saving the phenomena*, and *parsimony*, the mathematical astronomer was only expected to produce useful calendars and charts. No one expected them to solve the mysteries of the cosmos. The three rules, moreover, were not scientific since they assumed their outcome. What if, instead, the cosmos defied unity, the appearances deceived, or the truth unfolded with far greater *complex*ity?

There was a practical reason that no one expected more from the astronomers. They had no real knowledge before the advent of telescopes and Martian probes. Astronomy could not *prove* anything, despite the remarkable exactitude of its predictions. It could tell *when* celestial bodies would arrive at a specific location, but not *why* they arrived there.

[The answer to the parsimony principle of *Ockham's Razor* (that we should not multiply explanations unnecessarily) was "Kant's Shaving Bowl." This clever phrase seems to be the coinage of James K. Feibleman, meant to express Immanuel Kant's opposition to excessive parsimony, as voiced in *Latin* by his 19th-century *English* translator, that "*Entium varietates non temere esse minuendas*," that is, *the variety of entities should not be rashly diminished*. See *Critique of Pure Reason*, p. 656, p. 562 in the Max Muller English translation, 1881, and *The Two Story World: Selected Writings of James K. Feibleman*, ed. Huntington Cairns, New

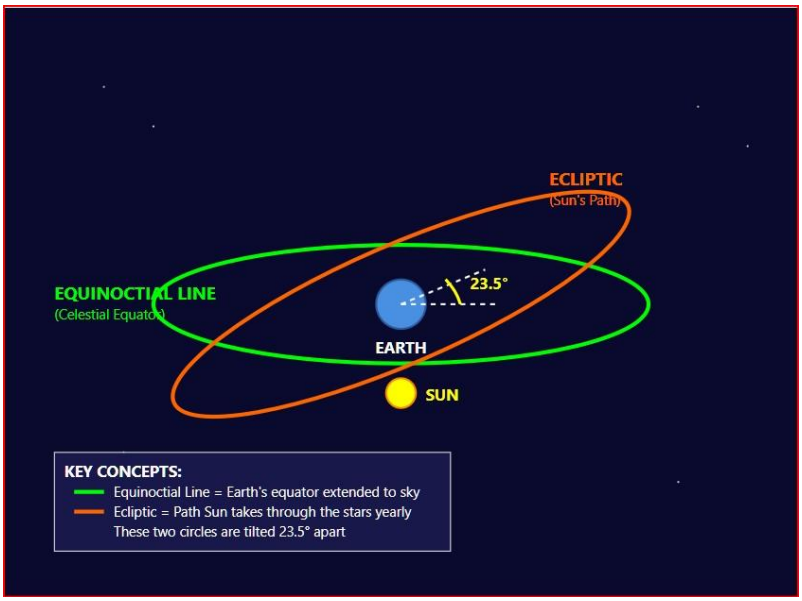
York, (1966), p. 290. The Latin phrase is Muller's own insertion, summarizing in Latin Kant's idea— namely, the principle of specification (*das Prinzip der Spezifikation*) in the Appendix to the *Transcendental Dialectic* section of the *Critique*: "*Die Erkenntnis der Erscheinungen in ihrer durchgängigen Bestimmung … fordert eine unaufhörlich fortzusetzende Spezifikation seiner Begriffe*," *i.e.*, the knowledge of phenomena in their comprehensive determination … requires a continuous and unceasing *specification* of their concepts].

The Wobbly Path of the Sun. The sun's strange path revealed astronomy's problems. Maimonides wrote,

> "It has been proved that the path of the sun inclines against the equator; this cannot be doubted. But it has not yet been decided whether the sphere of the sun is excentric or contains a revolving epicycle."

The Aristotelian astronomers were unable to explain the sun's motion. It was precisely this problem that prompted Claudius Ptolemy (*c.* 100 – *c.* 170 CE) to introduce his astronomical innovations.

The problem was that, in Aristotle's system, heavenly bodies move in strict circular rotation around the Earth at the center. However, *from the point of view of an earthbound observer over time*, the sun did not orbit its equinoctial plane (the celestial equator). If it did, we would have no seasons. Instead, the sun wobbles on its *ecliptic* plane at about 23.5° between the Tropics of Cancer and Capricorn.



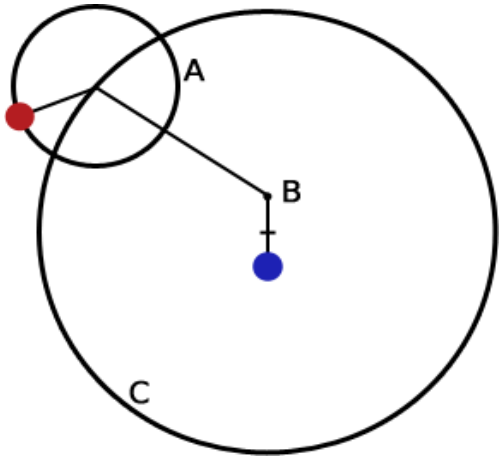
Another problem that Maimonides did not discuss but Ptolemy addressed is that the sun seems to slow down and speed up. From spring equinox to summer solstice, the Sun's observed path takes more than 91 days. From summer solstice to autumn equinox, it takes slightly less than 92 days.

Ptolemy *suggested* several theories to explain why the sun's observed motions violated the principle of *unity*. None of them were Aristotelian. The sun could be moved by 1) an *excentric* sphere, or 2) an *epicyclical* sphere around a moving center, which was a *combination* of excentric and ecliptic spheres. (See illustration of this complex proposal on the next page.) You could choose either account. It did not matter. Ptolemy produced relatively accurate tables predicting the sun's path on both hypotheses. He did not say which one was true.

Maimonides did not like those alleged solutions because they violated Aristotle's rule that the heavens only moved in strict circular rotation around the earth. He was *grudgingly* willing to entertain the proposal of a single excentric orbit, but only because it was the simplest solution:

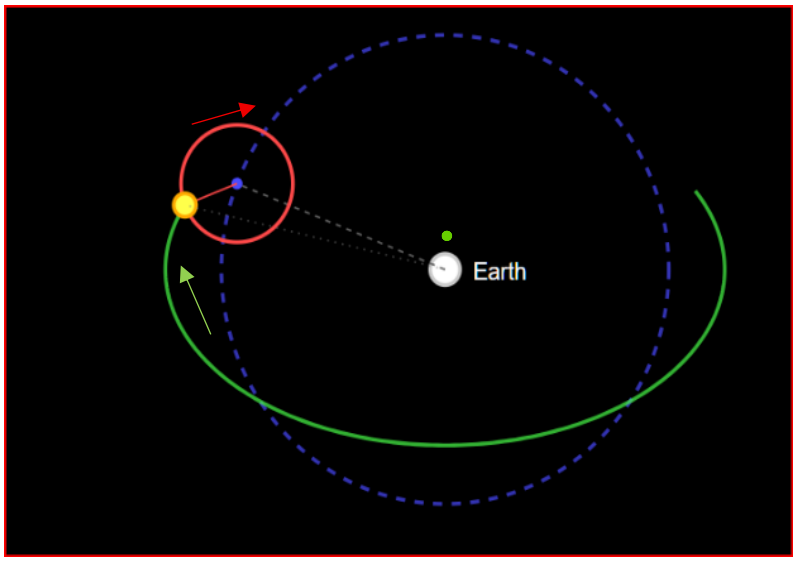
> "The astronomer….will…endeavor to find such a hypothesis which would require the *least* complicated motion and the *least* number of spheres…. For this reason, we adopt, in reference to the circuit of the sun, the theory of excentricity, and reject the epicyclic revolution assumed by Ptolemy."

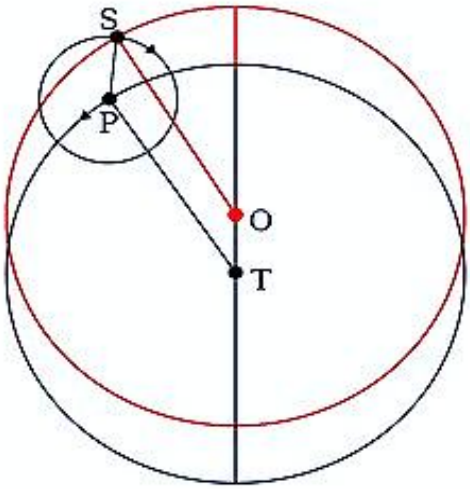
The Basic Excentric and Epicyclic Spheres



The Epicycle revolving an Excentric Sphere. Circle **A** is an *Epicycle*. Point **B** is called the *Equant* of the Excentric Sphere (**C**). The Equant was a mathematical fiction designed "to maintain a semblance of constant circular motion" *à la* Aristotle. Between the **blue dot** of the Earth and the Equant (**B**) is the *center* of the excentric sphere. The sphere was called "excentric" because it is not centered on the Earth, then considered the center of the universe. **Ptolemy's first proposal** was that the sun was on a single, simple excentric sphere.

Ptolemy's Second Suggestion: The Sun moves on an Epicycle tracing along an Excentric Sphere





Ptolemy's mixed excentric and epicyclic solution for the motion of the sun. The pictures are not exact, but should give the general idea of this complex solution. It addressed the two issues of the wobble and the brief acceleration and deceleration of the Sun approaching or receding from Earth. ***In the picture on the left***, we portray the Sun's path over the year in ***green***, but that green line is traced by the Sun's epicyclic motion in ***red*** around its epicyclic center, shown by the ***blue dot***. The ***blue circle*** *does* orbit the earth center. The path it traces in **green**, however, is excentric to the center of this *terracentric* universe, since it revolves the ***green dot***, which is its excentric center.

In the picture on the right, the letter **O** represents the excentric center, *offset slightly* from **T** (Terra), the Earth. The **deferent circle *in red*** rotates its excentric center **O**. **P** is the center of the epicycle sphere of the Sun (**S**), which rotates the Earth at the center on the **black** circle. The sun traces the red circle as it rotates the epicyclic center. Both circles are perfect circles, nominally, though not actually conforming to Aristotle's paradigm. (This diagram, by a *Wikipedia Commons* author, shows P traveling in a different direction than mine on the left.)

In other words, given that the *excentric* solution required one circle and the *epicycle* required two circles, by choosing the first alternative, Maimonides chose the solution with "the least number of spheres."

His key point, though, was that astronomy's failure to produce a true explanation for the sun's irregular path showed that it was not a science. Maimonides' critique subtly shattered the Aristotelians' *eternalism*, since it depended on the unproven assumptions of their astronomical physics.

(***91-92 days***. Spring is about 1.5 days longer than average, i.e., 91.31 days, while autumn is about 1.5 days shorter than average. The difference between the longest [summer] and the shortest [winter] is about 4.6 days. ***Tropic.*** Greek: *trope* (τροπή), meaning "turn," or "inclination," as the sun seems to "turn back" at solstices, i.e., crossing the constellations of Cancer and Capricorn. ***Equinoctial plane***: the plane projected into the universe from the Earth's equator. At the solstices, day and night are equal over the world: *aequus* + *nox* = equal night. ***Ecliptic***: So called because eclipses occur only when the moon crosses the sun's observed path.)

MAIMONIDES REJECTS THE EXISTENCE OF AN INFINITE NUMBER OF SPHERES

> "When we therefore perceive that all fixed stars move in the same way uniformly, without the least difference, we conclude that they are all in one super-sphere. It is, however, *not* impossible that each star should have its own sphere, with a separate center, and yet *move in the same way*. If this theory is accepted, the number of Intelligences (*sekhalim ha-nivdalim*) must be assumed equal to that of the stars. Therefore, Scripture says in reference to them, 'Is there any number of his *armies*?' (*ha-yesh mispar ligdudav*. Job 25:3). For the Intelligences, the heavenly bodies, and the natural forces are called the *armies* of God. Nevertheless, the species of stars can be *numbered*, and therefore we would still be justified in counting the spheres of the *fixed stars* collectively as one super-sphere, just as the *five spheres of the planets*, together with the numerous spheres they contain, are regarded by us as one super-sphere. Our object in adopting this number is… to divide the influences which we can trace in the Universe according to their *general* character, without tarrying to fix the number of the Intelligences and the spheres."
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> (Guide 2:11, R. Friedländer's translation, with adjustments, incl. using "super-sphere" to consistently translate Hebrew: *agul* or *kadur* / Judeo-Arabic: *kura* / כרה /كرة. See my chapter-essays on Guide 2:4 p. 7, 2:9, and esp. 2:10 for the origin of the term. **The "fixed" stars**. Where Maimonides says that "*They moved in the same way*…," R. Kafih, note 7, explained: "*They uniformly incline on their different axes*.")

Super spheres. In the prior chapter, Guide 2:10, Maimonides explained his inspiration that our universe is *tetradic*, that four super-spheres could explain the movement of the heavens. His theory marked the culmination of an Andalusian effort to streamline the intricate Ptolemaic model, characterized by multiple excentric and epicyclic spheres.

He could do this because the ninth-century Uzbekistani astronomer Abu al-Farghani had argued that a small number of *super-spheres* could resolve those complexities. This hypothetical super-sphere "was a space-filling sphere just large enough to house each planet's set of epicycles and other circles," including all its "epicycles, deferents, equants, and eccentrics… within its thick spherical shell."

The idea was not to eliminate those spheres, but only to recognize that like the cogs and gears in a watch, they all contributed to *one uniform movement*. It was more useful to consider them as one large, doughnut-like body. Since the stars moved on one path, one super-sphere could explain their movement. In the words of R. Asher Crescas, "They all moved with one perceptible force" (*akher sh'ha-koach ha-musag m'kalam ekhad*).

(Maimonides used this same flattening logic to reduce the mechanisms of 1) the "*fixed stars*," 2) the "*wandering*" *planets*, 3) the *sun*, and 4) the *moon* to four super-spheres. See chapter-essay on 2:4, "Maimonides Changes the Vocabulary of the Spheres,"

including illustrations. The passage describing Al Farghani's super-spheres is from Thomas Kuhn, *The Copernican Revolution*, 80-81. See *below* for R. Crescas' demolition of Maimonides' Tetrad, replacing it with a Triadic system.)

***What if there were an uncountable number of spheres*?** Maimonides considered a challenge from Jewish tradition, which conceived of *multitudes* of spheres. Commenting on the quoted passage, R. Moshe Narboni (c. 1300 – 1362) noted the aggadic account that there were many worlds: "Maimonides left room from the start for the Torah approach, namely, that the causes are many, so many that *some claim* they are infinite." (My trans: *v'natan makom l'khatkhila ha-torayit sh'ha-sibot rabot, ad sh'mahem amru sh'hem bilti baalot takhlit*).

This alludes to a Midrash, which said that God "Created worlds and destroyed them, until He created this one and said, *this one pleases Me*."

Maimonides approached the notion hypothetically, asking whether each star might have its own sphere, such that there would be as many *spheres* and *separate intellects* as there are stars, an uncountable number.

His quotation from Job was well chosen: 'Is there any number of His armies?' (*ha-yesh mispar ligdudav*). The noun *gedud* ('troop, band of soldiers'; R. Friedlander has "armies.") is a *collective noun*—grammatically singular but denoting a group. With the possessive suffix it becomes *gedudav*, 'His troops,' conveying not just one unit but hosts upon hosts. In this way, the scriptural author meant to suggest not merely an army but armies of armies, truly multitudes of multitudes.

***Could the spheres be infinite in number*?** This raised alarms in Maimonides' mind because it implied that the number of spheres could be infinite. He could accept multiplicity but not infinity, as the scholarly tradition since the Athenian philosophers had rejected the existence of infinite magnitudes, whether of spheres or of intellects.

Still, no matter how numerous those multitudes are, their spheres could still be placed in one super-sphere, since the stars seemed to move across the sky in the same direction and at the same pace. "Therefore, we would still be justified in counting the spheres of the fixed stars collectively as one."

Also, since "the *species* of the stars can be numbered," and any multitude that can be *numbered* as a *species* or *set* is *definable* and therefore *finite*, the stars and their adjuncts were not infinite.

("God created worlds and destroyed them": *Bereshit Raba* 3:7. Compare *Zohar* 1:246b, regarding the *shevirat ha kelim*. It had also been a Stoic belief: see Diogenes Laërtius, *Lives of Eminent Philosophers* 7.142: "The Stoics hold that the world is subject to a cycle of conflagration. It is recreated again and again eternally." Also see Seneca, *Natural Questions* 3:28, and Marcus Aurelius, *Meditations*, 9:28. Although Maimonides left the door open for multiple spheres here, he rejected it in Guide 2:30-32, stating that the idea "is not found in the Torah." While Maimonides considered the idea of many stellar spheres, he did not consider the notion of multiple *universes*, as Aristotle had demonstrated that there could only be one—see, generally, *Physics* 8:6, 258b26-260a9. Regarding Maimonides' rejection of an *infinity* of spheres or of intellects, see Guide 2:Introduction, Aristotelian Prop. III.)

***What little we can generally say about the structure of the universe*.**

> "For, as you have understood, our purpose is to count all the forces that we have apprehended in a general way regarding that which exists, *without tarrying to give a precise definition* (*l'hitakhav b'diuk amitat*) of the true reality of the intellects and the spheres." (Pines trans. p. 274 amended after R. Kafih.)….
>
> "All we wish to point out is this: in the first place, that the whole Creation is divided into three parts, viz. (1) The pure Intelligences [the separate intellects]; (2) The bodies of the spheres endowed with permanent forms…; and (3) The transient earthly beings." (Friedländer trans. v. 2, p. 55.)
> [The two translations quoted are consecutive in the text. We quoted the Pines translation for its accuracy in the first passage, though we usually prefer R. Friedländer for its lucidity and brevity.]

This catalog of the three kinds of things in the universe still has one foot in the old Aristotelian/Ptolemaic paradigm of intelligent crystalline spheres moving the stars. Still, Maimonides moved away from physical astronomy, not "tarrying" over it. His goal was to portray God's incorporeal governance of the universe.

This was a move from the physical world toward the noetic world. He understood that the proper subject of philosophy, especially metaphysics, is the world of *mind* and the incorporeal *forms* of things.

No Tarrying over the Intellects and Spheres. Maimonides used the suppositions of astronomy as a framework for his idea of the *distribution of benevolence* to the physical entities of our world, "without *tarrying* to give a precise definition of the true reality (להתעכב בדיוק אמיתת) of the *intellects* and the *spheres*."

There was no point in tarrying since neither Maimonides nor anyone else could *define* the *separate intellects* or even say how many there were: one, or ten, or multitudes.

Maimonides was also right in choosing not to try to define the *spheres*. Eudoxus (c.408–c.355 BCE) appears to have introduced them, but his description was vague. Aristotle also failed to clarify what they were:

> "It is evident, then, that there is a *fifth body* [element], distinct and separate from the four here below [i.e., fire, air, water, and earth]. It is not affected by generation and corruption, increase and alteration, but is unchangeable and impassive. The circular motion is its nature….The stars are not moved by themselves, but by the *spheres* in which they are fixed or to which they are attached." (Aristotle, *De Caelo* II:9:290a1, 289b30, 290b12–14)

Aristotle could not produce a definition of the spheres other than that they moved stars eternally in a circle. A proper Aristotelian definition, however, must specify a thing's *species* and *difference.* His account of the sphere describes but does not define. He could not decide whether the spheres were physical things or mere mathematical variables. This mix of physical and mathematical roles was incoherent. Nonetheless, medieval scholars were unable to abandon them.

The problem of the spheres. The physical spheres were the weakest link in this system. Still, Aristotle's physical spheres dominated thought for fourteen centuries. That is why they stayed part of the story.

When the paradigm shifted, the names also changed. Originally, Mercury, Venus, Mars, Jupiter, and Saturn were the *asteres planētai* (ἀστέρες πλανῆται)—literally, "stars that wander." Maimonides called them "perplexing stars," *kokavei nevukhim.* In the new Copernican paradigm, the old "*planetai*" stars became *planets*, shining by *reflected* light rather than their own. Their old sense as *stars* was forgotten.

The spheres also lost their old meaning. Johannes Kepler (1571-1630) finally proved that there were no "spheres." They were replaced with elliptical planetary orbits. In cabala, the *sefirot* completely lost their significance as astronomical entities.

What impressed Maimonides about Aristotle's physical spheres was that they were intelligent. Each sphere had an *immanent soul* that caused its movement and a *transcendent mind*, the adored object of its soul, which inspired its movement. *Neoplatonists* viewed these intellects as their *hypostases* (ὑποστάσεις – "those that stand under"), that is, as intermediaries *emanated* by God, usually ten in number.

Maimonides ignored the fact that Aristotle regarded these intellects as Olympian deities. For Maimonides, they were angels *created* by God. (See my chapter-essay to Guide 2:3, "The Other Aristotle Problem.")

Maimonides showed little interest in the technical details of the Ptolemaic model of the spheres. His focus was not on the spheres themselves but on how their intellects emanated the actualization of things.

In this chapter, and especially in the next, Guide 2:12, he clarified that we must grasp this emanation as *metaphysical* rather than *physical*. It is a *willed* noetic activity taking place solely in *mind*, beyond the *space-time-motion continuum*. This marked his break with the Aristotelian system.

(**Physical Spheres**. The Aristotelian spheres came from *matter* different from terrestrial matter. They were made of a *fifth element*, called *quintessence*. It was transparent and rotated eternally. See *Metaphysics* 290b12-14. **Aristotelian definitions**. *Posterior Analytics* II:7:92b26, *Topics* I:5:102a31–b4, *Metaphysics* Z:12:1037a10. The term *amitat* here refers, in philosophic Hebrew, to an Aristotelian definition. **The number of *intellects***: see my chapter-essays on Guide 2:*Introduction*, Prop. III, and on 2:6 "Maimonides' Dynamic Angelology," esp. there "Angels: A Definition?" **Johannes Kepler** (1571-1630) proved that there are no spheres, only planets and their orbits. See Kepler, *Astronomia Nova* and *Epitome of Copernican Astronomy*. **Paradigm persistence**: On the otherwise inexplicable persistence of the sphere paradigm, see Thomas Kuhn quoted on the last page of my chapter-essay on Guide 2:4, and Kuhn, *The Copernican Revolution*, 74-77. **Tetradic universe demolished by R. Crescas** (15th C.): In his commentary, R. Asher ben Avraham Crescas subtly demolished Maimonides' tetradic universe: "When Maimonides discussed the sun's tilt from the equator, the real meaning is that the sun rotates the zodiacal sphere," *perush sh'derech savuvo hu derekh galgal ha-mazalot*. The statement implies that *the sun does not need its own sphere*. Since the major complication in the sun's orbit was its tilt, and since that is the same tilt that the stellar constellations follow [23.44°], why did Maimonides find it necessary to grant the sun its own super-sphere? Three super-spheres were enough to satisfy the demands of parsimony. The universe would be *triadic*, not tetradic. Maimonides even recognized this when he said that the astronomer "will therefore prefer a hypothesis which would explain all the phenomena of the stars by means of *three* spheres to a hypothesis which would require *four* spheres.")

The Demolition of Astronomy. Maimonides began this chapter refusing to be awed by the astronomers' system. He simplified it to four super-spheres, but they lacked real explanatory power. They were expansive enough to accommodate even the Midrashic suggestion of multitudinous spheres.

Besides pointing out the weakness of astronomy, the main goal of the first half of this chapter was to clarify that anything Aristotle said about the universe above the sphere of the moon could be safely ignored, especially if it was part of an argument against creation.

Maimonides recognized that Aristotle believed in his god because it was the cause of the universe's *eternal* rotation. His god kept the system rolling.

Maimonides had always rejected Aristotle's eternalism. Still, Aristotle's case for divine existence was good enough to favor it over the fanciful claims of the Muslim Kalām theology. (See Guide 1:76, my chapter-essay).

In Guide 2:1, Maimonides had already shown that he did not need an astronomical proof for the existence of God. That was because he had already adopted an entirely metaphysical proof based on God's *necessary existence* as the *sufficient reason* for the existence of all other things.

Turning away from the astronomical calculators' gearbox cosmology, Maimonides pivoted to its entirely non-physical tenet, the doctrine of *emanation*.

MAIMONIDES' FOUR-PART PARABLE OF EMANATION

The preceding was prologue. Maimonides' purpose in Guide 2:11 was to explain the inner structure of emanation. "Emanation" was the accepted term for the divine rule over the universe, though no one could clearly define or explain it.

The core of our chapter is a four-part parable or story that illustrates how God *emanates the distribution of divine benevolence*. Each part is a *parable* because it speaks *indirectly* about emanation, though it may not sound like a traditional parable.

How are perfections distributed? God empowers forces to distribute, through "emanation," "goodnesses and lights," or "goodnesses and forces," down the chain of being. He creates and empowers other entities that can also emanate this benevolence.

God wills all of this to further His plan. Since words cannot fully explain this, Maimonides devised four stories to show how it might work.

(**Emanation** = *shefa* / פיץ / ἀπορροή. While the doctrine of emanation is not explicitly Aristotelian, it resembles Aristotle's idea of actualization. Things are formed when they transition from potentiality to actuality through "*actualization*." See, on *entelecheia*, below. The ***Liber de Causis*** indelibly linked emanation to Aristotle. This popular medieval forgery was attributed to Aristotle by a certain *Pseudo-Aristotle*, who was a follower of Proclus (412-485 CE). *Pseudo-Aristotle's* ninth-century Arabic book was very popular [265 manuscripts exist]. See *Liber de Causis, Kitāb al-Īḍāḥ li-Arisṭūṭālis fī l-Khayr al-Maḥd*, English, *Book of Causes*, tr. fr. Latin by Dennis Brand, Marquette U., 1981, esp. 4:48, p. 23*ff*. "Al-ʿaql dans la Tradition Latine du *Liber De Causis*," Dragos Calma, *Arabic Sciences and Philosophy*, Vol. 31, Issue 1, March 2021, pp. 127 - 148, Cambridge University Press. **Lights**: For the concept of an incorporeal "light," see Talmud, *Khagiga* 12a:9, 10, 12.)

The first parable: Against hubris. Humans should not think that God created the world solely for them.

He begins the story by telling us how God rules through the emanation of "*lights*" and *goodness*. These wonderful things spread through the intellects, to the spheres, and finally, to us.

> "We desire to show that the ruling power emanates from the Creator, and is received by the Intelligences according to their *order*: from the separate intellects part of *the good and the light bestowed upon them* (*shofa mehem…sh'kivlu tovot v'orot*) is communicated to the spheres, and the latter, being in possession of the *abundance* (*shofa*) obtained of the intellects, transmit forces and properties unto the beings of this transient world."

That we receive this emanated abundance is no cause to think that we are entitled to it, or that we are its sole intended beneficiary.

He tells us the moral without even telling the story. It is a kind of parable about the relationship of any benefactor and the recipient of his philanthropy:

> "The benefactor's existence, aim, and purpose is not solely to emanate benevolence upon his recipient." (My trans. from R. Kafih: *sh'kal mashpia tuv m'suyam …ain m'tziut oto ha-mashpia u'matarato v'takhlito ha-shafa'at zei ha-mushpa b'livad*.)

He warns us not to err by thinking that *inferior* things are the reason for the existence of their *superiors*, or that *means* are more important than *ends*. It would be *absurd* to think that our benevolent superiors are our inferiors (*davar batel b'heikhlet*).

> "For if this were the case, it would lead to the paradox that the higher, better, and nobler beings existed for the sake of beings lower in rank….No intelligent person will admit that this is possible." (R. Friedländer trans.)

This story of unnamed benefactors and beneficiaries seems obscure. R. Asher ben Avraham Crescas filled in the details.

> "The idea is that things that exist for another are *inferior*, since they exist for the sake of the other's purpose. If the separate intellects were to emanate their good *for the sake of* the spheres, such that the intellects exist *only* for the spheres' sakes, and the spheres for the sake of the generated and corrupted

> things [on earth], then *the higher would exist for the sake of the lower*, the noble for the sake of the base, and the eternal for the sake of the generated and corrupted. The *Ma'aseh Merkavah* alludes to this when the prophet says: *And their faces and their wings were separated above* [Ezekiel 1:11], meaning that although they *emanate* their *good* to this world, this is not their whole intention, but they have a higher purpose, which is to become *like* the Creator insofar as possible. Even though it appears from the actions of these celestial bodies that they do many things and emanate their good in this world every day, they are not directed [exclusively] toward these lower things." (My trans.)

The reason that the spheres rank higher than beings on Earth is that their forms are *fixed*. They do not change, unlike the transient terrestrial things. Things on earth are inferior to the heavenly bodies, which themselves are inferior to the angels and the separate intellects. The intellects are superior to the spheres because the intellects are entirely separate from physicality.

The main point is *not to err* by thinking our place in the universe is superior to any of God's creations. Each has its own reality, integrity, and purpose in the grand design.

("Not to Err…" as Maimonides thought R. Saadia Gaon had erred in maintaining that man is the crown of creation. R. Saadia argued that despite man's small size and physical weakness, he is the most eminent of God's creations. See See *Emunot v'Deot* 4:1, and 4:2, and R. Kafih note 16 to Guide 2:11. R. Ibn Ezra also criticized R. Saadia: "How could the greater be created for the despicable?" *Shorter Commentary* to Ex. 23. Note Maimonides' stunning use of Isaiah 40:15, "Do not delude yourself by supposing that the angels and spheres exist just for our sake. Our worth is spelled out for us vividly: *Lo, the nations are a drop in the bucket*." Maimonides argued: "The right view… Is not that all things exist for man's sake but that all beings were *meant for their own sakes* and not for the sake of something else…. Thus: the ultimate purpose of this world is God's will." Guide 3:13. The point is that each creation has its own purpose and integrity, as part of the divine plan.)

The Second Parable. Maimonides now reveals that what he is driving at in the four parts of this parable of creation is *the distribution of perfections*.

This second parable is the least clear, yet it is the most important of the four. In this second *indirect* account, the distributors exercise a *generosity born of abundance*. They give, *from* what has been given to them, *to* everything inferior to them. Here is the entire statement:

> "The nature of the influence [emanation] which one part of the Creation exercises upon another *must be explained* as follows: a thing perfect in a certain way is either *perfect* only in itself, without being able to communicate that *perfection* to another being, or it is so *perfect* that it is capable of imparting *perfection* to another being."

True perfection cannot be contained. Perfection is a species of the good that must transcend the boundaries of any perfect entity. The entity has reached the level of *actuality* it was meant to have, though its goodness continues to flow. Aristotle refers to this as *entelecheia*, meaning *actuality* or *perfection*, often translated as "entelechy" in English.

[*Actuality* is the insufficient English counterpart of the Latin *in actu. Entelecheia* was Aristotle's term for this actuality. It is the *realized state* of a thing as it *continues* to fulfil its *dynamic* potential (*dunamis*). It is something actively doing what nature designed it to do. It means "having its end/purpose within." See *Metaphysics* 9:1048a25-35. Joe Sachs, in his groundbreaking translation of the *Metaphysics*, calls it "*being-at-work staying itself*" to emphasize its *continuously active* state, which is a noetic reality. Actuality is not just a momentary realization of form, but the sustained process of present formation — a kind of ongoing *fulfillment* or *fulfilling*. Joe Sachs, *Metaphysics*, trans., Green Lion Press, 2002, *Glossary*, *li.*]

Maimonides' statement of this second parable is necessarily vague, with its intangible language about perfection and the capacity to impart that perfection. Still, it conveys the point of the four-part parable. Each part of the grand parable expresses the same idea in a different way, showing how God bestows benevolence throughout the universe.

The Third Parable. This last account was so abstract that we feel a false sense of relief when Maimonides presents it next as a story about three wealthy men. Still, in this version, we might mistakenly think that this story is about something other than the abstract process of divine thought.

> "It is as if you said, *by way of example* (*derekh mashal*), that there is 1) an individual who has wealth *sufficing only for his own necessities* (*sh'memala tzarkhav bilvad*), no residue being left over (*lo y'adef*) from it from which someone else might receive an [emanated] benefit (*sh'yashpia bo l'zulato*); and that there is 2) another individual who has enough wealth for a residue to be left over from it sufficient for the enrichment of many people, so that this one may give a measure of it to another individual, through which this second would also become rich, while 3) a residue is left over from it that suffices for the enrichment of a third individual (*sh'ya'ashir bo adam shlishi*)." (Pines' trans. p. 275.)

In this account of three tycoons, we learn that the first tycoon has only enough money for himself. The second tycoon has enough to give to others. The third tycoon can make other men wealthy tycoons, who can, in turn, establish themselves as wealthy philanthropists. The point of this parable is that God can invest intermediaries with the ability to empower others.

The use of three tycoons reminds us of the three parts of the system through which the emanation flows (intellects, spheres, us).

The Fourth Parable. Finally, he recounts the same story from the perspective of the first *Separate Intellect* created by God.

> "The case of *being* (*b'mtziut*) is similar. For the emanation coming from Him, may He be exalted, for the *bringing into being* (*l'hamtza'at*) of 1) *separate intellects* (*shekhalim nivdalim*), emanates likewise from these intellects, so that one of them brings another one into being, and this continues till the *Active Intellect* (*ha-sekhel ha-poel*). With the latter, the bringing into being of separate intellects comes to an end (*nifseka*). Moreover, a certain other act of bringing into being emanates from every separate intellect until 2) the *spheres* come to an end (*sh'nistaymo*) with the *sphere of the moon*. After it, there is 3) *the body subject to generation and corruption*, I mean the *first matter* (*ha-khomer ha-rishon*) and what is composed of it. Furthermore, forces from every sphere enter 4) the *elements* until their emanation is completed with the completion of generation and corruption." (Pines trans, p. 275-276, with my substitution of *emanation* for his *overflow*.)

God endows the First Intellect with *perfection* in abundance. Its abundance of goodness is so overflowing that as it reflects on its divine creator it creates a Second Intellect. This creative process repeats itself in the familiar Neoplatonic procession, down to the Tenth Intellect, the *Active Intellect*. In every act of reflection, the reflected image is inferior to the original.

Returning to the top of the array (at 2, above), he shows how each of these *intellects*, when it reflects on itself, creates its own *sphere*. The intellects endow each sphere with this benevolent ability to generate matter and form, which join to become (3) *Corporeal Form.* Corporeal form is the conceptual entity that generates (4) the four *Elements*. Those elements then combine with specific forms to actualize the compounded physical substances.

(See my chart, under "The Tenth Intellect: the 'Active Intellect'" in Guide 2:4. Maimonides does not use the term "corporeal form." But he said that prime matter is pure potentiality actualized by form—an idea the schoolmen summarized as *forma corporeitatis* or corporeal form. *Corporeal form* is the scholastic term that denotes the specific organizing principle or *actuality* that gives a physical body its structure, qualities, and identity—distinguishing it from mere matter, which is pure potentiality (*potentia/dunamis*), not a substance. That *first* or *hylic matter* requires *form* to become an actual, determinate substance. *Corporeal form* is the step before the actualization of the forms of the elements. See Charles Sanders Peirce, in *Dictionary of Philosophy and Psychology*, ed. James Mark Baldwin, New York: Macmillan, 1901, *s.v.* "Corporeal form."; Aquinas, *Summa Theologiae*, *pars* I, *qu*. 1 xv, art. 4.)

With that, the entire system reaches its ongoing perfection, *shlemut*, or *entelecheia.* Being perfect, it *stops* emanating principles at the tenth emanation, the perfect number. The flow of goodness, however, never ends.

Creation and Providence. Maimonides' Grand Parable alludes to two additional stories, known as *Maaseh Bereshit* and *Maaseh Merkava*, which represent Creation and Providence, respectively.

Through this Grand Parable, we learn of the complex process by which God governs the world. God wills each created being as part of His design, with its own purpose and integrity. Each has its place. None may assume that it was the purpose of creation.

This distribution of goodness and light cannot be contained. It acts to perfect the inferior members. It is as if each has become wealthy enough to make its inferiors generously benevolent.

In the final parable, we refer to the entities by their familiar philosophical names, i.e., intellects and spheres, and tell the story of how ten of them form the structure of the great chain of being.

These stories are dream images, not realities. The realities are beyond our grasp. We know them only through their effects. We can only speak of them in parables.

The rest of the chapter is Preface and Afterword to this Grand Parable. In the *Preface*, we learned that due to our limited understanding of the universe, our explanation can only take the form of a parable. In the *Afterword*, we learn that this is an ancient Jewish story—a story the Jews seem to have forgotten. They have forgotten it because they absorbed the anti-philosophical and anti-theological ignorance of the Gentiles.

HISTORICAL JUDAISM AND THE THEORY OF EMANATION

> "We already mentioned that these theories are not opposed to anything taught by our Prophets or by our Sages. For our nation is wise and perfect, as has been declared by the Most High, through Moses, who *made us perfect*: '*Surely this great nation is a wise and understanding people*' (Deut. 4:6)."

The universal paradigm. By Maimonides' time, the scholarly community, including Jewish, Muslim, and Christian scholars, had reached a consensus on the organization of the universe. Maimonides' Grand Parable reflected this shared understanding. Although this view was closely connected to Aristotle and the Aristotelians, it evolved further due to the contributions of astronomers and Neoplatonists.

The changes were not all in one direction, for the Aristotelians had been neo-Platonized, and the originally pagan Neoplatonists adapted to biblical views of creation.

Neoplatonism was the source of the theory of emanation. Emanation helped the scholastics explain what philosophers now call the mind/body problem. It was their best answer to the question of how intellectual entities in the noetic world affect physical bodies in our material world. Even today, we still lack an answer to this problem.

Scholars also accepted that the universe has three tiers: a small number of guiding intelligences, some intermediary transparent spheres that moved the stars, and, finally, the constantly changing things on Earth.

Maimonides now explains that this was an ancient Jewish story.

Some things were never part of the story. Maimonides restricted the alignment with the philosophers. It did *not* include their view that the world was uncreated and eternal, or their rejection of divine providence. It

went no further than that the universe had three parts and that God governed nature through the system of emanation:

> "Our object …is… to divide the influences which we can trace in the Universe according to their general character… *All we wish to point out is this* (*ela kal ha-metera*): in the *First* place, that the whole Creation is divided into three parts, viz. (a) the pure *Intelligences*; (b) the bodies of the *spheres* endowed with permanent forms…; and (c) the transient *earthly beings*, all of which consist of the same substance. [*Secondly*], we desire to show that the ruling power *emanates from the Creator* (*shofaat me'et hashem*), and is received by the Intelligences according to their *order*: from the Intelligences part of *the good and the light* bestowed upon them is communicated to the spheres. The latter, being in possession of the abundance obtained from the Intelligences, transmit forces and properties unto the beings of this transient world."

In this presentation, we observe Maimonides' shift from the corporeal to the conceptual.

Things have changed. We would be mistaken to think that Maimonides' alignment between Judaism and science would look the same today. Back then, science and philosophy took the divine seriously, and Aristotelians argued that *causation* must involve *form* and *purpose*.

Our science has amputated religion from life and drained causation of its conceptual and teleological components. It does not even admit the old idea that the world is organically interconnected (*Organicism*).

***Why did this wisdom come to seem foreign to Judaism*?** Maimonides, in these chapters, showed that this story did not oppose Jewish tradition. God had revealed it to the patriarchs, Moses, and the prophets of Israel.

At the end of our chapter, he presented arguments to explain why these originally Jewish ideas are so rare in the Scriptures and rabbinic sources. Why do they appear foreign?

Maimonides provides a brief history of Jewish engagement with metaphysical ideas. Whenever Maimonides discusses history, we pay close attention. It was uncommon for rabbinic writers at that time to do so.

> "We have already explained that all these views do not contradict anything said by our prophets and the sustainers of our Law. For our nation is a nation that is full of knowledge and is perfect, as He, may He be exalted, has made clear through the intermediary of our Rabbi [Moses] *who made us perfect*, saying: '*Surely, this great community is a wise and understanding people*' (Deut. 4:6) However, when the wicked from among the *ignorant* communities ruined our good qualities [accomplishments], destroyed our words of wisdom and our compilations [books], and caused our men of knowledge to perish, so that *we again became ignorant*, as we had been threatened because of our sins — for it says: '*And the wisdom of their wise men shall perish, and the understanding of their prudent men shall be hid*;' (Isa. 29:14); when, furthermore, we mingled with these communities their opinions were taken over by us, as were their morals and actions. For just as it says regarding the [mimicking] of actions: *They mingled themselves with the communities*, *and learned their works*,' (Ps.106:35), it says with regard to the adoption by us of the opinions of the *ignorant*: '*And they please themselves in the children of strangers*' (Isa. 2:6). This was translated [into Aramaic] by *Jonathan ben Uziel*, peace be on him: '*And they walk according to the laws* ["Torah"] *of the gentiles.*' When, in consequence of all this, we grew up accustomed to the opinions of the *ignorant*, these philosophic views appeared to be, as it were, foreign to our Law [*Torah*], just as they are foreign to the opinions of the *ignorant*. However, matters are not like this…"

[Pines' trans. **Jonathan ben Uziel** (first century BCE–first century CE) was the author of one of the Aramaic translations of various books of the Bible, *Targum Yonatan*. **Ignorant**. I highlighted the multiple uses by Maimonides of the term *ignorant* in grayscale. See Pines' footnoted explanation below.]

Moses, acting as God's emissary, had perfected Jewish wisdom. He "made us perfect" (*asher hevi l'shlimotenu*).

R. Even-Shmuel explained that we should not be surprised by this Jewish wisdom, even though it appeared "a thousand years" before Aristotle, or because it included both scientific and religious matters. It included the "Totality of all wisdom….because the subjects of wisdom draw upon one another" (*b'tekufa kduma kol kakh, k'elef shana v'yoter lifney aristo… l'shlemut b'khokhma, v'lo b'dat b'lvad…. ki tekhomei ha-hokhma yonekim zei m'zei*).

But then, terrible things happened to these wise people.

They were punished for their offences with war, exile, and persecution, as their prophets had warned them. The worst part was that their wisdom, passed down by their teachers for eons and preserved in libraries, was lost, since the *ignorant* Gentile conquerors killed the teachers and burned the books. Isaiah also foretold this:

> "13: And the Lord said: Forasmuch as this people draw near, and with their mouth and with their lips do honor Me, but have removed their heart far from Me, And their fear of Me is a commandment of men learned by rote; 14: *Therefore, behold, I will again do a marvelous work* among this people, *even a marvelous work and a wonder* (*lakhen hin'ni yosef l'hafli…haflei v'fele*); and the wisdom of their wise men shall perish, and the prudence of their prudent men shall be hid." Isaiah 29:13-14.
> (Grayscale indicates the part that Maimonides quoted)

Maimonides only mentioned the last two clauses in verse 14, that the wise would perish and the knowledge would be hidden. *Targum Yonatan* explained the italicized part about the "marvelous work," interpreting it as a euphemism for the "marvelous" punishments inflicted. Rashi explained the repetition of "marvel upon marvel," as "concealment upon concealment, sealing upon sealing" (*pele nosaf al pele, kisui al kisui, otem al otem*):

> "And what is this obscurity upon obscurity? The wisdom of their wise men shall be lost. The taking away of the sages of Israel is twice as hard as the destruction of the Temple and all the curses in Deuteronomy, for all of them are only one obscurity (citing the single *v'hiplei* in Deut. 28:59) …whereas here are two obscurities." (*Rashi*, *ad loc*., *Sefaria* trans.)

As punishment, the Jews were cast into a sea of ignorance. Even on Halakhic topics they mourned the loss of details. (Talmud *Sotah* 49a, *Temurah* 14b–15a, *Menahot* 45b, and *Sanhedrin* 88b). Maimonides deepened this sense by saying: "We *again* became ignorant." His "again" alluded to the ignorance of the Jews before Moses.

The meaning of "ignorance." By "ignorance," Maimonides did not mean generic ignorance.

For the quoted passage, I used the translation by Shlomo Pines (p. 276, Chicago, 1960), where he consistently used the term "ignorant" in the five instances that I highlighted. He explained why he did this in his footnote 13, where we learn what Maimonides meant by "ignorant."

> "13. *Jāhiliyya* [الجاهلية — אלג'אהליה]. The word derives from the verb *jahila* (meaning "to be ignorant"). It typically applies to the *pre-Islamic Arabs due to their paganism*. Certainly, Maimonides did not wish to suppress this shade of meaning when speaking a little further on of the Jews of his day having become *jāhiliyya*. However, the biblical verse that follows refers to their ignorance, and for this reason, the translation 'ignorant' was chosen, even though it does not render an essential

element of the meaning. It should be borne in mind that whenever the term 'ignorant' appears in this paragraph, it corresponds to *jāhiliyya* in the Arabic text."

[**Contemporary use of *jāhiliyya***. This sense of *jāhiliyya*, referring to the pagan ignorance of pre-Muslim eras, remains relevant. It continues to be a political and religious tool to criticize secular Western society. See "Sayyid Qutb's Concept of *Jāhiliyya* as Metaphor for Modern Society" by Sujata Ashwarya, *Islam and Muslim Societies*, Vol. 2, No. 2, 2006, on *Academia.edu*.]

The ignorant Gentiles of the *jāhiliyya* type not only killed the sages and destroyed their books. They were a snare for the Jews. The Jews mingled with them, leading to their intellectual *enslavement* to the ignorant Gentiles, and the loss of their own wisdom. The Jews became *jāhiliyya* ignoramuses like the gentiles.
(Mingled = *v'nitarvenu*. "Enslavement," see *Targum* to Psalms 106:35, quoted by Maimonides below, that *v'yitarvo = ovadehon*, *i.e*., that *mingling*, in some sense, meant *enslavement*. That would include enslavement to Gentile thinking.)

What should we think of this pagan ignorance and Muslim paganism that enslaved their minds? Maimonides highlighted the severity of this situation. He wrote: "For just as it says regarding the mimicking of actions" (*k'mo sh'amar b'dimion maaseihem*), and then quotes Psalms 106:35, that the Jews "were mingled among the heathen, and learned their works."

Psalm 106:34-39 emphasized what happened when the Jews "learned their works." They committed the three cardinal sins of Judaism—idolatry, bloodshed, and sexual immorality.

> "34: They did not destroy the nations, concerning whom the LORD commanded them:
> 35: But were mingled among the heathen, and *learned their works*.
> 36: And they served their *idols*: which were a snare unto them.
> 37: Yea, they sacrificed their sons and their daughters unto devils (*l'shedim*),
> 38: And *shed innocent blood*, even the blood of their sons and of their daughters, whom they sacrificed unto the idols of Canaan: and the land was polluted with blood.
> 39: They were thus defiled with their own works *and went a whoring with their own inventions*."
> (*va'yiznu b'mal'leihem. Radak* explained: "sexual immorality," *gilui arayot*. I italicized the three cardinal sins.)

He next quotes Isaiah 2:6 to portray the result of Jewish attraction to the *jāhiliyya* ignorance of Arab culture:

> "6. Therefore, thou hast forsaken thy people, the house of Jacob, because they be *replenished* (*maloo—full* of) from the east, and are *soothsayers* (*onenim*) like the Philistines, and they *please themselves in* (*yaspiku*—stuffed themselves with) the children of strangers.
> 7. Their land also is *full* (*v'timalei*) of silver and gold, neither is there any end of their treasures; their land is also *full* (*v'timale*) of horses, neither is there any end of their chariots:
> 8. Their land also is *full* (*v'timalei*) of idols; they worship the work of their own hands, that which their own fingers have made." (Isaiah 2:6-8)

Isaiah's verb *yaspiku* (יַשְׂפִּיקוּ) depicts a feeling of fullness, creating a vivid image of being stuffed, almost to the point of bursting, with foreign customs and influences. Those influences overpower and dominate, leaving no room for the sacred or eternal. Isaiah's words *maloo*, *malei*, and *yaspiku* describe spiritual engorgement with pagan practices and ideas, even in nominally monotheistic Muslim environments.
(On *yaspiku*, see Klein's *Etymological Dict.* 676).

Ignorance and the creation of demons. In the Guide's *Lexicon*, the more than forty chapters Maimonides wrote to clarify anthropomorphically tinged terms, Maimonides quoted snippets of Scripture to suggest their traditional interpretation.

In Maimonides' lexical discussion of the term *"yalod*," meaning "birth," in Guide 1:7, he largely disregarded *actual* childbirth or children. Maimonides thus offered an arresting reading of Isaiah 2:6, "They please themselves *in the children* (*u'v'yalde*) of strangers."

The *Birth of children*, for him, either meant the creation of good "*intellectual progeny*" (1:7, fifth definition) or, conversely, the creation of *bad ideas* (fourth definition). Those bad ideas led to the creation of *demons*, including especially demonic ideas. This was the *jāhiliyya* ignorance the Jews imitated and made their own.

He also sounded Isaiah's condemnation of Jews who "Satisfy themselves in the children of strangers" in Guide 1:7, where he again quotes the *Targum's* sarcastic Aramaic translation — "*u'v'nimusi amamya yehekhun*," as though the Jews adopted the *halakhot* of the gentile "Torah."

(ובנמוסי עממיא יהכון—*nimus* = the *Septuagint's* term for Torah, *nomos*. "*Yehekhun* is an Aramaic variation on *yehalakhun*"—*i.e*., their *halakhot*: "יהכון היא וריאציה של יהלכון." From Dr. Michael Shwartz' Hebrew trans. of the Guide, note 14, v. 2, 292, Gefen, 2003).

It meant that Jews adopted the ideas and worldview of the ignorant Gentiles. Taking on the opinions that they *birthed,* the Jews became ignoramuses like them. *Rashi* provided the traditional reading of Isaiah 2:6,

> "'*For they are full (malu) from the East*': Their hosts have become *full* of the deeds of the Arameans who dwell in the East, who were sorcerers who used the name of pagan deities.
> '*And with children of gentiles they please themselves*': They *cohabit* with the daughters of the heathens and *mingle* with them, and they would bear children to them, with whom they are always pleased, and they occupy themselves [with them] and long for them and bother with them."

This led Maimonides to think of Talmud *Eruvin* 18b and Midrash *Bereshit Rabba* 20:11, which discuss the creation of demons (*shedim*) after Adam's expulsion from Eden. The Midrash states:

> "R. Simon said: Throughout the entire one hundred and thirty years during which Adam held aloof from Eve, the male *spirits* were made ardent by her, and she bore, while the female *spirits* were inflamed by Adam and they bore." (Spirits = *rukhot*, which Rashi called *shedim* = demons).

According to the Talmud, Adam did not have a son in his own likeness, after his own image, for one hundred thirty years, until Seth was born. Seth was, crucially, Adam's *intellectual progeny*, not just his physical progeny, like those demonic siblings:

> "Those sons of Adam who were born before that time were not human in the true sense of the word, they had not '*the form of man*' (*ha-tzura ha-enoshit*)…. It is acknowledged that a man who does not possess this 'form' *...is not human, but a mere animal in human shape and form* (*sh'eino adam eleh baal khai b'tzurat adam v'tavnito*). Yet such a creature has the power of causing harm and injury, a power which does not belong to other creatures. For those gifts of intelligence and judgment with which he has been endowed for the purpose of acquiring perfection, but which he has failed to apply to their proper aim, are used by him for wicked and mischievous ends; he begets evil things, as though he

> merely resembled man, or simulated his outward appearance. Such was the condition of those sons of Adam who preceded Seth, i.e., *demons* (*k'l'omar shedim*)." (Guide 1:7)

They were idol worshippers. In Guide 2:30, Maimonides wrote:

> "When the serpent came to Eve, he infected her with poison; the Israelites, who stood at Mount Sinai, removed that poison; idolaters, who did not stand at Mount Sinai, have not got rid of it. *Note this likewise*."

We must understand ("note this") that those infected with the poison of materialist idolatry are not "in the image of God." They are the *jāhiliyya* Gentiles and those Jews who become like them, even if they do not quite fit the strict definition of idolaters. (See my chapter-essay to Guide 1:7, especially the section on "Demons").

Maimonides addressed this intellectual devastation previously in Guide 1:71, referring again to the domination of the *jāhiliyya*:

> "Know that the many *wisdoms* that were in our nation… were *lost* 1) over the length of time and through the 2) dominion of the *ignorant* (*aljāhiliyya*) nations over us, and 3) because those matters were not permitted to every person… — and this is the reason for the cessation of these great foundations from the nation." (Guide 1:71).

In his commentary to Guide 1:71, R. Even-Shmuel clarified that those lost "wisdoms" were subjects of *Divine Science*, including our chapter, Guide 2:11, together with the Divine Science subjects that he listed elsewhere (Guide 1:34-35, see my chapter-essays).

Ancient testimonies to Jewish wisdom. R. Even-Shmuel surveyed *testimonies* to this ancient Jewish heritage of wisdom. Among the earliest was *Theophrastus* (c.371-c.287 BCE), Aristotle's colleague and successor as the head of his school, who called the Jews a "philosophical nation," and said that:

> "In being philosophers by race (φιλόσοφοι τὸ γένος), they converse with each other about the Deity, and at night-time they make observations of the stars, gazing at them and calling on God by prayer."

Though complimentary, his observations do seem second-hand. Theophrastus was vaguely aware of some parts of the Jewish sacrificial system, which he said included an oath he called the "*Korban*." He mentioned that the Jews observe the Sabbath not out of superstition but for "philosophical reasons, namely, to give themselves rest and time for contemplation." He regarded it as a day for meditating on harmony in creation.

R. Even-Shmuel also mentioned *Aristobulus of Alexandria*. Aristobulus was a well-known and respected Hellenistic philosopher in Alexandria. He testified that the Bible had been translated into Greek much earlier than the usual third-century BCE date, and that Pythagoras, Socrates, and Plato were familiar with it. Aristobulus argued that the source of Greek philosophy was the Bible, and that the numerical symbolism in the biblical account of the days of creation inspired Pythagorean mathematical philosophy and religion. (R. Even-Shmuel's Introduction to volume II of the Guide, footnote 148. Aristobulus fl. c. 181–124 BCE. Whether Aristobulus was Jewish or Greek is a matter of dispute. Regarding his account of the *Septuagint*, cf. *The Letter of Aristeas*.)

Aristobulus may also have written a lost volume explaining Jewish law, in the form of a Dialogue with "King Ptolemy," where Aristobulus answered the King's questions about the Bible, particularly regarding the need to interpret anthropomorphic biblical terms metaphorically. Aristobulus, like Maimonides, defined away the corporeal implications of God "standing" and "descending" (Guide 1:10, 13, and 15). For Aristobulus,

standing meant eternality or systematic order, as in the heavens, while *descending*, as in the revelation at Mount Sinai, signified divine immanence.

R. Even-Shmuel expanded on Maimonides' history lesson, stating that from "R. Saadia Gaon to Maimonides, there was no thinker who did not believe with complete conviction in the continuity of philosophical thought among the Jewish people." (See his commentary on Guide 1:71.)

Prominent testimony came from *R. Yehuda HaLevi*, that both the principles and details of philosophy were *taken* from the Jews by the Chaldeans, then by the Persians, the Medes, the Greeks, and finally the Romans. Muslim philosophy affirmed Jewish wisdom, for *Averroes* said "No one will doubt that there *were* many great sages among Israel" (R. HaLevi, *Kuzari* II:66. Averroes, *Tahafut Al-Tahafut* 584:10, 360-361 in Van Den Bergh's trans).

Why was wisdom lost? R. Even-Shmuel detailed three reasons for this loss of wisdom (Comm. to Guide 1:71).

First, although the Jews gained this wisdom thousands of years ago, they did not develop it for long periods, and, thus, it could not be preserved in its vitality. Neglect led to forgetfulness.

Second, because of their exile, the Jews were surrounded by ignorance. No space was left for this wisdom to grow. R. Shem Tov observed, "It was due to their ignorance – for if they had been wise, we would necessarily have learned at least something from them – but *we were slaves and they were fools*, thus there was no chance of renewal for us."

Third, philosophical and theological speculation was reserved solely for individual study, as it was not permitted to discuss this lore in public (Mishnah *Hagiga* 2:1). Consequently, such scholars were few in every generation. The absence of teachers broke the chain of transmission.

This wisdom was not found in books. Maimonides wrote that the Jews relied on foreign texts when they contained the ideas of the Jews or if their own books were lost. Indeed, for ages, the Jewish tradition had been an oral one. Even the interpretation of the words of the Torah, received in an unbroken line from Moses, was not written until the successors of R. Yehuda ha-Nasi (2nd century CE) published the Mishnah.

Another cause of loss was *the problem of old books.* If there are no authentic written records, those that happen to exist acquire *unwarranted* authority. The reader accepts their doctrines without questioning their sources. In Guide 1:71, Maimonides blamed the uncritical acceptance of old books for the disaster of Muslim *Kalām* theology. (On *old books*, see my chapter-essay to Guide 1:71)

The turn against wisdom. We come to the final step in Maimonides' historical argument:

> "When, in consequence of all this, we *grew up* accustomed to the opinions of the *ignorant*, these philosophic views appeared to be, as it were, foreign to our Law, just as they are foreign to the opinions of the *ignorant*. However, matters *are not like this.*"
> (*v'khaasher gedalnu im hargel hashkafot ha-skhalim*, *ba'u ha-dvarim ha-ele ha-filosofiim k'elu hem zarim l'toratenu*, *k'zarotam m'hashkafot ha-skhalim*, *v'ain ha-davar khen.* (Guide 2:11: Eng.-Pines, Heb.-R. Kafih)

The Jews forgot this wisdom, and "grew up" with the false opinions of the ignorant. Like the Gentiles, the Jews came to regard the philosophical and theological doctrines that they themselves had developed as foreign and repulsive.

R. Even-Shmuel shows us the awful result: "We sanctified *war* against those ideas, as things that contradicted the fundamentals of the Torah" (*hitkhalnu l'khashuv et ha-deot ha-filosofiot l'zarot u'mitnagdot l'toratenu…v'kidashnu aleihen milkhama, k'al devarim ha-soterim et ikrei ha-torah*).

However, none of this is true (*v'ain ha-davar khen*). The opposite is the truth: the opinions of philosophy are themselves the opinions of the Torah (*deot hafilosofia hen hen deot ha-tora).* They dwelled in the hearts of our people for generations, long before gentile philosophers discovered them.

(***War***: The burning of Maimonides' Guide and *Sefer ha-Mada* in Montpellier in 1233, followed nine years later by the burning of the Talmud in Paris in 1242, culminated in the first expulsion of French Jews in 1254. The cultural and religious catastrophe of French Jewry led to the *repentance* of R. Yona Gerondi, who had instigated the Dominicans to burn the Guide. In repentance, he compiled his *Shaarei Teshuva*, *Gates of Repentance.* **On the "*Maimonidean controversy*,"** see R. Avraham ben ha-Rambam's *Milkhamot HaShem*, by Maimonides' son, together with supplemental material in R. Dr. Fred Rosner's English translation *Wars of the Lord*; also see the testimonies of *Radak* and *Meiri.* See also *Ha-Hakham* R. Dr. Jose Faur's important "Anti-Maimonidean Demons," in *Review of Rabbinic Judaism* 6.1, Brill, 2003).

R. Shem Tov's ancient commentary went much further: *All* of Maimonides' ideas about the system of the world are subjects of *Maaseh Bereshit* and *Maaseh Merkava*, including everything that he wrote up to this point. That is why Maimonides said that they did not contradict Jewish tradition. The Jews had been wise and perfected in wisdom, *not like they are now* (*lo k'mo sh'hi ata*), but they became as ignorant as the ignoramuses surrounding them. These "divine philosophical matters" came to seem as alien to the Torah as they are to the ignorant crowd. They thought that everything it said was a forgery, a lie, and a departure from Judaism (*hu ziuf, v'khazav, v'yetziah m'ha-dat*), contradicting the prophets. However, it is not so. Aside from the philosophers' error that the world is uncreated and eternal, the ideas of Maimonides' system were real to the sages. They were the original thoughts of the prophets, as received from Moses, the father of wisdom.

PROLOGUE TO THE NEXT CHAPTER: EMANATION, CREATION, AND THE TURN AGAINST THE PHILOSOPHERS

> "As we have frequently spoken about emanation from God and the Separate Intellects, it is proper that we clarify [in the next chapter] the *true definition of this thing called emanation*, as a *consequence* of which I will address the subject of the *creation* of the world." (Guide 2:11, My trans.)

R. Yehuda Even-Shmuel's brief comment on this final passage is profound. He bridged the gap between this chapter and the next: between the *structure* of emanation in our chapter and the *definition* of emanation in the next. This was a turning point for Maimonides. The turn to the *definition* of emanation marks a decisive shift away from Aristotle and his contemporary followers. R. Even-Shmuel wrote:

> "Let us return now to the continuation of the issues we clarified. We have already spoken clearly of the *identity* (*achdut*) of *creation* and *providence* (*bri'a v'hanhaga*), both of which are *types* (*min*) of *emanation* (*shefa*) that flows from God upon all creations, and from the *intellects* (*sekhalim*) upon the creations 'beneath' them [i.e., to entities inferior to the intellects]. The time has come to define precisely what this *emanation* is— that is, the thing people usually refer to by that name— for through the true definition of the concept of *shefa* the *barrier will fall that blocked the philosophers from attaining knowledge of the truth*—that the world was created, as our Torah affirms, and not [*eternal*] as the philosophers claimed." (R. Even-Shmuel's Commentary to Guide 2:11, v. II, p. 160, my trans.)

This is a bold claim.

Emanation is the *actualization* of things. In the next chapter, we learn of two different kinds of actualization: one in the noetic world (the realm of the *mind*) and the other in the corporeal world. In our chapter we learned that God could actualize things at *will* and *invest* intellects with that power.

Maimonides concluded that Aristotle had not been philosophical *enough*. He failed to understand that his *physics* could not be applied to God. His thinking was locked in the space-time-motion continuum.

The job of the philosopher, however, is precisely to investigate the world of mind, the world *beyond* the space-time-motion continuum. There God is free of material constraints.

Change and Motion. Maimonides' *Aristotelian Proposition* VII (v. II, *Introduction*) held that anything changeable, movable, or corporeal is *divisible*, but anything immovable or incorporeal is *indivisible*.

Physical bodies constantly change, and, therefore, must be divisible in their space, their time, or their motion. But those things that are *not* subject to division are also *not* in motion and are *not* physical bodies. These are the incorporeal beings, including God, souls, minds, and the forms that in-form material things. Thus, God is indivisible, immovable, and incorporeal. God is entirely free from the bonds of space, time and motion.

Time. Furthermore, *Proposition* XV clarified that *time* is an *accident attached to motion*, such that one is never found without the other. Anything that does not exist in motion also does not exist in time. Motion is only possible in time. We can *divide* a motion by the amount of time it takes. By contrast, the *immovable and indivisible One bears no relation to time*.

The Aristotelian definition was that *time is the number of the movement of a thing from here to there*. But where there are no things in *motion* or *places* for them to *move* to, *time* is irrelevant. As it is for God.

It is hard to think about a world without time. Still, our ability to even discuss it shows that we can do so.

A well-known example of a modern thinker who found it difficult to extract his mind from the space-time-motion continuum was Shlomo Pines, the author of the 1960 English translation of the Guide. He consistently translated the Judeo-Arabic phrase חדת אלעאלם / حدوث العالم as "creation *in time*." R. Kafih, by contrast, accurately translates to the Hebrew *khidush ha-olam*, "creation of the world," by which Maimonides always means "creation *ex nihilo*." Pines' formulation makes no sense, since before the creation of the world of matter there was no time, space, or motion. The world could not have been created "in time."

The conditioned reflex to think temporally reveals how the space-time-motion continuum grips our thought. Nonetheless, since philosophers had already concluded that God exists apart from matter, motion and time, *they should have recognized* that creation does not occur in *time* and does not have to come *from* anything.

Ex Nihilo. The idea that every effect must have a *connected cause* also comes from the physical world. It led philosophers to say that "nothing comes from nothing," *ex nihilo nihil fit*. But there need be no connected cause.

God, unbound by matter, is *free* to *will* creation. Not *from* anything, nor from any *thing*, and not from "*nothing*" either. Some clever Neoplatonists had argued that everything must at least come *from* a *potentiality*, even if it was called "nothing." Although sophisticated, this just revised the old Platonic demiurge who shaped the world from pre-existing matter.

(δημιουργός or dēmiurgós, meaning a craftsman or artisan, like a potter who has clay already at hand to model. Plato, *Timaeus* 27d–30c and 47e–53c. Kenneth Seeskin's definitive *Maimonides on the Origin of the World*, Cambridge, 2005, refers to these types of Neoplatonic arguments as creation *de novo* arguments to clearly distinguish them from Maimonides' creation *ex nihilo*. Prof. Seeskin established beyond doubt that for Maimonides, creation meant *creation ex nihilo*).

The neo-Platonized Aristotelians, including, in Maimonides' time, Avicenna and Averroes, thought of causation in strictly physical or quasi-physical terms, such that even the "emanations" from their First Cause had to be 1) eternal, 2) linked to motion, 3) in time, and 4) connected in space by proximity, continuity, and contiguity. They could not see beyond this barrier.

The philosophers could not conceive of something coming into existence without being caused by a temporal antecedent or a physical contact. They assumed there must be some previously existing material reality as the source for created things. Otherwise, all they could do to explain the mind/body connection was to gesture vaguely at notions of emanation.

God, however, is free of time, space, or motion. They pose no obstacle to God's *will* to create. To be God, God must have free will. Divine causation must be understood as non-physical: it happens 1) without contact and 2) with no "time before."

Maimonides possessed a profound understanding of the concept of emanation. In the next chapter, Guide 2:12, Maimonides noted that the *final point in all change* occurs *atemporally*, without *division*. It is the point where matter takes on a different *form*, and an entirely new being is born:

> "No temporal terminology can be attached to that 'change,' nor can we explain it in any way: it is the perfect case of a 'change' without division." Similarly, with Creation, "The paradigm case [of change without division], and the most striking, is creation *ex nihilo*."

By accepting Maimonides' spiritual conception of emanation as actualization not bound by time or space, *creation from nothing* becomes both conceptually *coherent* and philosophically *rigorous*.

Guide 2:12 will unlock the meaning of emanation. Maimonides will explain that God is free to will creation from nothing, as the Torah teaches, rather than out of preexistent matter or eternal necessity, as the philosophers so unphilosophically insisted.