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THE ROLE OF PRE-SOCRATICS IN ŞADRĀ'S PHILOSOPHY



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I. Some Historical and Methodological Remarks

The philosophical activities during the Safavid era mark the peak of a renewed engagement with Greek sources unmediated by Ibn Sina's interest in them and their successive incorporation into his philosophy.¹ Among the topics for which the Safavid thinkers consulted ancient Greek authors were cosmology, the role of the intellect and the ways of acquiring knowledge, the nature of the soul, and the process of emanation.² This engagement, to be sure, did not mean an antiquarian, philological return to the original texts in Greek. Rather, it was a re-reading of their Arabic translations from the ninth to tenth centuries to find ideas beyond those of which Ibn Sina made use, and to legitimize—through their authority—one's own philosophical project. Also, one should note that the interest in pre-Avicennan philosophy was not limited to Greek authors; the writings of Kindī (d. 256/873), (Ps.-) Fārābī, and even Yaḥyā bin 'Adī (d. 363/974) experienced something of a comeback. For example, a Safavid codex *Madrasa-yi Marwī* 19 from 1073/1662 contains fifty-three works by Ibn 'Adī, twenty-five of which were considered lost. On the other hand, it is noteworthy that the codex includes an otherwise typical Safavid anthology of philosophical texts: several works by Ibn Sina, the Arabic translation of Aristotle's *De caelo*, and the *Theologia Aristotelis*.³ Gerhard Endress has argued that such codices reflect the intensive copying activity catering to the philosophical curriculum of Safavid madrasas and attest to the existence of a doctrinally coherent School of Isfahan that was a theologically and apologetically motivated reinterpretation of Ibn Sina's metaphysics in light of both pre-Avicennan philosophy and post-Avicennan developments that drew inspiration from Greek and Hellenistic authors and writings of the Akbarian and Illuminationist schools, as well as gnostic and occult texts.⁴

When it comes to the early Islamic transmission of pre-Socratic material, this took mainly the form of gnomologia and doxographies.⁵ In these sources, pre-Socratic "principles" (*mabādī*) were correctly identified. However, it was attempted to synchronize the views of pre-Socratics with monotheism; otherwise, they were often criticized or rejected.⁶ The most important source for Şadrā is Shahrastānī's *Kitāb al-milal wa-l-niḥal* ("The books of sects and creeds"), which makes extensive use of the *Doxography*

by Ps.-Ammonius (Pseudo-Ammonius). The distinctive characteristic of the latter text is that it links familiar Neoplatonic ideas with names of various pre-Socratic thinkers, and argues that they were all in agreement about first principles, God's oneness, and the world's creation *ex nihilo*.⁷

The admiration Ṣadrā had for pre-Socratics has been stressed several times.⁸ However, this line of research has never been conducted to a sufficient degree. Hans Daiber's essay is the only text that discusses Ṣadrā as a historian of (Greek) philosophy head-on.⁹ The present article expands on the issues signaled by Daiber and situates Ṣadrā's contributions within the context of the two dominant perspectives on later Islamic philosophy in Iran. The first perspective takes as its starting point the observation that in the incorporation by many later authors such as Suhrawardī and Ṣadrā of texts such as the *Doxography* by Ps.-Ammonius, various paraphrases and pseudepigrapha did not only enhance the Neoplatonizing strand in the Islamic reception of Greek philosophy, associated with al-Kindī's circle,¹⁰ but more importantly led to misunderstandings and misinterpretations of Greek authors and the propagation of an inaccurate picture of them. In effect, this theoretical perspective tends to be critical of certain doctrines of Suhrawardī, Ṣadrā, and similar authors as resulting from the inaccuracies of the reception of Greek philosophy in Arabic translation.

While admitting the historiographical and philosophical value of such an approach, this article is also sympathetic to the second perspective, which tries to account for the totality of the tradition of later Islamic philosophy, its doctrines, sources, and methods. For one thing, it highlights Ṣadrā's own vision of philosophy as consisting of a system of interconnected philosophical, religious, and mystical truths. Empedocles, Democritus, and other pre-Socratics in their Arabic versions were an integral part of later Islamic philosophy and its version of the history of philosophy, even if often far removed from their Greek origins. Such an approach presents reception and interpretation as a creative process of reinterpretation and reinvention that is a constituent part of philosophizing and a vehicle of introducing novel ideas in an intellectual milieu in which intellectual lineage was crucial, while originality was often met with suspicion.

The main reason for Ṣadrā's interest in pre-Socratics was his adoption of the Suhrawardian model of the history of philosophy.¹¹ In a fashion similar to Suhrawardī, Ṣadrā lists several doctrines Greek philosophers agreed on, such as the oneness and unity of God and the belief that God is the Creator of the world.¹² Suhrawardī adds that they all also agreed on the hierarchical structure of reality and the relations between hypostases according to the principle of the nobler possibility, the existence of the three worlds and archetypes, and that pure souls can behold them.¹³ In the *Hudūth al-ālam* (The origination of the world), Ṣadrā says that, apart from the unity of God, the ancients agreed on the first principles and their number, the divine

knowledge of beings, the Resurrection, and the modalities of the soul's survival on the Day of Resurrection.¹⁴

Şadrā insists on a crucial point that imposes itself upon reading his sources: the harmony between the ancients is guaranteed because they are all “possessors of truth and monotheists,”¹⁵ for they took knowledge from the niche of prophecy. This is true of figures like Hermes and Agathodemon, and the Greek philosophers Thales, Anaximenes, Empedocles, Pythagoras, Socrates, and others.¹⁶ Notably, their immunity from error is guaranteed by the fact they combined reflection with praxis, just as the prophets did.¹⁷

The examples of Empedocles and Democritus are particularly illuminating as their ideas, on the one hand, were thoroughly appropriated by the Neoplatonists, while on the other hand, through Ibn Sina's critique of them, they became epitomes of the belief in the origination of the world by chance, found fallacious by virtually all Islamic philosophers.

II. Şadrā's Use of Pre-Socratic Philosophy

In what follows, I offer a closer look at two issues in Şadrā's philosophy that will give an insight into his method of philosophy for the purpose of finding textual and experiential grounding for the doctrines and principles of his own system that programmatically go beyond Ibn Sina.¹⁸ It will also enable us to appreciate two different strategies in the philosopher's engagement with the pre-Socratic material. The first problem is the origination of the world. Here, Şadrā engages with pre-Socratics to introduce philosophical innovations, even though he does it by claiming that their views prefigured his theory of substantial movement. Next, we will look at how he deals with theories of chance expressed by Democritus and Empedocles and refuted by Ibn Sina as they pose a serious problem to an otherwise harmonious picture of pre-Socratics that he extracts from doxographical sources available to him in Arabic. In this case, he acts as a defender of a certain vision of the history of philosophy.

Origination of the World

Şadrā's treatise *Hudūth al-ālam* contains especially rich material on pre-Socratics, a fact that has not gone unnoticed.¹⁹ Şadrā claims that the ancient Greek philosophers presuppose his understanding of origination as substantial motion. To understand this somewhat unusual pairing, we should look, on the one hand, at reasons that have to do with the practice of philosophy in his day and age and, on the other, at those that are concerned with philosophical positions proper.

As for the first type of reasons, it is clear that Şadrā tries to find legitimacy for his theory and shield it from the charges of heresy.²⁰ He is aware that his position is novel but emphasizes that attempts at providing

the correct understanding of the world's origination had proven unsuccessful.²¹ As the main culprits, Ṣadrā points to two groups. The first are systematic theologians, *mutakallimūn*, who put false hopes either in their resort to blind imitation and externalism or in dialectics, *al-mujādala*. The second group are philosophers who either reject revelation entirely or reach false conclusions by illegitimate modes of interpretation of religious texts.²²

As for the inaccurate opinions of philosophers, Ṣadrā criticizes in particular the concept of essential origination, *al-ḥudūth al-dhātī*, professed by al-Fārābī and Ibn Sina and understood as the very ontological dependence of a possible existent, *al-imkān al-dhātī*, on something other than itself, the Creator.²³ With his theory of the primacy of existence, *aṣālat al-wujūd*, Ṣadrā accepts Ibn Sina's division between essence and existence only at the level of conceptual analysis, because he does not believe that essence is something more than a mental abstraction derived from real existents.²⁴ Therefore, he cannot agree with Ibn Sina's account of essential origination, where existence is caused by something external to one's essence and which hinges on the differentiation between (a) God's existence being equal to His essence and uncaused (i.e., God is the Necessary Existent) and (b) other things' essences being given existence by their cause, God (i.e., beings that are possible in themselves and necessary by another). Since Ṣadrā holds that there is nothing but existence, which is a single, simple, objective reality, the essence-existence difference obtains only at the conceptual level, and so cannot account for the actual origination of existents by God.²⁵ For Ṣadrā, essential origination is simply a false representation of the world's coming to be and one more reason to claim that it has to be the real and temporal precedence of non-existence over existence.

For Ṣadrā, then, the philosophers' mistake leads them to their belief in the world's eternity:

In summary, only after the great philosopher Aristotle did the view that the world is eternal emerge among a group that rejected the path of the lordly sages and the prophets and did not follow their way of inner striving, spiritual exercise, and purification, clinging instead to the apparent sayings of the ancient philosophers without insight or disclosure—thus, they asserted the world's eternity. And so is the impurity of the materialist and naturalist philosophy, since they did not know the secrets of wisdom and the revealed law, and did not know the identity of their origin and the agreement of their import—because of their firmness in their belief in the world's eternity, and because of their claim that [the world's eternity] preserves the unity of the Creator from being defiled by multiplicity and change in His essence, and [because of their claim] that their arguments are based on necessary premises that are the principles of demonstration; they did not care that what they believed was contrary to what the people of religion, indeed, the people of the three faiths—Jews, Christians, and Muslims—held, that the world in the sense of that which is other than God, His Attributes, and His Names is originated, that is, it exists after it did not in a

real sense of 'after' and in a sense of being temporally posterior, and not only in a sense of being essentially posterior, [the latter] meaning that [the world] is in need of another and posterior to it essentially, as is the case for every possible thing according to its essential origination, i.e., its being undeserving of existence and non-existence [for] its own sake.²⁶

If it comes to the standard theological position, theologians did indeed claim that the world must have a temporal beginning—that it was originated at a point in time.²⁷ In a way, Ṣadrā, too, is adamant in maintaining that everything in the world, except God, is originated and preceded by non-existence:

... all corporeal entities that exist in this world, whether they are simple or compound, and whether they are form or matter, whether they are celestial or terrestrial, and whether they are souls or natures, are preceded by temporal non-existence, *masbūqa bi-l-'adam al-zamānī*. They are, according to every specific existence, preceded by temporal, uninterrupted non-existence in pre-eternity. So, in pre-eternity, all corporeal individuals and natural entities are non-existent: being preceded by pre-eternal non-existence is true of all of them both individually and as a whole.²⁸ Therefore, all are originated and there is no individual existing continuously among them, nor any reality with a fixed identity. That which is called a 'natural universal' or 'unconditioned quiddity', in its essence qua essence, has no existence, neither unity nor multiplicity, neither continuity and perdurance, nor discontinuity and origination. Rather, in all of these attributes, they are subordinate to their individual instances, existent by virtue of their very existence, one by virtue of their unity, many by virtue of their plurality, eternal by virtue of their eternity, originated by virtue of their origination.²⁹

Ṣadrā's own position on material origination, however, does not amount to the theological view. Even though he does not engage in a thorough critique of their view, he hints that the theologians' way is not sufficient because it either relies on belief, *ītiqād*, derived from transmitted data, reports, and community consensus, or establishes the foundations of religion on shaky reasonings and weak analogies, whereas the origination of the world requires certitude, *yaqīn*, which can be derived either by apodeictic proof, *al-burhān*, or by complete discovery, *al-kashf al-tāmm*. Such certitude is required because the issue of origination constitutes the solid basis of religious knowledge.³⁰ The main difference between the theologians and Ṣadrā is that even though the theologians have a concept of temporal origination, they treat it as an instantaneous occurrence rather than a gradual process.³¹ For Ṣadrā, however, the temporal precedence of which he speaks and which is constituent of origination should not be understood in absolute terms but as a series of continuous changes in substance where one thing constantly ceases to exist to give way to the new thing, while time is abstracted from this flow. In this way, he couples his views on temporal

origination with his flagship doctrine of substantial motion, *al-ḥaraka al-jawhariyya*.

The world's temporality, *ḥudūth*, is tantamount to its substantial transformation. In other words, the constant renewal, *tajaddud*, is a mode of being proper to bodies, and *ḥādīth* applies to each one of the parts of the world in each instant. At each moment there is a new world with new beings in it:

As for the world with all its material, formal, psychic, and bodily substances and their accidents, they are originated and ever renewing every time. And there is nothing eternal in the world that would be numerically one as an individual, but at each instant of time there is another individual.³²

In advancing the doctrine of substantial motion Ṣadrā goes against philosophical consensus. As is known, with this doctrine, he diverged from the teachings of Aristotle and Ibn Sina, who denied motion in the category of substance. The primary proof of the correctness of his view lies for Ṣadrā in the observation that since motion is understood as renewal and instability, the direct agent of motion must also be renewing and fluid because something fixed and stable cannot issue renewal. The direct agent is the substantial form of a thing or its nature, which is inherently fluid and in motion. However, Ṣadrā needed to find a stable substratum that could safeguard the unity and identity of a substance undergoing substantial motion and designated for it Platonic forms.³³

Ṣadrā, however, insists that his theory is not an illegitimate innovation. His hermeneutical strategy to demonstrate this is to present it as an effect of a methodology and epistemology that is superior to that of theologians and later philosophers. Ancient philosophers were possessors of this kind of knowledge, so by stipulating that he agrees with them as to the temporal origination of the corporeal world, *ḥudūth al-ālam al-jusmānī*,³⁴ not only does he not innovate a theory but simply reintroduces one that is free from the theological and philosophical shortcomings.

Furthermore, the philosopher claims that the false attribution of the eternity of the world to the ancient philosophers stems from Proclus' mentioning several fallacious arguments, or objections, *al-shubhāt*, in support of the world's eternity.³⁵ The contemporaries of Proclus did not understand his philosophical method and in consequence the doctrine of Proclus and the ancients became misunderstood and misinterpreted, and subsequently the ancients were presented as believers in the eternity of the world or the doctrine of meta-time, *dahr*.³⁶ These problems of understanding, which led to attributing the belief in the eternity of the world to various ancient philosophers, were a result of abandoning the path of the prophets—that is, performing spiritual exercises and purification—by the thinkers after Aristotle, materialists, *dahriyyūn*, and natural philosophers and their clinging to the apparent sayings of ancient philosophers.³⁷ In effect,

Aristotle's students, such as Alexander of Aphrodisias, Themistius, and Porphyry, followed him in propagating the doctrines that they believed to be the proofs of the eternity of the world.³⁸

In seeking to alleviate what he sees as this late distortion of the ancients' views on the world's origination and gradual becoming, Ṣadrā reaches to the *Theologia Aristotelis* and the *Ps.-Ammonius* to find those passages that can be read as supporting temporal creation, repeatedly asserting in the *Hudūth al-ālam* that all ancient philosophers divided existence between the intelligible and material realms and professed the transitory nature of material existence and the eventual annihilation of the corporeal world in the process of salvific purification. The perfecting progress of substantial motion has the soul as its ultimate and most perfect subject. This is evidenced by a quotation from Plato, where Ṣadrā claims that it was he who applied substantial motion to the development of the soul.³⁹ Thus, Ṣadrā couples the theory of motion in substance with another of his principles, that of the movement of the soul from the body and the created to the spiritual and eternal one, *al-nafs jusmāniyyat al-ḥudūth wa-rūḥāniyyat al-baqā*. This, I contend, is his strongest philosophical motivation for seeing ancient philosophers as prefiguring his views.⁴⁰ With a quotation from the *Theologia Aristotelis*, Ṣadrā further maintains that "Aristotle" (in fact, Plotinus of the Arabic paraphrase of the *Enneads*) argued that the soul governs bodies by bestowing life on them so that they do not perish but flow toward their perfections:

. . . it is impossible for any body to be permanent and abiding, be it simple or compound, if the power of the soul is not existent in it. For flow and corruption are of the nature of the body, and if the whole world were a body containing no soul and possessing no life, things would disappear and perish.⁴¹

With another quotation from the same source, Ṣadrā argues that the soul, while by itself it remains in constant flux, transcends pure corporeality in its governing the body's activity:

If the soul were one of the bodies or from the realm of bodies, it would inevitably disintegrate and flow, because it would flow as all things flow and would return to prime matter. If all things return into prime matter, and there is no form that in-forms matter—being its cause—this material world, *al-kawn*, will be brought to nothing. The universe will be brought to nothing as well, if it is pure body, and this is absurd.⁴²

Ṣadrā then immediately adds that the Stoic philosopher Zeno claimed that the corporeal world persists by the renewal of forms. It is worth comparing this passage from the *Hudūth* with the corresponding one from the *Ps.-Ammonius*, as this is a fragment that Ṣadrā sees as the most compatible with his doctrine of substantial motion⁴³ (see [table 1](#)). What Ṣadrā does not mention is that, immediately after presenting this view, his source is very

Table 1.

<i>Hudūth al-ʿalam</i>	<i>Ps.-Ammonius</i>
He said: The existents are permanent and disappear. As for their survival, their forms are renewed, and as for their disappearance, it is the disappearance of the first form when the subsequent emerges.	His doctrine was that the forms of this world, and the first knowledge insofar as it is in them, are both permanent and impermanent: permanent in the sense that they are renewed, impermanent in the sense that the first form perishes when the subsequent emerges.

critical of it, ascribing its popularity to logicians rather than eminent metaphysicians.⁴⁴

In any case, while Plato, Ps.-Aristotle/Plotinus, and Zeno are those who for Ṣadrā most clearly prefigure his doctrine of substantial motion, he interprets other ancient philosophers' doctrines as consistent with his general view on God and temporal creation. When it comes to Empedocles, what is perhaps most striking is that Ṣadrā sees his theology as closely resembling his own, even though his interpretation diverges from his sources. He reproduces the passage from the *Ps.-Ammonius* with Empedocles' claim that God "moves by stillness and rest" (*innahu yataḥarraku bi-naw' al-sukūn*), and explains that 'movement' means creation (*al-ijād*), and 'rest' denotes disregard of the lower (*adam iltifāt ilā l-sāfil*). Thus, Empedocles correctly identified that God is His own end, while all other beings have final causes other than themselves.⁴⁵ This interpretation is different from the text of *Ps.-Ammonius*, which explains that the Intellect and the First Element move by rest (presumably because of their immateriality), so this must be all the more true of their Creator.⁴⁶ Perhaps Ṣadrā's explanation in terms of God's final causality, which excludes the Intellect and the First Element since they move toward God and are not their own final causes, is prompted by the fact that the *Ps.-Ammonius* attributes the same view that God moves by rest also to Aristotle.⁴⁷

To open the already Neoplatonized reading of ancient philosophers for further hermeneutics, Ṣadrā emphasizes that they talked in symbols and metaphors, so only few had been guided to their true meaning.⁴⁸ Importantly, the symbolic language was the reason why Democritus became famous for doctrines such as chance and luck that seemingly contradicted other philosophical principles.⁴⁹ This is the subject to which I now turn.

Chance: Ṣadrā's Sources

Theories of chance and luck by various, especially pre-Socratic, thinkers were met with Aristotle's criticism and were challenged by him on several occasions. In *De caelo* I.10 (279b14–279b16), Aristotle summarized three theories on the duration of the world, which he refuted, championing instead his own theory of the eternity of the cosmos. Apart from Plato

(279b17–280a10), his primary targets were the cosmological theories of Empedocles and Democritus, both of whom ascribed role to chance. For Empedocles, the universe cyclically alternated between the generation and destruction, personified by Love and Strife, of the four eternal elements. Democritus claimed that the cosmic Swirl that created the world came to be accidentally. Regardless of the differences of their respective views, both Empedocles and Democritus assumed that the world in its present form will be destroyed and a new one will be randomly created. In the account of Empedocles' theory of the cosmic cycle in *De caelo* I.10, Aristotle briefly introduced a reasoning against Empedocles' theory. Namely, he maintained that "it is clear that when the elements come together the result is not a chance system and combination, but the very same as before" (280a16–18).⁵⁰ Again, in *De caelo* I.12, he used a similar argument against Democritus' theory of an accidentally ordered universe (283a29–283b3). These resemble a series of arguments used in Aristotle's critique of Empedocles' theory of chance in natural generation (e.g., *Phys.* II, viii, 198b30–33; *Gen. et Corr.* II, vi, 333b3–7; *Gen. et Corr.* II, vi, 333b9–16). These arguments—by showing regularity in nature, nature's essential teleology, or the similarity of things belonging to one species⁵¹—point to the difficulties, inherent in the theories of Empedocles and Democritus, in explaining why things happen in the same or a similar way always or for the most part. This observation and the following arguments, as we shall see shortly, will be adapted by Islamic philosophers, from Ibn Sina to Ṣadrā.

It is not clear if Ṣadrā knew the Arabic translation of *De caelo*.⁵² Regardless, he did not want to refute theories that prognosed the end of the world. On the contrary, he wholeheartedly adopted the cosmological vision of pre-Socratics as found in the *Ps.-Ammonius* that stressed the material world's origination and eventual perishing as a view held unanimously by all philosophers before Aristotle. If Ṣadrā wanted to refute the theories of chance by Empedocles and Democritus he could not do it at the expense of simultaneously advocating for the eternity of the world, as did Aristotle.

However, the usual sources that are sympathetic to the pre-Socratic doctrines that we have dealt with in previous sections do not offer much help. The *Ps.-Ammonius* contains no material on the pre-Socratic concept of chance. The description of a number of ancient opinions on chance in Aetius' doxography presents a fragmentary and not an entirely clear picture. First, the doctrines of Empedocles and Democritus were not included in this source. When it comes to Aristotle's own theory, the main parts of his definition are correctly identified, albeit in a laconic manner. We learn that chance is a cause only in an accidental, secondary sense, *'illa bi-l-'araḍ*, and constitutes a rare occurrence in things that happen for some reason, *bi-sabab mā*.⁵³ Nevertheless, the overall description of chance in Aetius contains some clear difficulties of understanding that render parts of it unintelligible.⁵⁴

Table 2.

Aristotle	Physics, II.4–6 195b31–198a13
Ibn Sina	al-Shifāʾ: al-Samāʾ al-ṭabīʿī I.13–14 Cairo edition: 60–75
Fakh al-Dīn Rāzī	al-Mabāḥith al-mashriqiyya 1:526–535
Mullā Ṣadrā	al-Asfār 2:253–259

Aristotle’s *Physics* remains thus the main Greek source for the concept of chance in the Muslim world. Based on it is Ibn Sina’s refutation of the pre-Socratic understanding of chance and his detailed theory of it. However, the direct interlocutor of Ṣadrā is Fakhr al-Dīn Rāzī, who reworked and summarized Ibn Sina’s text. We have, then, four layers of textual tradition (see table 2).

I will not offer here any detailed discussion on chance in any of these thinkers,⁵⁵ as I am interested mainly in how Ṣadrā uses the pre-Socratic material on this specific topic. In fact, any intricacies of the theory of chance lay beyond his interest. In most cases he is satisfied with simply duplicating Rāzī’s text, sometimes simplifying or rearranging it. As noticed by Cécile Bonmariage, this is his general practice in the *Asfār*, which does not, however, amount to Ṣadrā’s agreement with or endorsement of Rāzī’s teaching; rather, the text of the *Mabāḥith al-mashriqiyya* (“The Eastern investigations”) is “taken as the expression of the basic understanding of a topic, or the ground of a thorough critique.”⁵⁶ In his discussion of chance, as we will shortly see, Ṣadrā modifies the order of the text so it better serves his own purpose.⁵⁷

Democritus and Empedocles on Chance

The key rearrangement of Rāzī’s text on chance lies in the fact that Ṣadrā’s discussion commences with describing the positions of Democritus and Empedocles, while Rāzī first deals with the definition of chance and its characteristics.⁵⁸ Albeit Ṣadrā organizes this part of the discussion in a way that resembles Ibn Sina,⁵⁹ it is not for the purpose of returning to the original text of the *Shifāʾ*. Rather, it immediately points to Ṣadrā’s apologetic goal. While Ibn Sina discusses four different pre-Aristotelian definitions of chance—among which are (1) one that denies the reality of chance, (2) one that understands it as a divine cause, and the other two (3 and 4) that respectively belong to Democritus and Empedocles—Ṣadrā mentions only the last two definitions.⁶⁰ Given what we have already seen in the *Hudūth al-ālam*, we are on solid ground expecting that Ṣadrā’s purpose is to challenge the ascription of the highly contested theory of chance origination of the world to the two pre-Socratics.

Şadrā starts from a succinct description of Democritus' view on chance within the framework of the atomist theory:

Democritus claimed that the existence of the world is by chance, because the principles of the world are small bodies indivisible due to their solidity. They are dispersed in an infinite void. They share natures but have various forms and are constantly in motion. The world is formed when it so happens that a group of them collide and come together in a specific form. Regardless, he [Democritus] claimed that the formation of animals and plants is not by chance.⁶¹

This account is a quotation from Rāzī, who in turn closely follows Ibn Sina.⁶² Likewise, Şadrā's brief description of chance in Empedocles is taken from Rāzī. He recounts that Empedocles ascribed chance to the formation of animals and plants, holding that from a large number of elemental bodies generated and combined by chance only those that were suitable for survival remained and reproduced, while those that were not fit for survival perished.⁶³

Şadrā mentions three of Rāzī's four arguments that were formulated by Empedocles in refutation of purpose in nature:⁶⁴

E1. Nature has no deliberation; therefore, it cannot act for the sake of something.

E2. It is agreed that corruption, distortions, additional appendages, and death are not intended by nature, they are rather a necessity of matter. But they are no less frequent than their opposites, such as growth and regular formation. If so, the system of emergence and growth cannot be intended either but happens necessarily. The example is rain that happens to produce some good outcomes which makes people think that it is intended for them, but this is not so, because we know that rain falls only due to material necessity.

E3. The same nature produces different actions due to differences in material dispositions of objects. For example, heat dissolves wax but congeals salt, darkens the face of the bleacher, but bleaches the garment. This argument rests on the enthymematic premise that one nature can only have a single essential end.

Şadrā's Account of Chance

The core of Şadrā's understanding of chance is Avicennan. It is presented, however, in a much sketchier fashion that closely follows Rāzī.⁶⁵ In this account, Ibn Sina's metaphysical determinism comes to the forefront: all possible existents have causes that necessitate them and ultimately go back to God, the Necessary Existence, and the Cause of all causes. Chance is not an additional cause in any real sense; it results from clashes of two independent causal chains, which on their own can be traced back to God.⁶⁶

The primary understanding of the occurrence of chance in the natural world is derived from the Aristotelian model of frequency of events in which chance can only refer to events that happen seldom and are unusual, unexpected. Surely, we do not attribute chance to events that happen always or for the most part. Things that happen always, and—given there is no impediment—those that happen for the most part, happen by necessity.⁶⁷

The remaining two categories of events are those that happen equally, for instance Zayd's walking or sitting, and those that happen seldom, such as the formation of a sixth finger.⁶⁸ Ṣadrā argues that both kinds of events, from a certain perspective, happen by necessity. In the case of the extra finger, matter imposes the conditions in the formation of the fetus' palm. If there is more matter than what is needed for the five fingers, and the active power encounters a complete preparedness in matter, an extra finger must be created. This event happens always in relation to this particular nature, even if it is rare compared to other members of the species. The formation of the additional finger is necessary, given the occurrence of the aforementioned conditions and causes.⁶⁹

This deterministic understanding constitutes the crucial moment in Ibn Sina's analyses.⁷⁰ Founding chance on the frequency of events is not as unequivocal in Ibn Sina as it was in Aristotle. As Catarina Belo noticed, Ibn Sina's deterministic agenda makes unqualified adherence to Aristotle's statistical model complicated. For Aristotle, chance events consisted of those that happen always and for the most part. However, according to Ibn Sina, even they are necessary and determined by their causes.⁷¹ We can see here a certain shift of emphasis: the notion of chance, which according to Aristotle is unpredictable and thus beyond scientific description, becomes associated with the notion of contingency. Things in their essential contingency may happen or not, but once they are determined by a cause they become necessary. As such, they can be scientifically explained. The inability to explain them stems only from a person's ignorance of their causes.⁷² This signals a subjectivistic, epistemic interpretation of chance, which is explained simply as our ignorance of the real causes at work in the world.

Ṣadrā concludes, again in line with Ibn Sina, that a chance event is for something, *li-ajli shay'*.⁷³ It is only in connection with the final cause that one can talk about chance. On this understanding, chance can be characterized as an event that, even though it has its essential purpose and its own causal chain, leads to a different, surprising, and rare result. Chance, then, becomes an accidental cause contingent on natural and volitional matters, which are directed toward their essential ends and have their own causal chains.⁷⁴ For instance, if a falling stone cracks the skull of a person passing by, it is only its accidental end, and after this, when it descends to its landing point, it reaches its essential end. However, it may not reach its own end, like a descending stone that bashes the skull and stops. In the first

case, it is called an essential cause in relation to its natural end (falling on the ground) and chance in relation to its accidental goal (hitting a person). In the second case it is called void, *bāṭil*, in relation to the essential goal.⁷⁵

Refutation of Democritus and Empedocles?

The section of the *Asfār* in which Ṣadrā establishes his understanding of chance ends with a clear attempt at the rehabilitation of pre-Socratics. His main argument against the accidental generation of the world is based on the linguistic and logical definition of chance. Nature and will are the essential causes of all things and direct them toward their definite essential ends, that is, the effects that happen always or for the most part. Chance is contingent on nature and will be as long as their effects are not expected from them, because they happen rarely. However, in principle nature produces effects with regularity so that they happen always or for the most part and fulfill their essential ends. Therefore, the world could not be generated by chance, since chance cannot produce such a regularity and is limited to individual events.⁷⁶ A similar argument was used by Ibn Sina and Rāzī.⁷⁷ But while they used it precisely against the views of pre-Socratics, Ṣadrā adds that these views had been wrongly attributed to Empedocles and Democritus.⁷⁸ Notably, this is the first place where he deviates from the texts of Ibn Sina and Rāzī.

The argument above is directed mainly against Democritus and may not be a sufficient answer for a supporter of Empedocles, that is, his view that parts of the world originated by chance, not for a purposeful end. In the last section of the chapter on chance, Ṣadrā returns to Empedocles' arguments in support of chance based on the assumption that nature is devoid of deliberation and can therefore have no purpose or act by design.

To remind: E1 states that only deliberate actions can be purposeful, and since nature has no deliberation, it cannot act for a purpose, so everything it originates is by chance. To refute this, Ṣadrā demonstrates that even if nature does not produce its effects with deliberation, they still have a purpose, hence they are created for something. Deliberation does not make an action purposeful; rather it distinguishes why someone chose an action from other possible actions. But all these actions have ends of their own and lead to these ends essentially, regardless of an agent's deliberation. If a person's soul was free from different, opposing choices, the person would do one and the same action that would always lead to its essential end, just like the movements of heavenly bodies. We can observe this when a skilled writer or a lutist does not think about every letter they write or every strike of the strings but they do it out of habit, even though when they started performing their crafts, they used deliberation.⁷⁹

The second argument in Empedocles (E2) rests on the assumption that if nature had a goal it could not be death and decay because one cannot find

benefit in them. And since they happen as regularly as generation and growth, these can neither be for a purpose. Ṣadrā's answer focuses on showing that phenomena such as decay, death, and outgrowths have final ends. As for decay, it has two causes both of which are for a purpose. The first cause of decay is essential, and this is heat, and the other is accidental, and this is nature. The purpose of heat is the dissolution of moisture, which releases matter to be annihilated. This is the essential goal of heat. Nature, which is in the body, aims to preserve the body as much as possible, with supply after supply. But for each subsequent period, the deduction from it is less than in the first period, so the lack of supply is an accidental cause for the system of decay. Now, death is not an end in relation to a particular body, but is necessitated by a more universal teleological system of the world, for it prepares the soul for eternal life.⁸⁰

Finally, E3 against teleology in nature states that the same nature performs various contradictory actions, for example heat that dissolves wax but congeals salt. Ṣadrā argues that this is not true, because heat has one goal, which is combustion and the transformation of the burning object into something like its own substance. Dissolution or congealment are merely the necessary consequences and accidental ends of heat.⁸¹

In the remainder of the chapter Ṣadrā summarizes the rest of Ibn Sina's discussion.⁸² He does not go into as much detail as Ibn Sina, for he seems, again, to have altogether a different purpose in mind, that is, his concern with preserving what he believes to be the true doctrine of Empedocles. The following passage is instructive:

In the *Shifā*, an invalidation of the doctrine of Empedocles was mentioned with statements based on observations and clear evidence. This is why one of them explained his words on luck and chance as symbols and aphorisms or fabrications about him to indicate what he examined and found in his words on the strength of his [Empedocles'] behavior and his lofty status in the sciences.⁸³

Ṣadrā talks here about Suhrawardī's statements suggesting that Empedocles' view on chance was fabricated.⁸⁴ Therefore, Ṣadrā claims that even though Ibn Sina gave accurate insights and valid proofs against chance, this view was not really one held by Empedocles.

In *Hudūth al-ālam*, Ṣadrā alludes to the same passage in Suhrawardī, this time in reference to Democritus. We have already seen that Ṣadrā consistently claims that all ancient philosophers used symbolic language, which often led to misunderstandings. One such misunderstanding was ascribing erroneous views on chance to Democritus. Ṣadrā gives his interpretation: the philosopher was accused of denying final causes but he only denied the final cause in the acts of the Necessary Existence, for there is no sage who would deny that existentiated things become necessary through their causes.⁸⁵ This briefly expressed thought refers to the passage in

Suhrawardī where he proves that the proper understanding of divine generosity means that the Necessary Existent in His essence is not ‘for something’, *li-shayʿ*, as He is not deprived of anything, while everything else is in existential need and is contingent upon Him.⁸⁶ Having no final cause, the Necessary Existence is the final cause of every being. Ṣadrā adds that in a sense in which Empedocles and Democritus used the phrase ‘by chance’ we can accept the statement that ‘The world originated by chance’. This does not mean that the world became existent by itself or that it was originated by the Creator in a haphazard way, *juzafān*. It means that the existence of the world was not necessitated by itself, but by something else.⁸⁷ In this sense, ‘by chance’ means accidental and contingent.

Conclusions

The problem of the origination of the world demonstrates that the account of the history of pre-Socratic philosophy is subordinated to Ṣadrā’s philosophical project. After criticizing previous solutions by (mostly Islamic) philosophers and theologians, he advances his own doctrine of substantial movement, demonstrating that it existed already in a germinal form in pre-Socratics and other ancient philosophers. He attributes the inability of thinkers before him to extract it from these texts to the inadequacy of their philosophical method. The discussion on the role of chance in the origination of the world or its elements is the only time he must deal with arguments against pre-Socratics, especially by Democritus and Empedocles. While he does not want to defy Ibn Sina’s authority, he takes Rāzī’s textbook as the main reference and even simplifies it at times. He shows little interest in a thorough investigation into the subject matter but is rather focused on the defense of pre-Socratics. He agrees with and reproduces Ibn Sina’s arguments against chance, at the same time suggesting that they do not refer to the authentic views of the pre-Socratics. Furthermore, he refrains from integrating these criticisms into his investigations in the *Ḥudūth al-ʿālam* as this text follows early Arabic sources such as *Ps.-Ammonius/Shahrastānī* and *Theologia Aristotelis* where Empedocles’ and Democritus’ views on chance are not problematized. Overall, his engagement with pre-Socratic material is rather superficial, however, with the important exception of his attempts to find textual and philosophical precedence to his doctrine of substantial motion as one that can explain the temporal origination of the world.

Notes

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- 1 – For a study that discusses what some scholars have dubbed “the Safavid renaissance,” see Reza Pourjavady and Sabine Schmidtke, “An Eastern Renaissance? Greek Philosophy under the Safavids (16th–18th centuries AD),” *Intellectual History of the Islamicate World* 3 (2015): 248–290.
- 2 – *Ibid.*, p. 266.
- 3 – On this codex and the rediscovered works, see Robert Wisnovsky, “New Philosophical Texts of Yaḥyā ibn ‘Adī: A Supplement to Endress’ Analytical Inventory,” in Felicitas Opwis and David Reisman, eds., *Islamic Philosophy, Science, Culture, and Religion: Studies in Honor of Dimitri Gutas* (Leiden and Boston: Brill, 2012), pp. 307–326; *idem*, “MS Tehran-Madrasa-yi Marwī 19: An 11th/17th-Century Codex of Classical falsafah, Including ‘Lost’ Works by Yaḥyā ibn ‘Adī (d. 363/974),” *Journal of Islamic Manuscripts* 7 (2016): 89–122.
- 4 – Gerhard Endress, “Philosophische ein-Band Bibliotheken aus Isfahan,” *Oriens* 36 (2001): 10–58.
- 5 – Dimitri Gutas, “Pre-Plotinian Philosophy in Arabic (other than Platonism and Aristotelianism): A Survey of the Sources,” *Aufstieg und Niedergang der römischen Welt*, vol. II, 36.7 (Berlin and New York: De Gruyter, 1994), p. 4943.
- 6 – Carmela Baffioni, “Presocratics in the Arab World,” in Henrik Lagerlund, ed., *Encyclopedia of Medieval Philosophy* (Dordrecht: Springer, 2011), p. 1074. As for the authentic Empedoclean doctrine of Love and Strife, the general idea is present in Islamic sources: they are two Principles, of which Love unites, while Strife separates and antagonizes; see Shahrastānī’s *Kitāb al-milal wa-l-niḥal* (Cairo: Mu’assasat al-ḥalabī wa-l-shirkat li-nashr wa-l-tawzī’, 1387/1968), 2:128–129; henceforth *al-Milal*. The most emblematic Empedoclean doctrine of the four elements is also found in *al-Milal* 2:130. See also *Die Doxographie des pseudo-Ammonios: Ein Beitrag zur neuplatonischen Überlieferung im Islam*, ed. Ulrich Rudolph (Stuttgart: Franz Steiner, 1989) (henceforth *Ps.-Ammonius*, 104). However, the fundamental fact about the reception of Empedocles (Anbāduqlīs, Anbādhuqlis, etc.) is that the authentic Empedoclean material was fused with pseudepigrapha that depicted Empedocles as a contemporary of Luqmān and David, who traveled to Syria to receive wisdom from the former to return later to Greece and propagate his teachings, which he corrupted, however, with doctrines that contradicted the Afterlife; see Muḥammad ibn Yūsuf al-‘ĀmirLi, *Kitāb al-Amad ‘alā l-abad*, ed. E. K. Rowson (Beirut: Dār al-Kindī,

1979), p. 70. In his other works, al-ʿĀmirī offered a much more thorough reconstruction and critique of Empedocles’ authentic doctrines on the soul and natural philosophy; see Nicholas Aubin, “Natural Teleology versus Material Determinism and Chance: Al-ʿĀmirī against Empedocles and Galen on Nature and Soul,” *Journal of the History of Philosophy*, no. 3 (July 2021): 429–456. For a reconstruction of Ps.-Empedocles’ Neoplatonic thought, see Daniel de Smet, *Empedocles Arabus: Une lecture néoplatonicienne tardive* (Brussels: Paleis der Academiën, 1998), chap. 3. If it comes to Arabic Democritus, he was known mainly for two things. The first are his gnomic sayings; see Baffioni, “Anaximène, Anaximandre, Anaxagore et Démocrite dans la tradition arabe,” p. 772. The second was his atomistic theory. However, when Muslim authors spoke about it, the positions of Democritus were confused with those of Leucippus or Epicurus.

- 7 – Since the Arabic text was first discovered in 1958 by S. M. Stern, scholars have formulated a few hypotheses regarding its origin. The editor of the text, Ulrich Rudolph, has determined that the work originated in the middle the third/ninth centuries, and claimed that rather than being a Greek translation, it was composed in Arabic; see *Ps.-Ammonius*, 16. Most recently, de Smet argued that the text of Ps.-Ammonius was largely based on a Neoplatonic doxography of a Christian background related to the school of Ammonius (d. ca. 520), son of Hermias and the disciple of Proclus and that the Arabic text was subsequently amended by a Muslim author close to Arab Neoplatonist circles. See Daniel de Smet, “Les philosophes grecs, tous monothéistes! Une relecture néoplatonicienne islamisée de l’histoire de la philosophie (Pseudo-Ammonius),” *Revue de l’histoire des religions* 2019/4 (Tome 236), p. 825. For the previous controversies, see *Ps.-Ammonius*, 14–15. Two other important sources containing material on pre-Socratics are a doxography best known under its Latin name *Placita philosophorum*; see *Aetius Arabus: Die Vorsokratiker in Arabischer Ueberlieferung*, ed. and trans. Hans Daiber (Wiesbaden: Steiner, 1980), and the already quoted al-ʿĀmirī’s *Kitab al-Amad ʿalā l-abad*. The latter is the first text to claim that Greeks derived their wisdom from various ancient prophets; see al-ʿĀmirī, *Kitab al-Amad ʿalā l-abad*, 70–74.
- 8 – See Seyyed Hossein Nasr, “Ṣadr al-Dīn al-Shīrāzī (Mullā Ṣadrā)” in M. M. Sharif, ed., *A History of Muslim Philosophy* (Wiesbaden: Otto Harasowitz, 1966), 2:938; Hans Daiber, “Ṣadrā on the Problem of Creation and the Role of Greek Philosophers: New Light on Mullā Ṣadrā as Historian of Greek Philosophers,” *Spektrum Iran* 13 (2000): 7–8. On Ṣadrā’s use of philosophical sources, see, i.a.: S. H. Nasr, “Mullā Ṣadrā as a Source for the History of Islamic Philosophy,”

- Islamic Studies* 3, no. 3 (1964): 309–314; Fazlur Rahman, *The Philosophy of Mullā Ṣadrā* (Albany: State University of New York Press, 1975), p. 7–13; Sajjad Rizvi, *Mullā Ṣadrā and Metaphysics: Modulation of Being* (London and New York: Routledge, 2009), pp. 33–37.
- 9 – Daiber, “Ṣadrā on the Problem of Creation and the Role of Greek Philosophers,” pp. 7–22.
- 10 – The Arabic translations and paraphrases done in the so-called al-Kindī circle, most importantly the paraphrase of the *Enneads* IV–VI, were responsible for the introduction of Neoplatonizing texts. They are to be contrasted with the translations of the Baghdad Peripatetics from the ninth to the eleventh centuries, which were closer to the original Greek sources and less prone to the harmonizing efforts of al-Kindī’s circle. On the texts produced in al-Kindī’s circle and their sources representing different intellectual strands (both academic and popular) of Greek and Hellenistic traditions, see, e.g., Gerhard Endress, “Building the Library of Arabic Philosophy: Platonism and Aristotelianism in the Sources of al-Kindī,” in *The Libraries of the Neoplatonists* (Leiden: Brill, 2007), pp. 319–350; idem, “The Circle of al-Kindī: Early Arabic Translations from the Greek and the Rise of Islamic Philosophy,” in Gerhard Endress and Remke Kruk, eds., *The Ancient Tradition in Christian and Islamic Hellenism: Studies on the Transmission of Greek Philosophy and Sciences Dedicated to H. J. Drossaart Lulofs on His Ninetieth Birthday* (Leiden: Research School CNWS, 1997), pp. 43–76.
- 11 – Suhrawardī, *Opera metaphysica et mystica* II, ed. H. Corbin (Tehran: Anjuman-i shāhanshāhī-yi falsafih-yi Īrān, 1373 Sh/1993), 10; Ṣadr al-Dīn Shīrāzī, *Risāla fīl-ḥudūth*, ed. Sayyid Ḥusayn Mūsaviyān (Tehran: Bunyād-i ḥikmat-i islāmī-yi Ṣadrā, 1378), 153–156 (henceforth *Ḥudūth al-‘ālam*). John Walbridge devoted two monographs to Suhrawardī’s vision of the history of philosophy: *The Leaven of the Ancients: Suhrawardī and the Heritage of the Greeks* (Albany: State University of New York Press, 2000), and *The Wisdom of the Mystic East: Suhrawardī and Platonic Orientalism* (Albany: State University of New York Press, 2001).
- 12 – *Ḥudūth al-‘ālam*, 157; cf. *Opera metaphysica et mystica* II, 11.
- 13 – *Opera metaphysica et mystica* II, 11 and 155–156. The principle of the nobler possibility and its use as a proof of the existence of Platonic Forms in Suhrawardī’s thought has recently been subject to two analyses: Fedor Benevich, “A Rebellion against Avicenna? Suhrawardī and Abū l-Barakāt on ‘Platonic Forms’ and ‘Lords of Species’,” *Ishrāq: Islamic Philosophy Yearbook* 9 (2019): 33–42; Jari Kaukua, *Suhrawardī’s Illuminism: A Philosophical Study* (Leiden and Boston: Brill, 2022), pp. 161–167. For an analysis of the same principle in Ṣadrā, see

Agnieszka Erdt, "The Possibility of the Nobler (*imkān al-ashraf*) in Ṣadrā's Philosophy and Its Historical Origins," *Oriens* 50 (2022): 173–205.

14 – *Hudūth al-ālam*, 157.

15 – *Asfār* 5:205.

16 – *Hudūth al-ālam*, 14–15.

17 – *Hudūth al-ālam*, 17–18. See also Sajjad Rizvi, "Philosophy as a Way of Life in the World of Islam: Applying Hadot to the Study of Mullā Ṣadrā Shīrāzī (d. 1635)," *Bulletin of the School of Oriental and African Studies* 75, no. 1 (2012): 33–45, and Mathieu Terrier, "La représentation de la sagesse grecque comme discours et mode de vie chez les philosophes šīites de l'Iran safavide (XIe/XVIIe siècle)," *Studia graeco-arabica* 5 (2015): 299–320.

18 – In another article that dealt with Ṣadrā's re-examination of earlier intellectual tradition and focused on the principle of nobler possibility (cited above), I argued that a thorough examination of his sources can help us appreciate Ṣadrā's philosophy in both its novelty and its historical continuity. The evaluation of these sources demonstrates his continued concern with Neoplatonic doctrines and the centrality of certain topics, such as that of the soul, that shaped his own system. These conclusions are confirmed by the present article, even though Ṣadrā's engagement with pre-Socratic material is more superficial.

19 – Daiber, "Ṣadrā on the Problem of Creation and the Role of Greek Philosophers," p. 11. Notably, much of the same text presented in *Hudūth al-ālam* can also be found in the relevant discussions in the second journey of the *Asfār* 5:205–246.

20 – *Hudūth al-ālam*, 59.

21 – *Hudūth al-ālam*, 9.

22 – See *Hudūth al-ālam*, 9–17.

23 – *Hudūth al-ālam*, 16.

24 – For a concise exposition of Ṣadrā's doctrine of the primacy of existence where he presents eight arguments in its support, see *The Book of Metaphysical Penetrations*, trans. Seyyed Hussein Nasr, ed. Ibrahim Kalin (Provo, Utah: Brigham Young University Press, 2014), pp. 11–19.

25 – Note, however, that this division also cannot distinguish between God and other existents: God is pure existence while other beings differ from Him (and each other) in terms of perfection and imperfection and in intensity and weakness of their existence. These limitations of existence and aspects of its privation, or various modes of existence, when presented to the mind, become essences.

- 26 – See *Hudūth al-ālam*, 15–16.
- 27 – The interest in the *kalām* cosmological argument from the temporal regress, proving that that the world cannot be eternal and must be originated, was revived by William Lane Craig, *The Kalām Cosmological Argument* (London: Macmillan, 1979).
- 28 – Şadrā falls here into the mereological fallacy, claiming that since each individual thing he lists is originated their totality must be originated as well. The mereological argument was used in the defense of the theological proofs from accidents for creation ex nihilo but was attacked by philosophers; see Ayman Shihadeh, “Mereology in Kalām: A New Reading of the Proof from Accidents for Creation,” *Oriens* 48 (2020): 5–39. I would like to thank the anonymous reviewer for pointing me to this issue.
- 29 – *Asfār* 7:285.
- 30 – *Hudūth al-ālam*, 9–10.
- 31 – See *Hudūth al-ālam*, xvi (Mūsaviyān’s introduction).
- 32 – *Ibid.*, 112. Cf. also *Asfār* 7:297.
- 33 – *Hudūth al-ālam*, 62, 81, 112, *passim*. On the Platonic forms in Islamic philosophy, see Rüdiger Arnzen, *Platonische Ideen in der arabischer Philosophie: Texte und Materialien zur Begriffsgeschichte von şuwar aflātūniyya und muthul aflātūniyya* (Berlin: De Gruyter, 2011), for a quick account of Şadrā’s views, see Arnzen, 203–211.
- 34 – *Hudūth al-ālam*, 15.
- 35 – In *On the Eternity of the World*, Proclus presented eighteen arguments. Ishāq b. Hunayn translated nine of them; see ‘Abd al-Rahmān Badawī, *al-Aflātūniyya al-muḥdatha ‘ind al-‘Arab* (Kuwait: Wakālat al-matḅ ūāt, 1977), 34–42. There exists another Arabic translation of the treatise: Elvira Wakelnig, “The Other Arabic Version of Proclus’ *De Aeternitate mundi*: The Surviving First Eight Arguments,” *Oriens* 40 (2012): 51–95. Shahrastānī summarized eight arguments; see *al-Milal* 2:208–210. Şadrā must have followed, or at least have been acquainted with, Ishāq b. Hunayn’s translation as he mentioned that the arguments were nine; see *Hudūth al-ālam*, 21. For his interpretation of Proclus’ views, see *Hudūth al-ālam*, 239–241.
- 36 – *Hudūth al-ālam*, 21, 234. The close association of Proclus with Plato, *Abuqlus al-muntasab ilā Aflātīn*, prompts Şadrā to seek similarities between the two. Since Plato’s words about the eternity of the world, which only referred to the intelligible realm, were misunderstood, that is, taken as referring to the physical world and the doctrine of *dahr*, so must have been the case with Proclus; see *Hudūth al-ālam*, 235–236.

- 37 – *Hudūth al-ālam*, 15 and also 157. See also Mathieu Terrier, “La représentation de la sagesse grecque comme discours et mode de vie chez les philosophes šīrites de l’Iran safavide (XIe/XVIIe siècle),” *Studia graeco-arabica* 5 (2015): 299–320, at p. 303.
- 38 – Cf. *Hudūth al-ālam*, 20–21. This is a quotation from *al-Milal* 2:208.
- 39 – *Hudūth al-ālam*, 193.
- 40 – See, e.g., *Asfār* 5:195–199, where the importance of substantial motion for the problem of the soul’s perfectibility is perhaps most apparent.
- 41 – *Hudūth al-ālam*, 62; *Aflūṭīnīnda l-‘arab*, 126 (trans. by Geoffrey Lewis).
- 42 – *Hudūth al-ālam*, 61–62; *Aflūṭīnīnda l-‘arab*, ed. ‘A. Badawī (Cairo: Maktabat al-nahḍa al-miṣriyya, 1955), p. 126.
- 43 – *Hudūth al-ālam*, 62, *Ps.-Ammonius*, 40, l.8–9.
- 44 – *Ps.-Ammonius*, l. 11–13. It seems to suggest that this doctrine was distorted in some way, even though the reading of the sentence in question is uncertain.
- 45 – *Hudūth al-ālam*, 168.
- 46 – *Ps.-Ammonius*, 43, l.1–4.
- 47 – *Ps.-Ammonius*, 44, l.15–17. For a different interpretation of this passage by Shahrastānī, where ‘rest’ refers to the Intellect and means its full actuality, and ‘movement’ refers to the Soul and its coming out of potentiality to join the rank with the Intellect, see Shahrastānī’s *Kitāb al-milal wa-l-nihāl* (Cairo: Mu’assasat al-ḥalabī wa-l-shirkat li-nash wa-l-tawzī, 1387/1968), 2:131.
- 48 – *Hudūth al-ālam*, 220.
- 49 – *Hudūth al-ālam*, 220.
- 50 – See also Leo Elders, *Aristotle’s Cosmology: A Commentary on the De caelo* (Assen: Van Gorcum, 1966), p. 155.
- 51 – For the analysis of these arguments and the details of Aristotle’s critique, see John Dudley, *Aristotle’s Concept of Chance: Accidents, Cause, Necessity, and Determinism* (Albany: State University of New York Press, 2012), pp. 84–87.
- 52 – See *Aristūṭālīs fī l-samā wa-l-āthār al-‘ulwiyya*, ed. ‘A. Badawī (Cairo: Maktabat al-nahḍa al-miṣriyya, 1961).
- 53 – *Aetius Arabus*, 136.
- 54 – For example, we read: “There is a difference between a thing that is by chance, *bi-ittifāq*, and a thing that is by itself, *min dhātihi*. The thing that happens by chance, *yakūn bi-ittifāq*, happens by itself, *qad yakūn*

bi-dhātihī, and does not happen by chance, *lā yakūn bi-l-ittifāq*, because it is outside of actions” (*Aetius Arabus*, 136).

- 55 – For Aristotle, I refer to Dudley, *Aristotle’s Concept of Chance: Accidents, Cause, Necessity, and Determinism*. For Ibn Sina (and Ibn Rushd), see Catarina Belo, *Chance and Determinism in Avicenna and Averroes* (Leiden: Brill, 2007).
- 56 – Cécile Bonmariage, “Ṣadrā’s Use of Fakhr al-Dīn al-Rāzī’s *al-Mabāḥith al-mashriqiyya* in the *Asfār*,” *Oriens* 48 (2020): 195.
- 57 – *Ibid.*, pp. 192–193.
- 58 – Fakhr al-Dīn Rāzī, *al-Mabāḥith al-mashriqiyya* (Qum: Intishārāt-i bīdār, 1411/1990), 1:526–528 (henceforth *Mabāḥith*).
- 59 – Ibn Sīnā, *Shifāʾ, Ṭabīʿiyyāt: al-Samāʿ al-ṭabīʿī*, ed. S. Zāyid (Cairo: GEBO, 1983), pp. 60–62 (henceforth *Shifāʾ*).
- 60 – Ṣadr al-Dīn al-Shīrāzī, *al-Ḥikma al-mutāʿaliya fī l-asfār al-ʿaqliyya al-arbaʿa* (Beirut: Dār ihyāʾ al-turāth al-ʿarabī, 1990), 2:253–255 (henceforth *Asfār*).
- 61 – *Asfār* 2:253–254.
- 62 – *Mabāḥith* 1:537 and *Shifāʾ*, 61.
- 63 – *Asfār* 2:254, taken verbatim from *Mabāḥith* 1:531; slightly different wording in *Shifāʾ*, 61.
- 64 – See *Asfār* 2:254–255, *Mabāḥith* 1:531–532. Rāzī systematized the arguments found in Ibn Sina; see *Shifāʾ*, 69. Interestingly, in his commentary on Ibn Sina’s *al-Ishārāt wa-l-tanbīhāt*, Rāzī not only refrains from providing these arguments, but instead embraces the Empedoclean claim that nature has no purpose; see Fakhr al-Dīn Rāzī, *Sharḥ al-Ishārāt wa-l-tanbīhāt*, ed., ʿAlī-Riḏā Najafzādih (Tehran: Anjuman-i āthār va mafākhir-i farhangī, 1384 Sh), 2:343. Among Muslim philosophers, Abū Bakr al-Rāzī used an argument very similar to that of Empedocles, criticizing Porphyry for the inconsistency of attributing nature with no intellection or will, and yet making it act on purpose and not by chance; see Abū Bakr al-Rāzī, *Rasāʾil falsafīyya*, ed. Paul Kraus (Cairo: Paul Barbey, 1939), p. 121.
- 65 – *Asfār* 2:255, *Mabāḥith* 1:526; See *Shifāʾ*, 62–66.
- 66 – *Asfār* 6:391–392, Ibn Sina, *al-Shifāʾ, al-Ilāhiyyāt*, 439. See also Belo, *Chance and Determinism in Avicenna*, p. 22.
- 67 – *Asfār* 2:255.
- 68 – *Asfār* 2:255.
- 69 – *Asfār* 2:255, *Shifāʾ*, 63–64.

- 70 – While the majority of scholars assert Ibn Sina’s determinism, some like A. Ivy, J. Janssens, and L. Goodman reject such categorical assessment and opt for (at least some) indeterminism. For an overview, see Belo, *Chance and Determinism in Avicenna*, pp. 14–16. Belo herself defends the deterministic thesis and deals with Ivry’s criticisms that matter is responsible for chance events that account for breaks and fresh starts in the natural world; see *ibid.*, pp. 55–89.
- 71 – Belo, *Chance and Determinism in Avicenna*, p. 30. For Ibn Sina’s ambiguous stance on the frequency model, see *ibid.*, pp. 29–33.
- 72 – *Asfār*, 2:256.
- 73 – *Asfār*, 2:256.
- 74 – *Asfār*, 2:256.
- 75 – *Asfār*, 2:256, *Shifāʾ*, 65–66.
- 76 – *Asfār*, 2:256.
- 77 – See *Shifāʾ*, 67, *Mabāḥith* 1:532. The reasoning goes back to Aristotle (*De Cael.* I, xii, 283a29–b3), who, however, connected it with his doctrine of the eternity of the world: chance events are unusual, so they occur at one time to disappear later. But since the universe is infinite in time, it cannot come to be by chance; see Dudley, *Aristotle’s Concept of Chance*, p. 83; Elders, *Aristotle’s Cosmology: A Commentary on the De caelo*, p. 170.
- 78 – *Asfār*, 2:256.
- 79 – *Asfār* 2:257; see *Shifāʾ*, 72; *Mabāḥith* 1:534.
- 80 – *Asfār* 2:258; see *Shifāʾ*, 72–73, *Mabāḥith* 1:534–535.
- 81 – *Asfār* 2:258–259; see *Shifāʾ*, 74, *Mabāḥith* 1:535.
- 82 – *Asfār* 2:259; see *Shifāʾ*, 70–71, *Mabāḥith* 1:532–533. See also Belo, *Chance and Determinism in Avicenna*, p. 43.
- 83 – *Asfār* 2:259.
- 84 – Suhrawardī, *Kitab al-mashārī wa-l-muṭārahāt*, in *Opera metaphysica et mystica*, ed. H. Corbin (Tehran: Anjuman-i shāhanshāhī-yīih falsafih-yīi Irān, 1373 Sh/1993), 1:432. See also Walbridge, *The Leaven of the Ancients*, p. 46.
- 85 – *Ḥudūth al-ʿālam*, 220.
- 86 – *Opera metaphysica et mystica* 1:428 ff.
- 87 – *Ḥudūth al-ʿālam*, 220.