Abstract: Aristotle's Prime Matter: An Analysis of Hugh R. King's Revisionist Approach

Aristotle is vague, at best, regarding the subject of prime matter. This has led to much discussion regarding its nature in his thought. In his article, "Aristotle without Prima Materia," Hugh R. King refutes the traditional characterization of Aristotelian prime matter on the grounds that Aristotle's first interpreters in the centuries after his death read into his doctrines through their own neo-Platonic leanings. They sought to reconcile Plato's theory of Forms—those detached universal versions of form—with Aristotle's notion of form. This pursuit led them to misinterpret Aristotle's prime matter, making it merely capable of a kind of participation in its own actualization (i.e., its form). I agree with King here, but I find his redefinition of prime matter hasty. He falls into the same trap as the traditional interpreters in making any matter first. Aristotle is clear that actualization (form) is always prior to potentiality (matter). Hence, while King's assertion that the four elements are Aristotle's prime matter is compelling, it misses the mark. Aristotle's prime matter is, in fact, found within the elemental forces. I argue for an approach to prime matter that eschews a dichotomous understanding of form's place in the philosophies of Aristotle and Plato. In other words, it is not necessary to reject the Platonic aspects of Aristotle's philosophy in order to rebut the traditional conception of Aristotelian prime matter.

Aristotle's Prime Matter:
An Analysis of Hugh R. King's Revisionist Approach

Traditional scholarship on Aristotle posits an interpretation of his first matter, or "prime matter," as the original stuff of nature, which is absent of form and, as such, is pure potentiality.[1] Prime matter is completely lacking in characteristics—nothing can be said (predicated) of it—and so it is first in the process of generation and last in that of analysis. For Aristotle, analysis is a process by which one peels back the layers of a thing's composition, breaking apart a form, or actualization, from its underlying matter, or potentiality. This process may take many successive steps, but in general Aristotle refers to the matter arrived at first in analysis as the proximate matter, and sometimes the last matter, because it is that matter appropriate for the final stage of generation at which the analysis began. Universal matter, then, is the final matter at which analysis arrives, and it is appropriate for all types of generation. Being the last in analysis makes universal matter also first in generation; hence, it is called "prime matter."

Aristotle is vague, at best, regarding the subject of prime matter. This has led to much discussion regarding its nature in his thought. In his article, "Aristotle without Prima Materia," Hugh R. King refutes the traditional characterization of Aristotelian prime matter on the grounds that Aristotle's first interpreters in the centuries after his death read into his doctrines through their own neo-Platonic leanings. They sought to reconcile Plato's theory of Forms—those detached universal versions of form—with Aristotle's notion of form. This pursuit led them to misinterpret Aristotle's prime matter, making it merely capable of a kind of participation in its own actualization (i.e., its form). I agree with King here, but I find his redefinition of prime matter hasty. He falls into the same trap as the traditional interpreters in making any matter first.

[1] King depends on Harold H. Joachim's book, *Aristotle: On Coming-to-be and Passing-Away* (1922), for the "traditional" interpretation of prime matter.

Aristotle is clear that actualization (form) is always prior to potentiality (matter). Hence, while King's assertion that the four elements are Aristotle's prime matter is compelling, it misses the mark. Aristotle's prime matter is, in fact, found within the elemental forces.

King and the Tradition

King begins his argument in Book V in *Metaphysica* with the following lengthy passage from Aristotle, which is so central to our discussion here that we will consider it in its entirety:

> Nature is the primary matter of which any non-natural object consists or out of which it is made, which cannot be modified or changed from its own potency, as e.g. bronze is said to be the nature of a statue and of bronze utensils, and wood the nature of wooden things; and so in all other cases; for when a product is made out of these materials, the first matter is preserved throughout. In this way people call the elements of *natural* objects also their nature, some naming fire, others earth, others air, others water, others something else of the sort, and some naming more than one of these, and others all of them. Nature is the substance of natural objects [. . .]. Hence, as regards the things that are or come to be by nature, though that *from which* they naturally come to be or are is already present, we say they have not their nature yet, unless they have their form or shape. That which comprises both of these exists *by* nature, e.g. the animals and their parts; and nature is both the first matter (and this in two senses, either first, counting from the thing, or first in general, e.g. in the case of works in bronze, bronze is first with reference to

them, but in general perhaps water is first, if all things that can be melted are water), and the form or substance, which is the end of the process of becoming.[2]

From this passage King draws three straightforward conclusions. First, he argues that Aristotle uses the terminology "first matter" to refer to "proximate matter." For Aristotle, proximate matter is the matter appropriate for a specific thing's generation. Proximate matter is not general; it represents a level of complexity not suitable for creating all things, e.g. man comes from man, but man does not come from a tree. Second, Aristotle sometimes uses "first matter" to refer to "universal matter"—that general, basic matter out of which all things spring. Universal matter is found in the complete physical analysis of all substances; when all remnants of form have been stripped away, it is the last matter at which we arrive. Third, the passage above asserts that regardless of type, matter persists after generation and "cannot be modified or changed from its own potency." King notes that Aristotle has elsewhere, in *Physica*, made the same distinction between proximate and universal matter. At the beginning of Book II in *Physica*, Aristotle tells us, "Some identify the nature or substance of a natural object with the immediate constituent of it which taken by itself is without arrangement, e.g. the wood is the nature of the bed, and the bronze the nature of the statue."[3] In other words, some of Aristotle's predecessors claim that proximate matter is the nature of a thing. Still others claim that universal matter is the nature of a thing, and so, Aristotle says, "some assert earth, others fire or air or water or some or all of these, to be the nature of the things that are."[4] For King, the point of this discussion is that Aristotle considers these views to have some merit, which he evidences in pointing to the following statement from Aristotle: "This then is one account of nature, namely that it is the primary

[2] Aristotle, *The Complete Works of Aristotle: The Revised Oxford Translation*, ed. Jonathon Barnes, 2 vols. (Princeton: Princeton University Press, 1984), 1014b26-1015a11.
[3] Ibid., 193a10-12.
[4] Ibid., 193a20-22.

underlying matter of things which have in themselves a principle of motion or change."[5] Then, at the end of Book II in *Physica*, King says, Aristotle's discussion of matter comes full circle. Again he cites Aristotle, who writes,

> If then there is to be a house, such-and-such things must be made or be there already or exist, or generally the matter relative to the end, bricks and stones if it is a house. But the end is not due to these except as the matter, nor will it come to exist because of them. Yet if they do not exist at all, neither will the house [. . .]. The necessary in nature, then, is plainly what we call by the name of matter and the changes in it.[6]

With the addition of this passage, King draws the conclusion that because matter is necessary to generation, and prevails throughout that process, then proximate matter is comprised of that which makes up universal matter in a genealogical way. He states, "So that, *if* fire, earth, air, and water are the universal first matter, then all substance will necessarily utilize these as their material base."[7] One could arrive at this conclusion by applying Aristotle's process of analysis to any substance. King calls this third conclusion the cornerstone of the traditional interpretation in that the tradition claims it denies that first matter is a substance (a "this"). This claim is drawn from another passage in *Metaphysica*, where Aristotle states,

> It seems that when we call a thing not something else but "of" that something (e.g. a casket is not wood but of wood, and wood is not earth but made of earth [. . .]), that something is always potentially (in the full sense of that word) the thing which comes after it in this series. E.g. a casket is not earthen nor earth, but

[5] Aristotle, 193a28-29.
[6] Ibid., 200a24-32.
[7] Hugh R. King, "Aristotle without Prima Materia," *Journal of the History of Ideas* 17, no. 3 (June 1956): 372, accessed November 19, 2013, http://www.jstor.org/stable/2707550.

> wooden; for wood is potentially a casket and is the matter of a casket [. . .]. And if there is a first thing, which no longer is called after something else, and said to be of it, this is prime matter; e.g. if earth is airy and air is not fire but firey, fire then is prime matter, not being a "this."[8]

So, were we not able to analyze fire into some matter and some form, then analysis stops and fire is the first matter. The tradition argues that if something has a recognizable character that is identified in a universal characterization, then that thing is informed. By virtue of its information, it is not matter alone (a "first thing"), and it is not prime matter. The tradition considers the four elements, two of which are mentioned in the above quotation, to be thises, because they are each characterized by a pair of the elemental forces: hot, cold, moist, and dry. The elemental forces inform prime matter, making the elements the first, and most basic, substances.[9]

Unsatisfied with this conclusion, King offers a few points for consideration before carrying on with his refutation. His primary goal here is to suggest that the elements are not thises, as the tradition maintains, that first matter is perceptible, and further, that Aristotle arrives at first matter by way of physical analysis—a process befitting perceptible things. First, King offers a passage from *De Caelo* in which Aristotle states, "That which is potentially a certain kind of body may, it is true, become such in actuality. But if the potential body was not already in actuality some other kind of body, the existence of a separate void must be admitted."[10] King interprets this quotation to mean that prime matter (a "potential body") must be perceptible—

[8] Aristotle, 1049a19-27.
[9] Harold H. Joachim, *Aristotle: On Coming-to-be and Passing-away* (Oxford: Clarendon Press, 1922), 137, accessed November 30, 2014, https://archive.org/details/oncomingtobepass00arisuoft. Joachim frequently refers to "elemental forces" as the constituents of the elements. He insists that they are logical, not temporal, presuppositions to the elements (see Joachim 137), despite Aristotle's extended discussion of the elementary forces in *Physica*, on which Joachim comments on pages 200-12 of his book. In those pages, he also denies external action for the forces despite Aristotle's further discussion of such action in *Meterologica*. Joachim insists they have only "immanent" action (see Joachim 207). This will be rebutted by King which is discussed below.
[10] Aristotle, 302a5-8.

"already in actuality some other kind of body"—or else there must exist a void. Aristotle firmly believes that everything comes from something, and so the mere mention of a void is a sure sign of the strength with which he asserts any statement. Thus, if we analyze down to the universal matter, the prime matter, we stop, because we can no longer distinguish a form to strip away. King claims analysis stops at the elements, because Aristotle refers to the elements as "simple," rather than "compound."[11] King draws additional support for simple elements from *De Partibus Animalium*. Aristotle states at the beginning of Book II that "the first in order [of composition], as all will allow, is composition out of what some call the elements, such as earth, air, water, fire."[12] For King, it is curious that Aristotle calls the composition out of the elements first if they are composed of prime matter and elemental forces, as the tradition maintains. Conversely, King also notes here that Aristotle is sympathetic to Empedocles' theory of elements as they pertain to matter, but because the ancients lacked a full conception of form, according to Aristotle, they could not truly conceive of hylo-morphism.[13] This endorsement by Aristotle is poignant for King, and he posits, "Did [Aristotle] possibly conceive his own elements to exist only as the material substrate of composite substances?"[14]

In response, King moves to Aristotle's discussion in *De Caelo* of the generation and destruction of the elements. Aristotle states in Book III,

> Since they are generated, they must be generated either from something incorporeal or from a body, and if from a body, either from one another or from something else. The theory which generates them from something incorporeal requires a separate void. [. . .] But, on the other hand, it is equally impossible that

[11] Aristotle, 334b31-335a3.
[12] Ibid., 646a13-15.
[13] Ibid., 194a19-21 and 642a14-31.
[14] King, 373.

> the elements should be generated from some kind of body. That would involve a body distinct from the elements and prior to them. [. . .] The elements therefore cannot be generated from something incorporeal nor from a body which is not an element, and the only remaining possibility is that they are generated from one another.[15]

In the passage above, Aristotle clearly does not speak of an indeterminate substratum from which the elements spring. King continues, "The Tradition, however, has a way out of the dilemma which their interpretation seems to face here: at no time are the elements *temporally* generated from first matter."[16] King states that temporal generation is impossible under the framework of prime matter supported by the tradition, because prime matter would require existence to be able to generate the elements. Existence, or actuality, is out of the question for prime matter because that would require it not be purely potential. Therefore, the tradition engages in a logical presupposition of the elements' generation, rather than a temporal one. King finds this an anathema, because it clearly breaks away from Aristotle's typical definition of matter as that which exists prior to generation and persists throughout the process of generation. I also might add that Aristotle firmly holds that actuality (form) is prior to potentiality (matter).

The tradition bases its interpretation of prime matter as discussed above on three key passages in Aristotle. First, Aristotle writes of the process of generation and corruption, "nothing perceptible persists in its identity as a *substratum*, and the thing changes as a whole."[17] This is distinct from alteration, in which the substratum remains the same while a property of that substratum changes. Aristotle refers to several examples of contrary properties that, by way of

[15] Aristotle, 305a14-32.
[16] King, 374.
[17] Aristotle, 319b14-15. See also Joachim, 107-8.

alteration, come to identify a substratum. For instance, one of his favorite examples of contrarieties is the pair health and illness. The tradition takes the above passage to mean that the substratum subject to generation or corruption must be insubstantial—that is, void of properties or predications. In further support of an insubstantial substratum, the tradition submits Aristotle's statement that "there must preexist something which *potentially* is, but *actually* is not; and this something is spoken of both as being and as not-being."[18] This explanation fulfills the requirements that generation is from something, and from something seemingly insubstantial, which is to say, prime matter. Finally, Aristotle states, "the passing away of *this* is a coming-to-be of *something* else."[19] The tradition interprets this to mean that when prime matter, which is all that persists in generation or corruption, relinquishes one form (its existence in a substance), it must immediately take on another form. This "swapping" of forms is what King later calls prime matter's participation in forms. Moreover, this notion betrays the neo-Platonic leanings of Aristotle's first interpreters.

In direct response to the supporting evidence traditionalists cite, King points out that Aristotle considers "substratum" capable of use in two ways: first, as substratum of accidents (i.e., musicalness or paleness), and second as substratum of form.[20] In the second case, the substratum is matter. King believes Aristotle specified his use of "substratum" in the comment that "nothing perceptible persists" in generation or corruption as the substratum of accidents. Further, Aristotle does not state explicitly in the first point above that no thing persists after generative or corruptive change. Were no thing (no perceptible thing) to persist throughout the process, the process itself would not be perceptible. Aristotle merely states that a substratum's

[18] Aristotle, 317b16-18. See also Joachim, 91-3.
[19] Ibid., 318a23-24. See also Joachim, 97.
[20] Ibid., 1049a28-36.

"identity" does not persist; therefore, in generation it is possible for the identity of a substance to be subsumed into the identity of a new substance. Moreover, if matter were to shed all form during the process of generation or corruption and become prime matter again, Aristotle would have no need for his notion of proximate matter.

King also refutes the tradition's assertion that elements are composite. In doing so, he explicates at length the selection from *De Partibus Animalium* that he earlier considered only in passing. Aristotle states,

> Now there are three degrees of composition; and of these the first in order as all will allow, is composition out of what some call the elements, such as earth, air, water, fire. Perhaps, however, it would be more accurate to say composition out of the elementary forces; nor indeed out of all of these, as said elsewhere in previous treatises. For wet and dry, hot and cold, form the material of all composite bodies.[21]

King makes of this extension on the previously considered passage that the elementary forces—hot, cold, dry, and moist—are neither matter nor form. The tradition asserts that such forces are formal, not material. King claims the "neither-nor" status he affords the elemental forces is necessary for Aristotle's concept of reciprocal generation. Each element keeps as its fulcrum one of the elemental forces, from which it swings between contrarieties to create the other elements. However, there is a passage in *De Genertatione et Corruptione* that King must explain in light of this assertion. Aristotle states,

> In fact, however, fire and air, and each of the bodies we have mentioned, are not simple, but combined. The simple bodies are indeed similar in nature to them, but

[21] Aristotle, 646a12-17.

> not identical with them. Thus the simple body corresponding to fire is fire-like, not fire; that which corresponds to air is air-like; and so on with the rest of them. But fire is an excess of heat, just as ice is an excess of cold.[22]

King's interpretation of this passage is that Aristotle is contrasting his own elements with those of Empedocles, whom Aristotle mentions immediately prior to this passage. King insists that Aristotle's elements must be simple so that "no composite structure of form and matter [can] interfere with their receptivity of any and all form."[23] He thus refers to Aristotle's elements as "ideal" or "theoretical," in comparison to those of Empedocles, which King characterizes as "simple approximations, matter with a minimum of form."[24]

King continues by turning to *De Generatione et Corruptione*, this time to the beginning of Book II. There, Aristotle summarizes the attributes of those things that undergo natural change, as well as unqualified coming-to-be and passing-away, along with its cause and difference to alteration. According to Aristotle, what is left, then, to discuss are "the so-called elements of bodies."[25] After a brief summary of previous philosophers' stances on the elements, Aristotle offers a reconciliation, stating, "Now we may agree that the primary materials, whose change (whether it be association and dissociation or a process of another kind) results in coming-to-be and passing-away, are rightly described as principles or elements."[26] King points out that Aristotle does not suggest that the elements are imperceptible. Rather, Aristotle states that the elements' "change" results in generation and corruption, which is a process reserved for perceptible bodies. Thus, Aristotle is saying that the elements themselves are perceptible.

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[22] Aristotle, 330b22-26.
[23] King, 379.
[24] Ibid.
[25] Aristotle, 328b26-32.
[26] Ibid., 329a5-7.

Moreover, Aristotle writes that those philosophers err "who postulate, beside the bodies we have mentioned, a single matter—and that corporeal and separable matter. For this body cannot possibly exist without a perceptible contrariety."[27] After a review of Anaximander's "Boundless," Aristotle continues with Plato's "Omnirecipient," saying that its change is not generation; rather, it is alteration, but, "Nevertheless [Plato] carries his analysis of the elements—solids though they are—back to planes, and it is impossible for 'the Nurse' (i.e. the primary matter) to be identical with the planes."[28] King states that Aristotle's criticism of these two philosophers' theories of first matter is two-fold: "(1) they separate it from the elements, and (2) they then make it imperceptible."[29] These criticisms become abundantly clear, then, when Aristotle states his own theory of the underlying matter: "Our own doctrine is that although there is a matter of the perceptible bodies (a matter out of which the so-called elements come-to-be), it has no separate existence, but is always bound up with a contrariety."[30] King takes this passage to mean that Aristotle's matter is not separate from or prior to the elements, because it is the elements. He further states that the tradition's interpretation of this underlying matter as prime matter would make this entire section from *De Genertatione et Corruptione* garbled.

A final point of clarification needs be worked out in reference to King's argument: the confusion between logical analysis and physical analysis of matter. Aristotle uses the word "matter" ambiguously, says King, leading traditional scholarship astray. In *Metaphysica*, we find a statement that appears in almost every discussion of prime matter. Aristotle states:

> But when we come to the concrete thing, e.g., *this* circle, [. . .] of these there is no definition, but they are known by the aid of thought or perception [. . .] they are

[27] Aristotle, 329a9-11.
[28] Ibid., 329a22-24.
[29] King, 380.
[30] Aristotle, 329a25-27.

> always stated and cognized by means of the universal formula. But matter is unknowable in itself.[31]

Out of context, the last line, "But matter is unknowable in itself," seems compelling evidence for prime matter. However, as King points out, critics draw this statement from Aristotle's discussion of the role matter plays in formula, or definition. Essences make up definitions, and so when faced with a particular that has many predications, one cannot depend on the matter of a thing for help.

Refining King Against the Tradition

Interestingly, throughout what is indeed a groundbreaking re-reading of prime matter in Aristotle, King unfortunately suffers from the confirmation bias of which he accuses his predecessors. He routinely looks past Aristotle's references to form in his supporting citations about matter; these references could have led King to a more-nuanced discussion of the elements and their role in nature. In the opening passage of his article, King quotes Aristotle to the effect that "nature is both the first matter [. . .] *and the form or substance,* which is the end of the process of becoming."[32] Here, Aristotle uses "end" in the sense of "purpose" or "goal," not in the temporal sense of "culmination." Shortly thereafter, in his discussion of "nature," King uses Aristotle's comment, "This then is one account of nature, namely that it is the primary underlying matter of things which have in themselves a principle of motion or change,"[33] as proof of Aristotle's agreement that the four elements are universal matter. However, in the very next sentence, which King omits, Aristotle states, "Another account is that nature is the shape or

[31] Aristotle, 1036a1-8.
[32] Ibid., 1015a6-11, emphasis added.
[33] Ibid., 193a28-29.

form which is specified in the definition of the thing."[34] Aristotle goes on to summarize this account of nature, much as he did with matter. Importantly, he concludes this section in keeping with his hylo-morphic doctrine, writing,

> The form indeed is nature rather than the matter; for a thing is more properly said to be what it is when it exists in actuality than when it exists potentially. Again man is born from man but not bed from bed. That is why people say that the shape is not the nature of a bed, but the wood is—if the bed sprouted, not a bed but wood would come up. But even if the shape *is* art, then on the same principle the shape of man is his nature. For man is born from man.[35]

Matter and form are equally important to the nature of a thing, because a thing's perceptibility depends upon both. King draws further evidence from the end of *Physica* Book II, where Aristotle gives an example of matter's importance in nature. Aristotle tells us that a house, while not necessitated by the bricks and stone that make it up, could not exist if the bricks and stone (its matter) did not also exist. Aristotle says, "The necessary in nature, then, is plainly what we call by the name of matter and the changes in it."[36] Again, King stops there. However, in his subsequent sentence, Aristotle writes,

> Both causes [material and formal] must be stated by the student of nature, but especially the end; for that is the cause of the matter, not *vice versa*; and the end is that for the sake of which, and the principle starts from the definition or essence.[37]

This omission shows for the first time why King's focus on matter is, in fact, a serious problem in the development of his argument. Not only has Aristotle stated that any student of nature must

[34] Aristotle, 193a30-31.
[35] Ibid., 193b7-12.
[36] Ibid., 200a31-32.
[37] Ibid., 200a32-34.

especially focus on form, but he also has stated that form (actuality) is the cause of matter (potentiality). In a discussion of prime matter, identifying matter's cause is key. Aristotle also uses the word "principle," which receives much focus in regard to the elements. Considering King's desire to equate universal matter with the elements, omitting a passage discussing the "start" of the "principle" as "essence" (or form) is hard to rationalize away.

Here, King directs us towards *De Partibus Animalium* 642a-642b4 in a footnote. This passage discusses *two* causes: necessity (matter) and final end. Aristotle tells us that the final end creates the character of the necessity. Undoubtedly, King chose this passage to emphasize again matter's necessity. Taken as a whole, though, the passage only emphasizes that Aristotle is keen to show the importance of form and how its interplay with matter separates him from Plato. Aristotle uses the phrase "final end" to distinguish his "form" here. He often used his formal, efficient, and final causes interchangeably. In *Physica*, he tells us,

> Now, the causes being four, it is the business of the student of nature to know about them all, and if he refers his problems back to all of them, he will assign the "why" in the way proper to his science—the matter, the form, the mover, that for the sake of which. The last three often coincide; for the what and that for the sake of which are one, while the primary source of motion is the same in species as these.[38]

Elsewhere in his writing, he refers simply to two causes: formal and material. Continuing in *De Partibus Animalium*, Aristotle stresses that form and matter both have to be considered when one investigates nature. He states,

[38] Aristotle, 198a22-26.

> It is plain then that there are two modes of causation, and that both of these must, so far as possible, be taken into account, or that at any rate an attempt must be made to include them both; and that those who fail in this tell us in reality nothing about nature. For nature of an animal is a first principle rather than matter. [39]

We just learned in *Physica* that nature is both form and matter, a point he reiterates here. Aristotle also tells us, "The reason why our predecessors failed to hit on this method of treatment was, that they were not in possession of the notion of essence, nor of any definition of substance."[40] King charges the traditional scholarship on Aristotle's prime-matter similarly, except that he believes the tradition imposes a mistakenly Platonic notion of form. Ironically, in his inattention to, and avoidance of form, King falls into the same trap as did Aristotle's predecessors.

King's insistence on omitting form from his argument against the tradition is most damaging to his claim that the elements are simple. He again cites *De Partibus Animalium*, where Aristotle writes,

> Now there are three degrees of composition; and of these the first in order as all will allow, is composition out of what some call the elements, such as earth, air, water, fire. Perhaps, however, it would be more accurate to say composition out of the elementary forces; nor indeed out of all of these, as said elsewhere in previous treatises. For wet and dry, hot and cold, form the material of all composite bodies.[41]

[39] Aristotle, 642a14-17.
[40] Ibid., 642a25-27.
[41] Ibid., 642a15-18.

King reads this passage as support for his claim that the elements are simple. The elementary forces function merely to allow reciprocal generation among the elements. However, earlier, in *De Generatione et Corruptione,* Aristotle writes, "The elements of bodies must therefore be subject to destruction and generation."[42] This leads one to believe that Aristotle intended a more literal interpretation of this selection from *De Partibus Animalium*. The elementary forces (also called "contraries") generate the elements. It is a special kind of generation, though, which Aristotle refers to as "combination." Also in *De Generatione et Corruptione,* Aristotle writes,

> In fact, however, fire and air, and each of the bodies we have mentioned, are not simple, but combined. The simple bodies are indeed similar in nature to them, but not identical with them. Thus the simple body corresponding to fire is fire-like, not fire; that which corresponds to air is air-like; and so on with the rest of them.[43]

King interprets this passage as Aristotle's comparison of his own elements—which he terms "ideal"—with the elements of Empedocles. I believe Aristotle actually refers to another passage immediately prior to his discussion of Empedocles' elements, which Aristotle mentioned only as a contrast before he continued with his own explanation of the elements. He first discussed the elemental forces and how they combine to create the elements:

> Contraries, however, refuse to be coupled; for it is impossible for the same thing to be hot and cold, or moist and dry. Hence it is evident that the couplings of the elements will be four: hot with dry and moist with hot, and again cold with dry and cold with moist. And these four couples have attached themselves to the

[42] Aristotle, 305a12-13.
[43] Ibid., 330b22-25.

> *apparently* simple bodies (Fire, Air, Water, and Earth) in a manner consonant with theory.[44]

Considering Aristotle's comments in this way clarifies why he refers to the elements as "apparently" simple bodies. The elements are not literally simple; rather, they are a special kind of "simple." Aristotle writes that "since they are four, each of them is characterized simply by a single quality: Earth by dry rather than by cold, Water by cold rather than by moist, Air by moist rather than by hot, and Fire by hot rather than by dry."[45] Hence, King's description of the elemental forces as fulcrums is not entirely inaccurate. However, his insistence that the elements, not the contraries, are simple leads King to commit perhaps his most severe instance of confirmation bias. King writes that "the elements must be simple, with no composite structure of form and matter to interfere with their receptivity of any and all forms."[46] Curiously, he sounds rather Platonic.

The elemental forces are universal matter, first or "prime" matter, in that they represent the underlying stuff of the simplest substances. Aristotle explains the elemental forces in *Meterologica*. At the beginning of Book IV, he writes, "We have explained that the causes of the elements are four, and that their combinations determine the number of the elements to be four. Two of the causes, the hot and the cold, are active; two, the dry and the moist, passive."[47] Here, Aristotle clarifies insights from his *De Generatione et Corruptione*, where we learned, in Book II, that each of the four elements has two contraries associated with it, one of which chiefly characterizes it. Fire is the combination of hot and dry, Water of cold and moist, Earth of cold

[44] Aristotle, 330a31-330b3, emphasis in original.
[45] Ibid., 331a3-5.
[46] King, 378-9.
[47] Aristotle, 378b10-14. See also Joachim, 200-12, and note 9 above. Joachim says Aristotle is describing an immanent process here, instead of an external one. He says this to support a logical presupposition of the elemental forces as constituents of the elements. The temporal alternative, which I argue here, presents difficulty for his argument regarding an incorporeal prime matter in Aristotle.

and dry, and Air of hot and moist.[48] What we learn in greater detail in *Meterologica*, is why each element requires two of the contraries, one from each of the two pairs, active and passive. Aristotle states,

> Next we must describe the operations of the active qualities and the forms taken by the passive. First of all, unqualified becoming and natural change are the work of these powers and so is the corresponding natural destruction; and these are found in plants and animals and their parts. Unqualified natural becoming is a change introduced by these powers into the matter underlying a given natural thing when they are in a certain ratio; and matter is the passive qualities we have mentioned. When the hot and the cold are masters of the matter they generate a thing; if they are not, the object is imperfectly boiled or otherwise unconcocted. [. . . B]ut the natural course of their destruction ends in putrefaction. Hence things that putrefy begin by being moist and end by being dry. For the moist and the dry were their matter, and the operation of the active qualities caused the dry to be determined by the moist.[49]

In true hylo-morphic style, the dry and moist behave as matter, and the hot and cold as form. Aristotle even calls this combination a form of generation and corruption. Furthermore, these elemental forces are perceptible. In Book II of *De Generatione et Corruptione*, Aristotle states,

> Since perceptible is equivalent to tangible, and tangible is that of which the perception is touch, it is clear that not all contrarieties constitute forms and principles of body, but only those which correspond to touch. For it is in

[48] Aristotle, 331a7-331b2.
[49] Ibid., 378b28-379a11.

> accordance with a contrariety—a contrariety, moreover, of *tangible* qualities—that the primary bodies are differentiated.[50]

Aristotle goes on to list six pairs of contraries associated with touch, but he discharges all except two: hot-cold and dry-moist. These constitute the principles of body (the elements), because they are reciprocally active and susceptible. He writes, "hot and cold, and dry and moist, are terms, of which the first pair implies *power to act* and the second pair *susceptibility*."[51] As Aristotle told us in *Physica*, perceptible things require perceptible principles.

Conclusion

The sides of the debate over Aristotle's prime matter are not equally represented. In fact, those on the side of the tradition—those in support of an amorphous, incorporeal matter—outnumber those opposed to the tradition. As William Charlton, an opponent of prime matter, notes, the key difficulty is located in Aristotle's ambiguity regarding prime matter. Charlton proposes that a more fruitful route than textual exegesis might be to consider the coherence of prime matter with Aristotle's philosophy as a whole.[52] He ultimately concludes "that Aristotle held no metaphysical doctrines which required him to postulate prime matter."[53] Further, he agrees with King that the tradition's mistaken interpretation of prime matter is the result of its attempt to combine Aristotle's philosophy with that of Plato in *Timaeus*. In keeping with Charlton's rejoinder, Daniel W. Graham offers a deduction of the paradox of prime matter, which proceeds as such:

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[50] Aristotle, 329b7-11, emphasis in original.
[51] Ibid., 329b24-26, emphasis in original.
[52] William Charlton, "Prime Matter: A Rejoinder," *Phronesis* 28, no. 2 (1983): 197-211, accessed November 19, 2013, http://www.jstor.org/stable/4182173.
[53] Ibid., 210.

1. There is a substratum for every change. (*Ph.* 1.7.190a33f, bl-3)
2. In a change the new state of affairs comes to be directly from the substratum and indirectly from the privation. (*Ph.* 1.9.192a31f; 8.191b15f)
3. A substratum is real (*ousia*). (*Cat.* 5.2b15-17; cf. *Ph.* 1.9.192a5f)
4. A Privation is not real. (*Ph.* 1.9.192a5f)

∴5. In a change the new state of affairs comes to be directly from something real and only indirectly from something not real. (2, 3) (*Ph.* 1.8.191b13-16)

6. There is substantial change. (fact)

∴7. There is a substratum for substance. (1, 6) (*Ph.* 1.7.190bl-3)

8. The substratum for substance is matter. (def.) (*Gen. Corr.* 1.4.320a2f)

∴9. Matter is real. (3, 8) (*ousian pōs* [*einai*] *tēn hylēn*: *Ph.* 1.9.192a5f)

10. There is elemental change. (fact) (*Cael.* 3.6)
11. The elements are the most basic substances. (fact) (*Cael.* 3.3)

∴12. There is a substratum for elemental change. (1, 10) (*Gen. Corr.* 1. 3.319b2-4; 2.1.329a24-26)

∴13. The substratum for elemental change is matter. (8, 11, 12) (*Gen. Corr.* 2.l.329a24f)

14. The substratum for elemental change is prime matter. (def.) (cf. ibid., 329a29 f)

∴15. Prime matter is real. (9, 13, 14)

16. Prime matter has no characteristics of its own. (cf. 11) (ibid., 329a25f)
17. What has no characteristics is not real. (assumption) (*mēden*: ibid., 1.3.317b27-31)

∴18. Prime matter is not real. (16, 17)[54]

The reality of prime matter—the prime matter of the tradition, which is the substratum of the elements as informed by the elemental forces—is paradoxical within the scope of Aristotle's philosophy, according to Graham's deduction. He states, "We must contemplate a more radical revision of principles to save Aristotle not only from the paradox of prime matter, but from the causes of the paradox."[55] I argued above that Aristotle's principles, his first matter, are the elemental forces: hot, cold, moist, and dry. Graham makes a valid point here that supports such a hypothesis, stating, "matter is relatively indeterminate—relative, that is, to the compound or the form—but that does not mean that it is completely indeterminate or nothing in the Eleatic sense. Matter can be no particular thing, i.e., no complex substance, without being nothing at all."[56] One pair of the elemental forces—moist and dry—represent susceptibility (matter), while the other pair—hot and cold—represent action (form).[57] The two pairs of contraries that comprise the elemental forces function as material and formal causes of the elements.

Now, let us take a closer look at how this reading changes the above deduction in a key way; specifically, how it changes line 14, which states, "The substratum for elemental change is prime matter." Graham cites *Physica* for support. In the passage he cites, Aristotle states, "We must reckon as a principle and as primary the matter which underlies, though it is inseparable from, the contrary qualities; for the hot is not matter for the cold nor the cold for the hot, but the

[54] Daniel W. Graham, "The Paradox of Prime Matter," *Journal of the History of Philosophy* 25, no. 4 (October, 1987): 475-490. Graham argues that Aristotle's solution to the problem "nothing comes from nothing," which he inherited from the Eleatics, is the concept of prime matter. Furthermore, Graham claims the concept of prime matter is not a solution, but a paradox, as his deduction shows. Aristotle admits that prime matter is "nothing," but that it is never found outside its information in the elements. Graham claims that the tradition may have supposed that Aristotle admitted to prime matter's reality based on the tradition's confusion of Aristotle's explanation of substance and privation in *Physica* (Book I). For Aristotle, privation is not of the substratum but of some feature of the substratum, according to Graham.
[55] Ibid., 489.
[56] Ibid., 481.
[57] Aristotle, 329b24-26.

substratum is matter for them both."[58] The substratum that is the matter for both hot and cold, which are the "contrary qualities," or formal characteristics, is the pair moist and dry. Aristotle clarifies this in Book II, chapter two of *Physica*. He again refers to the character of the elemental forces in *Meterologica*, stating, "Two of the causes, the hot and cold, are active; two, the dry and moist, passive."[59] Furthermore, Aristotle refers definitively to the elemental forces as causes in this passage. With this interpretive change, one can alter Graham's deduction beginning with line 14 as follows:

14. Matter has no separate existence, but is always bound up with a contrariety. (*Ph.* 2.1.329a25-27)
15. The contrarieties out of which the elements come to be are hot and cold, and moist and dry. (*Met.* 5.1.378b10-14)
16. Hot and cold are active causes, and moist and dry are passive causes. (*Met.* 5.1.378b13-14)
17. The underlying matter of the elements is the passive causes. (*Met.* 5.1.378b33)
18. Prime matter, the basic stuff of all perceptible substances, is a function of the contrarieties (the elemental forces). (14, 15, 16, 17)

[58] Aristotle, 329a29-32, emphasis in original.
[59] Ibid., 378b13-14.