The Hermeneutic Problem of Potency and Activity in Aristotle

Mark Sentesy, The Pennsylvania State University

Abstract: Of Aristotle's core terms, potency (dunamis) and actuality (energeia) are among the most important. But when we attempt to understand what they mean, we face the following problem: their primary meaning is movement, as a source (dunamis) or as movement itself (energeia). We therefore have to understand movement in order to understand them. But the structure of movement is itself articulated using these terms: it is the activity of a potential being, as potent. This paper examines this hermeneutic circle, and works out a strategy for reading Aristotle based on his conception of our epistemological predicament. This hermeneutic approach helps us gain access to the phenomena of movement and its sources (potency, and energeia). The paper closes with a review of the conceptual resources we deploy to think about movement: homogeneity, space and time, impulse, relativity, the blend of sameness and difference, and being and non-being. Showing that Aristotle uses none of these clears the landscape for a fresh inquiry into his account of movement.

To get underway in the study of *dunamis* and *energeia* it is necessary to examine movement. Aristotle devotes book IX of the *Metaphysics* specifically to *dunamis* and *energeia*, yet it is not possible to start the study there, for the argument of that book begins with the sense of *dunamis* proper to movement, its primary sense, and with the sense of *energeia* that is movement, and from there works out how they from there extend to other things. Thus, to understand *dunamis* and *energeia* it is necessary to understand movement, and their function in movement.

When we turn to Aristotle's account of movement, however, we do not find an explanation of these words through an appeal to movement. Instead, we find a proof of the existence of movement through an appeal to *them*. After all, Aristotle defines movement as *the being-at-work (energeia) of a potent thing (tou dunamei ontos), as such*. Thus, he expresses the structure of movement using the very terms we hoped movement would clarify; instead of making the meaning of any of these, more obvious, Aristotle

seems to make it less accessible by referring them to one another, making of them a kind of circle. We cannot undertake the understanding of *dunamis* and *energeia* without movement, but movement is not grasped through concepts that are readily available to us: it can only be grasped through understanding *dunamis* and *energeia*. The turn to movement, therefore, is not merely preliminary to the study of *dunamis* and *energeia*: to study one is to study the other.

This circle, however, is not a closed circle. Three things hold it open: the words *dunamis* and *energeia* themselves, the experience of movement, and the differences and relationships between the words, as expressed in the structure of movement. After some general remarks on why this hermeneutic circle is not closed, we shall work out more precisely both this difficulty and how to get out of it.

§1: Why This Hermeneutic Circle is Open

The first reason, then, that movement (kinēsis) does not form a closed circle with dunamis and energeia is that dunamis, energeia, and entelekheia have meanings that we can partly recognize. One cannot suppose that the meanings of these words are those of ordinary Greek: consider Aristotle's complex relationship with inherited opinions (endoxa), and consider also that he created the words energeia and entelekheia from ordinary Greek words. Nevertheless, though we have reasons to say that the common meanings of each of these words are of limited usefulness, they nevertheless would have made some sense on their own. Thankfully, Aristotle goes out of his way to say something about their meaning, though not much, as we shall see. So while it will not be possible to grasp their meanings solely on philological grounds, it will be possible to gain some insight this way.

The complex relationship between Aristotle's terms and ordinary Greek has a loose resemblance to the relationship between these terms and our English translations: what he tries to communicate is

and can be expressed in ordinary Greek or in ordinary English, but only roughly. For us this means that in many cases key terms should remain untranslated, except where elucidation would be very helpful; such elucidation, while it can be accurate, is usually provisional and will not survive being generalized or removed from its context. The distinctions Aristotle makes between them, and the relationships between them, however, are more likely to apply elsewhere, though here too one must be cautious.

The second reason that it could actually be helpful to put *kinēsis*, on the one hand, and *dunamis* and *energeia* on the other, into a circle of inquiry, is that we have ample experience of movement. This experience is continuous, unrelenting; it is unclear at first whether there is anything to be distinguished from it, because it seems as though the whole of the cosmos moves. Even what appears to have ceased moving and be resting is in its most basic character *something that moves*. To be motionless, therefore, has two relevant meanings: to be at rest, and to be beyond movement and rest altogether. For rest has its meaning only as a moment of a moving thing, as "a deprivation in what admits of motion," (*Physics* V.2 226b10-18). But it is not at all obvious whether or not there is anything that transcends movement and rest altogether.

The matter is complicated by our own natural constitution: we are living things, and for us to live is (also) to move: if nothing appears to be moving, nevertheless our hearts beat, our blood circulates continuously. If we grasp eternal ideas, such as Gödel's incompleteness theorems, we do so as moving things, whose minds will soon turn to something else. If movement seems to be indeterminate or difficult to grasp, it is in part because it is difficult to distinguish from anything in our experience.

_

¹ Take, for example, the ongoing disagreement over how to translate *entelekheia*, e.g. as complete reality, full actuality, being-atwork-staying-itself, being-in-its-end, and being-at-its-end. A similar disagreement over how to translate *energeia*—sometimes it can only be translated activity, and other times actuality, e.g. NE VII.12 1153a12, Pro III.5 204a20, III.6 206a14—led Beere to argue against translating it at all. Cf. the introduction to Jonathan Beere, *Doing and Being: An Interpretation of Aristotle's Metaphysics Theta* (Oxford, Oxford University Press, 2009).

Furthermore, while our familiarity with this experience gives access to movement, familiarity also covers over its problematic and questionable character: we do not realize that we do not understand movement. For example, if asked what movement is, we are inclined to respond as Descartes did, that it is just the action by which a body travels from one place to another, and we do not notice that this is to define movement as a motion of some kind.

However, to add irony to irony, our alienation from the stakes and terms of Aristotle's inquiry can help us get around this fog of familiarity. The concepts we normally deploy to understand movement, to explain it through something we think is more fundamental, or to reduce it to something else are absent from Aristotle's account of what movement is. As we shall see in the next section, in his account of movement Aristotle denies us concepts such as space and time, impetus, relation, sameness and difference, being and non-being. But being deprived of our familiar explanations forces us to think what he is saying more deeply.

Finally, while we have an experience of movement that leads us into the question of *dunamis* and *energeia*, it is not an experience that Aristotle aims to clarify, but the being of movement and, through this, *dunamis* and *energeia*, perhaps being itself. He makes it clear in the first chapter of the *Physics* that we are not investigating our *experience of* nature, but the principles that make nature what it is. He describes this study by characterizing the condition of our original experience through a distinction between what is clearer and more familiar to us and what is clearer and more distinguished to us by nature (*ta saphestera tē phusei kai gnōrimōtera*, *Physics* I.1 184a16).² This statement is not part of an attempt

_

² If the way that *ousia* is prior in being to the other categories indicates what makes a thing clearer by nature—a formulation admittedly significant in assumptions—then one could argue that what is clearer by nature is what does not in its being depend on other things, while what is less clear by nature does. For example, the category of 'sort' or 'kind' has no meaning unless there is a more primary being of which it is said. Thus, the 'sort' is less clear by nature, since to be at all something else must be, that is, because its being depends on and implies another being.

to work out the structure of experience or of phenomena in which clarity happens, nor is it an attempt to work out what clarity itself is. It is a description of the relationship between what things are *by nature* and how they initially appear *to us.*³ Its purpose is to outline how we come to know, and it gives us a guiding insight that will allow us to grasp the method and structure of Aristotle's investigation.

We shall turn to this in some detail in a moment, but it is important to notice that both of the terms Aristotle uses to describe clarity and knowing here have the sense of 'distinct': ta saphestera, the things that are clearer, more distinct, more manifest, and ta gnōrimōtera, those well-known, noble or distinguished ones, the familiar ones or kinsmen. In a word, Aristotle's account of movement is accomplished by distinctions, that is, by putting these things into determinate structural relationships that, as we inquire into them, clarify each other, more and more sharply distinguishing themselves from one another even as they hold together more strongly as a whole. Like a well-cut joint, the more precisely they are distinguished, the more accurately they are cut, the better they can fit together.

S2: Two Interpretive Difficulties

Aristotle's account of movement quietly brings up two difficulties that appear to cripple any explanatory project, and which need to be noted before our discussion can get underway. Doing so shows how provocative the argument is, because it raises two question marks over the relationship between movement, on the one hand, and on the other i) the elements (*stoikheion*) of movement—material, form, and in some way *sterēsis*, and ii) the structure or definition of movement expressed through *dunamis* and

³ Aristotle is not a phenomenologist in the traditional modern sense: that conception of phenomena implies a dative of appearance, the one in or to which things appear, and borrows from Kant (and through him Augustine) to the extent that this dative 'subject' of appearance accomplishes a synthesis or gathering of phenomena even as it articulates and distinguishes them. The dative of appearance is there in Aristotle's formulation only at the beginning of the road of inquiry, that is, there is a dative of appearance when comes to what is clearer and more familiar *to us*, but *not* when it comes to what is clearer by nature.

energeia, the sources (arkhai) of movement. The difficulty is, in a word, that it is through movement that we distinguish or grasp both the elements and the sources of movement. If explanation is the act of referring or reducing something to more basic, more immediately recognizable terms, Aristotle's account of movement is not at all an explanatory project. Instead, it is an inquiry, which gains access to elements and sources by successive groups of distinctions. A closer look at these difficulties will offer us a guideline for reading Aristotle in such a way that we can enter the hermeneutic circle formed by these terms.

It is in what I shall call the Descriptive Argument in *Physics* I.7-8 that Aristotle distinguishes the elements of movement: form (*eidos*), the deprivation or non-being of this form (*sterēsis*), and the underlying material (*hupokeimenon* or *hulē*). Among scholars, this discussion of movement "is generally agreed to constitute [Aristotle's] formal introduction of the notions, fundamental in his thinking, of matter and form." It is through the study of movement that these terms are distinguished from and set into relationship with one another.

By itself this might not constitute a critical circularity, for example, if Aristotle was merely using the discussion of movement as an occasion to expound an independent doctrine of form (eidos), material ($hul\bar{e}$), and deprivation ($ster\bar{e}sis$). However, in the discussion of place in Physics IV.4, Aristotle indicates that the relationship between material and movement is much more radical; it is because of movement that we say that material exists at all:

just as, if something is altered, there is some being, now pale, that before was dark, and now hard that before was soft, which is why we say material is something (dio phamen einai ti tēn hulēn), so too place, through a similar appearing (phantasias), seems to be something, except that that [material's being said to be something] is because that which was being air—this now is water (ho ēn aēr, touto nun hudōr) (Physics IV.4 211b31-36)

⁴ Charlton, W. Aristotle's Physics, Books I and II (Oxford: Oxford University Press, 1970), 70.

This suggests that the introduction of the concepts of material and form in the discussion of movement was no accident: it may be that 'the wood of something' ($hul\bar{e}$) and 'the look of something' (eidos) show up at all only because something moves or changes.⁵

Here, however, we must point out that the elements that we had hoped would explain, reduce, or relate movement to something more recognizable, are themselves discovered first of all through movement. There is the possibility that they only exist, that is, that they are only *something* in and through movement. This poses an interpretive obstacle that risks being impossible to surmount. What is Aristotle's method, and what could such an argument, which threatens to collapse into a cycle of self-reference, be meant to accomplish? Before we turn to a possible answer, however, it will be useful to intensify the difficulty.

Scholars usually minimize the importance of movement to the discussion of *dunamis* and *energeia* in *Metaphysics* IX, occasionally noting the fact that Aristotle makes the account of these terms start with movement, but failing to turn to the physics to understand what the terms mean in the definition of movement.⁶ Heidegger is in this respect a notable exception, saying "Aristotle achieves this essential meaning of δύναμις and ἐνέργεια precisely through a treatment of κίνησις, with a view toward movement. This is shown quite unmistakably in his investigation of κίνησις (*Phys.* III.1-3)." Yet Heidegger, too, does not follow up on this promising comment, either by expanding on it in further remarks, or by turning to examine the chapters he mentions.

-

⁵ Either a new look takes primacy by arising in our phenomenal field (*phantasia*) and calling us to remark on it, attributing it to some material, or it is through imagining (*phantasia*) change that we grasp or posit an underlying thing, a material of the change.

⁶ Thus, in his book on *Metaphysics* IX, though it argues that energeia is both doing and being, at once and in the same way, Beere turns to the definition of movement only briefly, on p. 158 and 204. For the understanding of energeia, the very slim conclusion he draws is the suggestion that in the definition of movement energeia must mean 'activity' instead of 'actuality.'

⁷ Heidegger, M., *Aristotle's* Metaphysics Θ 1-3: *The Essence and Actuality of Force*, Trans. Walter Brogan, Peter Warnek (Bloomington: Indiana University Press, 1995), 42.

When we turn to other work on the *Physics*, we find scholars to be acutely concerned about the circularity of the definition of movement. Their worry is really about whether or not an *interpretation* of this definition smuggles in an understanding of movement. The most notorious example is in the widespread interpretation of *entelekheia* as 'actualization' in the context of the definition, since 'actualization' is another word for movement.⁸ They take up this task as though it was evident that Aristotle could not have given a circular definition. This is a legitimate concern, and indeed, a definition should not be circular in the way they are concerned about. But although Aristotle's definition of movement is not a vicious circle, scholars overlook the more complex form of circularity sketched above.

Scholars usually assume that a definition succeeds if it defines movement in more recognizable terms—terms that we already understand. In assuming this, they confuse precisely the two things Aristotle is at pains to distinguish at the opening of the *Physics*, namely what is more familiar to us, and what is more distinct by nature. Thus, while they are at pains to avoid one kind of circularity, they do not notice that the definition of movement forms a different kind of circle.

Now, that the definition of movement is circular is clear from the relationship between *Physics* III and *Metaphysics* IX. In book III of the *Physics* Aristotle defines movement as: "the *entelekheia* of a potential being, as such" (*Phys.* III.1 201a11).9 In *Metaphysics* IX, however, he defines *dunamis* as a source of change: "[potency] is a source of change in another or in itself as other" (*Met.* IX.1 1046a11).10 Since in both of these contexts Aristotle uses the words *kinēsis* and *metabolē* interchangeably, he seems to have given a circular definition, in the end: "movement is the *entelekheia* of a being-insofar-as-it-is-a-source-of-

. .

⁸ See especially Kosman, L.A. "Aristotle's Definition of Motion," *Phronesis*, 14 (1969), 40-63.

⁹ ή τοῦ δυνάμει ὄντος ἐντελέχεια, ἦ τοιοῦτον, κίνησίς έστιν

 $^{^{10}}$ ή ἐστιν ἀρχὴ μεταβολῆς ἐν ἄλλ ω ἢ ἧ ἄλλο.

movement in another or as other."¹¹ The same problem arises for *energeia* or *entelekheia* (taking the two to be the same in this formulation) when Aristotle says that *energeia* is thought most of all to be movement (*Met.* IX.3 1047a30-32). This is clearly not an act of defining movement in more recognizable terms, it is an act of defining movement using something *less* recognizable than it.

The definition also does not do another thing scholars take it to do: recent scholarship takes this formula as a set of criteria that help us distinguish one thing from another, that is, as a kind of formula that will help us pick out the right class of objects, i.e. this is a movement, that is an object. Yet when the relation of the definition to its terms is taken into consideration, it is completely unable to help us pick out what is a movement and what is not; the criteria-approach cannot help us here. Moreover, in the absence of a definition, we have no difficulty distinguishing between things at rest and things in motion.

The definition is not, for all that, viciously circular, as we discussed above, since movement is not a single term, but is expressed as a structure: it is not *simply dunamis*, or *simply energeia* or *entelekheia*, but

-

¹¹ In the first four books of the *Physics*, and in *Metaphysics* IX, Aristotle uses movement, *kinēsis*, interchangeably with change, *metabolē*. In the *Physics*, see II.1 192b11-20, III.1 200b12, 200b33-201a3, 201a8-10, III.2 201b21-23, in the *Metaphysics*, see IX.1 1046a1-11, and especially IX.2 1046b22, where a soul is described with a source of *kinēsis*. In book five of the *Physics*, he distinguishes these, and *kinēsis* comes to mean most properly motion as we normally understand it, namely motion in place.

¹² Taking definitions to be criteria with which we pick something out seems to have two sources: 1) the idea that things in the world are instances of classes, so that the act of speaking is an act of classification, and 2) the idea that definitions are instructions for action, as, for example, are ostensive definitions, which work by pointing out or working with examples. The both premises are evident in Wittgenstein's classic example of successful language use, with which he opens the *Philosophical Investigations*: "Now think of the following use of language: I send someone shopping. I give him a slip marked "five red apples". He takes the slip to the shopkeeper, who opens the drawer marked "apples"; then he looks up the word "red" in a table and finds a colour sample opposite it; then he says the series of cardinal numbers—I assume that he knows them by heart—up to the word "five" and for each number he takes an apple of the same colour as the sample out of the drawer.—it is in this and similar ways that one operates with words." Wittgenstein, L. *Philosophical Investigations* (New Jersey: Basil Blackwell & Mott, 1958), §1. Both of these are quite at odds with Aristotle's account, both of things (which he does not take to be examples of classes), and of language (which can be either theoretical or political, e.g. a legislative act).

the *entelekheia* of a being-in-*dunamis*, as such. Furthermore, *dunamis* is a source of change, *metabolē*, not simply or only *kinēsis*.¹³

When we turn back to *Metaphysics* IX, however, we find ourselves in deeper difficulty: Aristotle says that his strategy is to discover or to develop new senses of *dunamis* and *energeia* by extending their meaning from movement to other things. In two related passages in book IX, he says 1) that his task is to examine the sense of potency and/or being-at-work proper to movement, and that following this, by making distinctions about being-at-work, he will make clear how they come to apply to other things (*Met.* IX.1 1045b32-1046a4). Later, he says 2) that though being-at-work starts by meaning primarily movement, the name *energeia* stretches toward or converges in meaning with *entelekheia* because, he argues, the end or completion (*telos*) of a thing is a being-at-work (*energeia*) (IX.3 1047a30-32, and IX.8 1050a21-23). It is as a result of this argument that Aristotle draws together the categorical analysis in book VII of the *Metaphysics* with the energetic analysis, concluding that being-at-work is thinghood (*ousia*) and form (*eidos*). Thus, starting from movement, *energeia* and *dunamis* come to apply to other things, specifically thinghood and form.

It is clear that to argue for such a transition from one set of senses to another it is necessary to understand the first group of senses, that is, to understand movement, or at least to understand the sense

-

 $^{^{13}}$ The difference between $kin\bar{e}sis$ and $metabol\bar{e}$ is intricate and not relevant for our current purposes. However, based on Physics V, one may say that $kin\bar{e}sis$ has a $pros\ hen$ sense, namely change in place. This is the most stable of the kinds of change, since the underlying thing need not itself be altered in its movement. The least stable kind of change is genesis, since it involves a change in the underlying thing. This, it might be said, is the $pros\ hen$ meaning of $metabol\bar{e}$, and the one that interests Aristotle more when it comes to the investigation into being.

¹⁴ Because in the same sentence he listed the categories, the passage seems to imply that the other things to which *dunamis* and *energeia* apply are or include the categories.

¹⁵ The passages pointing out the convergence of these meanings are: ἐλήλυθε δ' ἡ ἐνέργεια τοὔνομα, ἡ πρὸς τὴν ἐντελέχειαν συντιθεμένη (IX.3 1047a30) and ἡ δὲ ἐνέργεια... συντείνει πρὸς τὴν ἐντελέχειαν. (IX.8 1050a21-3). The words *suntithemi* means to put together or agree, and suggests that Aristotle intentionally designed the words to do so. For its part, *sunteinō* means to stretch together or draw tight, and to urge or strive, and also both together, namely to be bent on or directed at one thing.

of these terms as they apply to movement. This, however, is precisely what Aristotle seemed to deny us, for example, by defining movement using *dunamis* and *energeia*, and in turn defining *dunamis* as a source of movement, and calling *energeia* movement most of all. If we cannot start with a definition that we know picks out movement, if we do not have the understanding of movement in hand in advance, it seems impossible for us to grasp how it would stretch out to apply to other things. *Dunamis* and movement form a circular system of reference; Aristotle extends this circle to work out what being is, without having its terms clear, distinct, or firmly grasped.

§3: The Method of Inquiry

This difficulty, however, is perfectly consistent with the method Aristotle outlined at the beginning of the *Physics*. Aristotle is emphatic that we do not to start with something that is already clear by nature, but with what is familiar and clear to us. The methodological challenge he notes is not how to find something perfectly evident from the start, but how to proceed to from this to what is less familiar, but clearer by nature. The method he describes in *Physics* I.1 starts with our vague sense of what is the case, a familiar, general whole (*to katholou holon*) of things jumbled-up or poured-together (*ta sugkexymena*). The only method he offers for retrieving knowledge from this—though it is a powerful one—is to distinguish things from one another. As we do so particular things come into focus and we will begin to grasp them, eventually with such precision that we could even distinguish sources, causes, elements, and the things that arise from them.

¹⁶ See Robert Sokolowski, "The Method of Philosophy: Making Distinctions" *Review of Metaphysics* 51:3 (March 1998): 515-533, and "Making Distinctions," *Review of Metaphysics*, 32:4 (1979:June), 639-676.

Similarly, at the end of the *Posterior Analytics*, Aristotle tells us that by bringing these particular things to a stand, one at a time, we can start to see how they hold together (*Pos. An.* II.19). My suggestion is that these together—the act of making distinctions between what is jumbled together and familiar, and the way particular phenomena come to a stand or show up asserting their own character—describe a single method, and that this is Aristotle's method in formulating the definition of movement.

If this is right, then Aristotle does not need to give a definition that is water-tight and perfectly intelligible from the very start. What he needs to do is in a way more difficult: to make a series of distinctions that progressively disentangle jumbled-up and familiar phenomena, staying aware of what has not yet fully become clear or come to stand on its own, and, which is perhaps most difficult, to try to find what has been confused that is preventing something from coming clear, and to distinguish these properly based on those thing themselves, with no distinctions assumed in advance, and *even though these things have not themselves been grasped yet*. Therefore, our interpretive task, namely to read the account of movement in the context of its methods and goals, suggests a practical task, namely to make all of the distinctions that Aristotle makes, and watch for what becomes clear and what does not.

That Aristotle follows this method is evident in *Physics* I: he starts with a familiar understanding of movement in his appeal to our experience of movement in opposition to Parmenides' argument in *Physics* I.2. At least at the start he does not need to give us criteria—especially in the form of difficult and complex technical terms—that will help us pick out what things are moving and what are not—we do this easily already because of our familiarity with moving things. The purpose of the definition, then, is not to have an answer from the start, but to use distinctions 1) to lead us to understand first principles, causes, elements, and beings, 2) by which a thing can be understood clearly. We need to show, however,

that the approach derived from *Physics* I and the *Posterior Analytics*, can be applied both to the account of movement in physics in general, and to the inquiry into *energeia* and *dunamis* in first philosophy.

There is much evidence, thankfully, that the method of inquiry into nature is consistent within the *Physics* and between the *Physics* and *Metaphysics* IX. Two examples should be adequate to establish this: 1) like *Physics* I and *Posterior Analytics* II.19, *Physics* III opens with the argument that one begins with general (*katholou*) things and grasps singulars (*idiai*) later (*Physics* III.1 200b22-25). 2) *Physics* I.1 suggests that the way of inquiry will be to make distinctions, while Aristotle says explicitly that the task of *Metaphysics* IX is precisely to make distinctions (*Met.* IX.1 1045b32-1046a4). This practice gives rise not only to differences between things, but also to the identification of things, as *Posterior Analytics* II.19 suggests.¹⁷

A key worry here is about the primacy of *dunamis* and *energeia*, and whether such primary terms can be defined if there is nothing more basic than they. If, as scholars seem to say, Aristotle implies that one cannot define *dunamis* or *energeia*, he does so by saying that they should be "clear by looking at particular examples directly" and that one can see both of them "at one glance, by means of analogy" (*Met.* IX.6 1048a35). Still, Aristotle approaches them by making distinctions, and such distinctions are made in the midst of our experience of the world.¹⁸

Aristotle gives us a both a description of the elements of movement, and a definition that can only be understood when we have grasped the principles by which they are expressed. At the same time, the

¹⁷ Notably, such a practice of "dividing at the joints" (*Met.* VII.17) leads Aristotle to identify energeia with entelecheia and *ousia* (*Met.* IX.8 1050a16-23).

¹⁸ Aristotle distinguishes the way of inquiring after *ousia* from others, observing that it cannot be demonstrated, but must be pointed out in some other way: τις ἄλλος τρόπος τῆς δηλώσεως (*Met.* VI.1 1025b14). Also, for simple things there is no way to teach or search for them, but some other way of searching: φανερὸν τοίνυν ὅτι ἐπὶ τῶν ἁπλῶν οὐκ ἔστι ζήτησις οὐδὲ δίδαξις, ἀλλ' ἕτερος τρόπος τῆς ζητήσεως τῶν τοιούτων (*Met.* VII.17 1041b9).

description and definition must lead us to understand these principles. In a word, Aristotle uses these distinctions to give us access not only to the phenomenon of movement, but also to its principles. Both the description and the definition are probes that allows us to penetrate into the phenomenon of movement. They allow us to make distinctions within it that will let it show up more clearly for us, and thereby they allow us to grasp movement more concretely in all its determinations.

If the description of the elements of movement and the definition of movement were simply circular, and their aim was to help us distinguish movement from rest, we would have to dismiss it. My reading, however, shows that this project is not really circular, but a *hermeneutic probe*, consisting of *access-distinctions*. Thus, like the words themselves and our experience of movement, the articulations expressing the structure of movement hold open what appears to be a closed circle of reference, and allow us to enter into the interpretation of movement.

§4: Hermeneutical Advantages of This Approach

In approaching a text, the reader's prior suppositions are necessary, but not sufficient to open up its meaning.¹⁹ There are two hermeneutic advantages of adhering to what we called access-distinctions:

1) on such an account it will not (yet) be clear what these distinctions give access *to*, so that getting clear about what is not yet clear is a primary task for such an interpretation. So to grasp that and how they give access to something, one must suspend judgment on the final meaning of these distinctions and therefore resist asserting one's own assumptions.

_

¹⁹ For example, the assumption that Aristotle was speaking about the same world that we live in today, and that he would agree to this statement. (Though Aristotle's understanding of the causes and principles of events might differ from ours, this does not immediately imply that *the world* is a different one. One might in phenomenology still distinguish between 'my world,' 'our world,' and 'the world' that cannot be closed to any in the past or future who say 'I' or 'we.') These would make a certain kind of conversation possible between the reader and Aristotle, but must themselves be open to re-evaluation.

Furthermore, 2) these distinctions and that to which they give access will only make sense once most or all of them are made, the way a number of stars in a constellation must be in place before they become a coherent shape.²⁰ One way to describe the genesis of the form or *Gestalt* involved in understanding is to say that it has come to be when someone becomes able to add or remove points in the constellation reliably and accurately. Put otherwise, a complete way of seeing the world arises as a whole, as Wittgenstein argues in §141 of *On Certainty*: "When we first begin to believe anything, what we believe is not a single proposition, it is a whole system of propositions. (Light dawns gradually over the whole.)"²¹

Thus, together with the suspension of judgment, adherence to the method of distinctions makes it less likely for a reader to smuggle in his misinterpretations of particular cases and found his misinterpretation on them, since these would conflict with the contour of the whole that emerges. This method, of course, is difficult to adhere to, and the discussion that follows undoubtedly contains errors. The reader must examine for himself what I set out to argue.

One way to use this method is to concentrate on distinctions Aristotle makes that are not clear to us. With these it is imperative that we not attempt to reduce them to something we already (think we) understand. By trying to uphold them, on the one hand, and trying to figure out what it means to uphold them, on the other, we have a better chance of working out their proper sense.

Let this discussion suffice as a statement of the hermeneutical situation in which Aristotle places us in the investigation of *energeia* and *dunamis*. Not only must we turn to movement to understand these

²⁰ As is beautifully illustrated in the ninth part of Ondaatje's poem *The Nine Sentiments*: "I hold you the way astronomers / draw constellations for each other / in the markets of wisdom // placing shells / on a dark blanket / saying 'these / are the heavens'." Michael Ondaatje, "The Nine Sentiments" in *Handwriting* (Toronto: McClelland & Stewart, Inc., 1998), 41.

²¹ Ludwig Wittgenstein, On Certainty, trans. Denis Paul, and G.E.M. Anscombe (New York: Harper Torchbooks, 1969), §141.

out from the understanding of these terms. Put otherwise, at the outset we find that thinking *energeia* and *dunamis* will just be to think movement, and thinking movement will just be the thinking of these. However, as we come to understand movement, we find not only must we understand *energeia* and *dunamis*, we must understand them in a way that applies to things that seem not to be movements. In short, setting out from movement, the ring of thought comes to establish something further about *energeia* and *dunamis*, which gather together phenomena other than movement, and overflow the cup of inquiry. By the same token, setting out from *energeia* and *dunamis* to think *movement* also transforms the understanding of movement, and we come to realize that there is something that is in a way still movement, and not movement: movement starts out as change from opposite to opposite in specific respects, but thinking it through *energeia* and *dunamis*, we come to grasp a vertical dimension of movement that is precisely the-being-toward itself of things, the way that they are themselves complete.

By expressing the structure of movement in these terms, Aristotle opens it up and offers some grip that allows us to deepen and sharpen our experience of movement. The other edge of the same stroke gives us more ability to use this experience to understand the terms that articulate the structure of movement, and begin to draw some conclusions.

To approach openly the question of what movement is, and to rouse our experience of movement to philosophical alertness, however, it is still necessary for us to remove the clutter of the pre-conceived theoretical investments, to which we turn when we are expected to produce knowledge about it. Doing so will help immeasurably in the investigation of *energeia* and *dunamis*, for they are often secretly interpreted within and through these assumptions. Getting clear that these investments are *irrelevant to*

the investigation at hand will help set up a clear-eyed engagement with Aristotle's distinctions, and prevent us from reading *our* assumptions into his.

WAYS OF CONCEIVING OF MOVEMENT THAT ARE ABSENT FROM ARISTOTLE

As noted above, in one way it is to our advantage that the principal explanatory terms or frameworks to which we readily turn in thinking about movement are absent from or excluded explicitly by Aristotle's analysis. Among these should be included: the homogeneity of motion, time and space, impulse, relation, sameness and difference, negation and non-being. The lack of these allows Aristotle's account to be challenging and unexpectedly radical, since we cannot reduce movement to other concepts, and since the strangeness of his account can help us get around the fog of familiarity that envelops our experience and thinking of movement. The absence of these things, however, deserves some comment. So I shall sketch common ways each plays a role in our understanding of movement, and how each is incompatible with or rejected in Aristotle's account. Clearly it is not possible to encompass all interpretations, or even all of the relevant ways of relating these terms to movement. The objective, then, is only pedagogical, to bring the question of movement more clearly to the fore by disentangling it, estranging it from other problematics.

§5: Homogeneity of Motion

It is commonly assumed in physics and philosophy of physics that all changes are reducible to motion in place. The further premise, that there is only one form of potency, namely force—either the ability to exchange force with other objects through contact, or an ability of a thing to generate momentum in itself as an equal reaction to an opposite body—renders the science of movement perfectly

universal because every form of movement is the same: it makes it seem possible to formulate universal laws or models that describe all motion.

Aristotle is sometimes criticized, sometimes praised for not sharing this conception. He uses movement (kinēsis) in both a broad and a narrow sense. The broad sense is roughly synonymous with change (metabolē), and includes all forms of change: coming-to-be and passing-away, alteration, growth and diminishment, and motion in place. The narrow sense of kinēsis is of local motion.²² Though they all are kinēseis in the broad sense, Aristotle does not reduce the four primary kinds of movement to each other (Cf. Phys. V). Indeed, while, say, increase in quantity implies a movement, how-much and place are not, for Aristotle, the same: they are different categories—one expressed by number, the other by surface and other bodies—and therefore different kinds of being. Put otherwise, they are basically different properties said to be in a being. Because the heterogenous structure of being is at the fundament of Aristotle's physics, movement is heterogenous, having many irreducibly different kinds.

Put otherwise, even though Aristotle argues that the other forms of movement depend on and can be traced back to motion in place, still, motion in place cannot account either for alteration, say in color or sort, nor for coming-to-be or passing-away, say of the soul or animating principle of an animal's body.²³

²² Coming-to-be (genesis) and destruction on the one hand, and *kinēsis*, on the other, have different kinds of priority in Aristotle's work—the first seems to have priority in ontology and the discussion of phenomenology or ideas (cf. especially *Phys.* I.7-9 and II.1, *Met.* VII.7-9), whereas *kinēsis* in the narrow sense has priority for a very different reason, namely since the body that is moved in place does not need to change what it is as it is moved along (cf. *Phys.* V.1-2).

²³ The myth that at death a body loses 21 grams of weight is an attempt to translate the event of passing-away into a change of place and a physical quantity: something that has a certain mass moves out of the body.

Second Space and Time

Unlike Aristotle, physicists in the modern era did not attempt a definition of movement, but aimed only at working out its properties. Descartes defied anyone to attempt a definition, saying "movement... is nothing other than the action by which some body travels from one place to another."²⁴ Joe Sachs comments, as follows: "The use of the word 'passes' [travels] makes this definition an obvious circle; Descartes might just as well have called the motion the action by which a thing moves. But the important part of Descartes' definition is the words 'nothing more than,' by which he asserts that motion is susceptible of no definition which is not circular..."²⁵ If there are, apart from Aristotle's, any other genuine attempts to define movement, they are largely unknown. This led Rémi Brague to say that, "instead of speaking of 'the *Aristotelian* definition of motion,' as if there were others, one should simply speak of *the* definition of motion, which happens to have been formulated by Aristotle."²⁶

Yet the pseudo-definition accomplishes something: it reduces movement to space and time, which are taken to be prior categories, entities or forms. A common philosophical response to the failure of this definition, is to define movement as the synthesis of space and time. This preserves their priority over movement, but may not to help us much to understand movement.

The priority of space and time accords perfectly with and is occasionally believed to be reinforced or proved by the mathematical formula for velocity: distance / time. This formula, however, is not a definition of movement, nor could it ever be intended to be. For on the one hand, its terms are measurements: both the distance and the time represented in the equation are the product of a

²⁴ René Descartes, *Principles of Philosophy*, trans. Valentine R. Miller and Reese Miller (Dordrecht: Kluwer Academic Publishers, 1991), II.24, cf. II.25.

²⁵ Joe Sachs, Motion, §3.

²⁶ Rémi Brague, "Aristotle's Definition of Motion and its Ontological Implications," trans. Pierre Adler and Laurent d'Ursel, Graduate Faculty Philosophy Journal 13:2 (1990), 1.

measurement accomplished by a *movement* of the scientist and his instruments—a movement *that is exactly not the movement of the object supposedly represented by the equation.* The equation covers over the conditions of its own possibility, occluding consciousness of the physicist and his practices. More importantly, it is the movement of measuring that is the real content of the equation. Thus, properly speaking space and time are not prior in the equation: movement is prior.

Aristotle famously makes time depend on movement, but not to be the same as movement (*Phys.* IV.10-11). Time is ontologically dependent on movement, but differs from it in the following way: time is that articulation of movement that generates numbers.²⁷ Expressed very loosely, if it were possible to think movement without reference to a mind's pronouncement of time, then clearly movement would already in some way be articulated: the sunlight on the fields in the evening changes to starlight, whether this is perceived or not. Furthermore, motion is articulated in relation to me and my being-in-the world: the sun appears to emerge from the trees when I stand *in this spot*.

Many have accused Aristotle of presupposing time in his account of movement, but it seems to me that they miss the mark, or their criticisms fail to understand or engage parts of his argument (such as his explanation of what it means for all movement to be 'in' time, and why this nevertheless does not make movement dependent on or equiprimordial with time). Until we do, as a matter of principle, it is preferable to take Aristotle seriously, to ask if his argument genuinely works, before presuming otherwise.

²⁷ I address the complexity of this account in my paper "Aristotle on the Now and the Generation of Time: A Systematic Reconstruction," forthcoming.

Aristotle argues that (homogenous) space does not exist, but that (heterogenous) place does. More interestingly, in *Phys*. IV.4 he argues that the only reason we say there is place is because there is change, because where there was one thing there is now something else.²⁸ Place depends on movement.

Suitably, it turns out that this way of reading Aristotle on time and place fits his definition of movement—the being-in-completion of the potent being, as potent—in which there is no reference to time or space. Nor do they appear in his numerous explanations of the definition.

§7: Impulse

Impulse is a common concept in the thinking of movement. It contains a complete account of objects in their material character, which can be distinguished into two concepts: force, and its generation, impression or transfer. To describe impulse more accurately, it will be useful to investigate velocity a little further. Velocity is a fundamental characteristic of bodies for modern physics in much the way that movement is for Aristotle: for certain things, being at all implies that they can be moved or are already in a state of movement. This is what it means to be *in* movement; even rest is understood as a special case of movement. Velocity is a state of being that can be changed, and similarly, a thing's potency can be increased, decreased, or destroyed.

Velocity is defined as a movement over a certain distance in a certain time. Galileo's hypothesis that bodies continue in this state of motion or rest until an outside force is impressed upon them shows

²⁸

²⁸ It is formulations like this, which seem difficult or impossible to formulate by using the concept of movement instead of time, that lead people to argue that time must be prior to movement. Strictly speaking, however, this cannot prove the priority of time, but at most only that all movement happens *in* time. Aristotle's claim that time is something that arises in and belongs in speech suggests that by saying 'before' and 'after' we are taking up a fundamentally different relationship with what is there, with what we experience to be. Through language we set past and present before us simultaneously, and look at what happens as though from the side, from a third-person point of view, shift, as it were, into a kind of fifth dimension in which past and present are laid out like a line. This is not how we *experience* change. Either way, the claim is that we do not have a *temporal* experience of the simultaneity or juxtaposition or separation of two events. We can, however, grasp the extent and structure of movement in these ways.

that impulse is not part of the modern conception of velocity, but is instead a limit of or an event modifying velocity—it is the *change* in velocity that impulse explains. By contrast, *dunamis* in Aristotle can describe the ability of a thing to move at all, even when it is not actively being moved. Yet Aristotle argues that *dunamis* in a higher, more proper sense is a positive 'power' of *not* being affected, that is, the 'power' not to be moved (*Met.* V.12, IX.1).²⁹ For example, one who fully has the potency of thinking (that is, who has it *entelekheia*), has an ability to think that cannot be destroyed or resists being removed from him by change. On a superficial level, this more proper sense of *dunamis* makes it resemble the modern concept of *inertia* (a concept that fuses velocity and mass) more than it resembles force. Yet, at the same time, Aristotle defines *dunamis* as a *source of movement* (*Met.* V.12, IX.1). These considerations suggest that the concept of *dunamis* is not force, but might have something in common with all three—velocity, inertia, and force.

The modern conception of force is properly speaking as that which *actively* initiates movement, or the quantity of energy stored up that *can* do so: this force-energy is actual only at the moment of generation or impression, and lapses immediately into inertial or potential energy as soon as its appearance or transfer ceases.³⁰ There are two ways of describing impulse: either force is impressed by

_

²⁹ That which makes a thing *un*affected or *un*changeable is called a potency, so the source of being changed might more properly be called a source of being unchanged: "things are broken and crushed and bent and in general destroyed not by being potent but by being impotent and falling short of something" (*Met.* V.12 1019a28-31). This remark is repeated at the beginning of *Metaphysics* IX: potency is "an active condition of being *un*affected for the worse or for destruction by the action of a source of change" (*Met.* IX.1 1046a13-14), Joe Sachs, trans., my italics.

³⁰ Since Galileo, the change of the state of inertial velocity, called acceleration, is taken to be the result of force. Force explains movement i) on the model of an "efficient cause," or more exactly, of a *pressure* applied to something from outside, through ii) the concept of a *transfer* of a *quantity* of energy from one thing to another. This means that i) in the concept of impulse, the source of movement is identified with or defined as *one* of the four causes—of the other causes, only material remains, not as a cause or source of movement, but as the resistance to movement. Aristotle's account of cause is any answer to the question 'what is responsible for this?' which divide into four: 1) the material underlying a change, 2) its look, shape, form, or pattern, in other words, its configuration, 3) the outside source (*archē*) of the source of movement, 4) the *telos* or the 'for which' of movement. In the concept of force, however, cause is reduced to the concept of pressure. Though the modern natural philosophers admit that a thing's design or configuration is crucial to what happens, they do not call this a *cause of movement*, since they do not take it to *initiate* the movement. De la Mettrie says "Everything depends absolutely on difference of organization." Similarly, according

something else, or a thing's mass generates the thing's momentum because its own force is aroused in an equal and opposite reaction to an impression. Aristotle's distinction between the ability to be moved and the ability to move something else shows, however, that *dunamis* is both active and passive. The potent thing does not need to be set in movement, or its *energeia* released through contact. All that is required for movement to occur is the right circumstances—those in which what is potentially will be on its own. Moreover, as a source of movement, it is precisely not altered or transferred.

If *dunamis* means strength, however, then it will be close to the idea of force and the communication of force. He seems to describe something like impetus when he rejects the idea that a thing could be carried along by itself (*Phys.* IV.8 214b16). On the other hand, he struggles with the question whether contact is necessary for continuous movement, as, for example, in projectile motion. He offers decisive arguments against the need for contact (notably in *Phys.* VII.1-2, VIII.10), but appears to affirm a thesis which he attributes to 'some people,' which is based on the necessity of contact, namely circular replacement (VIII.10). Clearly he is struggling both with the preconditions for a notion of impulse, and also with a distinction between velocity and acceleration. Yet nowhere in these sections does he refer to *dunamis*, and in general the definition of movement does not appear to be affected at all by the outcome of these deliberations. *Physics* VII is the only place in the *Physics* and *Metaphysics* in which *dunamis* is clearly addressed as a quantity—a quantity proportionate to the distance a thing is moved when pushed. To say this appears to confuse two fundamental ways of saying being—the categorical

-

to Descartes the reason animals act differently is that their organs are arranged differently (*DM* VI, 32). See Julien Offray de la Mettrie, *Man a Machine*, trans. Gertrude Carman Bussey, rev. M. W. Calkins, M. Carret and George Santayana (Open Court Publishing Co., 1912). See also Descartes, René, *Discourse on Method and Meditations on First Philosophy*, 4th ed. trans. Cress, Donald (Cambridge: Hackett Publishing Company, 1998). By reducing or restricting *energeia* and *dunamis* to the concept of force, of one thing acting upon another, by interpreting them through the concept of impetus, this hydraulic or economic conception of force takes the meaning of what are distinct concepts in Aristotle, namely source (*archē*) and cause (*aitia*), to be the same.

(the character of quantity), and the energetic (being-potent). The only place in the *Physics* in which *dunamis* means strength or quantity is VII.5, but due to its textual corruption and conflicts with the rest of the *Physics*, it might be that Aristotle did not write it.

Another incongruity between *dunamis* and force is that a thing is potent both for movements and for things that are not movements: Aristotle distinguishes between being something that can walk, is to be something that can move, but being a person that can think or see is not, according to him, the same as being able to move.³¹ More interestingly, the highest kind of potency, Aristotle argues, is the ability to be *un*affected (*Met.* V.12, IX.1). This is clearly the opposite of the concept of force and the transfer of force that is contained in the idea of impulse.

§8: Relation

Philosophy 6: 219-92 (2008).

Since the demise, at Einstein's hand, of the idea of absolute space and time, movement has been assumed to be relative.³² More precisely, from the idea that movement is motion in place, and that motion in place is reducible mathematically to and explicable solely through the more fundamental concepts of space and time (an assumption Aristotle rejects), comes the idea that the moved being changes its

³¹ However, some scholars argue that Aristotle's distinction between movement and activity is not at all what we would assume it to be, that is, they argue that his distinction seems not to be between movement and an activity that is *not* movement. Instead, they argue, Aristotle's distinction is between activities that do not contain their *telos*, or are not ends in themselves, and those that do and are: if the *telos* of a horse is not eating but galloping, then Aristotle would call eating a movement, and galloping an entelecheia or energeia. Cf. Charles Hagen, The "Energeia-Kinēsis" Distinction and Aristotle's Conception of "Praxis," *Journal of the History of Philosophy*, 22:3 (1984), 263-280. Hagen borrows from Terry Penner the claim that *telos* is what distinguishes *kinēseis* and *energeiai*. See Penner, "Verbs and the Identity of Actions—A Philosophical Exercise in the Interpretation of Aristotle," in Oscar Wood and George Pitcher, eds. *Ryle: A Collection of Critical Essays* (New York: Anchor Books, 1970), 405-11. But as Burnyeat has shown, the passage on which this distinction is based does not belong in *Met*. IX, and might not be by Aristotle. Myles Burnyeat, "Kinêsis vs. Energeia: A Much-Read Passage in (But Not Of) Aristotle's Metaphysics." *Oxford Studies in Ancient*

³² This idea of relative movement was already fully present in Newton: he responded to it by positing a parallel underlying absolute space and time.

position relative to other beings while remaining identical and unchanged itself. Movement, on this account, is interpreted as extrinsic, which allows being to be static, solely intrinsic.

Yet beings to which force is applied to not remain the same: a tennis ball flattens, and then returns Similarly, gravity will never affect a whole object in the same way, since parts of it will always be closer to and more affected by other things than other parts will be. Moreover, objects affect themselves gravitationally as well as electromagnetically, and these affects are distributed unequally in any complex body. In short, movement is never merely extrinsic to a body.

Now, Aristotle takes all material things to be beings of movement. By being material things, their being-moved is inseparable from being what they are: movement is not extrinsic to things, but belongs to being, that is, to the being of material beings. More technically speaking, for Aristotle relation is a category said to be in a being: it is a property of something. Moreover, although some beings or kinds of movement are incidental to what a thing is, for example, tables fall to the ground, not as tables, but as wood, Aristotle also argues that other movements are essential to what a thing is, for example, to be a flower is to grow and bloom, to be an animal is to sense and to move around.

§9: Sameness and difference

Since before Aristotle's time, thinkers have attempted to understand movement through the concepts of sameness and difference. Some took movement to be caused by these, and others have taken movement to be an identity of sameness and difference. Aristotle's terms for movement—dunamis and energeia—are clearly not words for 'same' or for 'different,' and each of them is one in one way and more than one in another way (*Phys.* III.2, *Met.* VIII.6, IX.1). More directly, immediately following the definition of movement, Aristotle argues that, on the one hand, difference is not sufficient to begin a movement.

Movement is not itself difference: both are difficult to catch sight of and are therefore thought to be indeterminate, but although this leads people to associate movement with difference, Aristotle rejects this association (*Phys.* III.2). Finally, Aristotle argues sameness does not imply stasis: something the same and one could nevertheless move, since, for example, all could be water in movement (*Phys.* I.3 186a16-8). In short, Aristotle does not take same and different to be the terms through which to understand movement. It is perhaps the reverse, since movement forces us to understand *dunamis* and *energeia* in a way that makes us re-think what same and different are, and how they are related.

§10: Negation and non-being

Nor does Aristotle conceive of movement through being and non-being. Parmenides argues that coming to be, and therefore movement, is not, *not* because that which might emerge from it is not, but because it did not exist *before* coming to be. Put otherwise, Parmenides takes movement to imply what is not: he grasps generation as a temporal structure connecting a being, which *is* now, to its own non-existence in the past.³³ But Aristotle argues that he can preserve Parmenides' premises concerning being and non-being, and still argue that movement is (*Phys.* I.8). Thus his argument is a rejection of a mixture hypothesis, an argument that movement is not mixed with non-being.

Aristotle rejects the mixture hypothesis in two stages: in his description of the elements of movement, he distinguishes 'what is not' (*sterēsis*) from the elements that are essential to movement, so that "everything comes to be out of the underlying thing and the form" and not from non-being (*sterēsis*) (*Phys.* I.7 190b20). Then as part of his proof of the existence of movement, he defines movement using potency and being-at-work—that is, in terms that differ even from these (*Phys.* III.1). This double

³³ Aristotle's rejection of the argument that the structure of movement is or depends on time applies here as well (*Phys.* IV.11)

argument first delimits and locates what exactly is thought not to be (namely, the form), setting it clearly in relation with that which comes to be the form in the relevant sense (namely, the *hypokeimenon*, the underlying thing), and distinguishing both of these from that out of which a thing comes to be in an accidental sense (namely, *sterēsis*, the non-being of the form). Then it abandons these descriptive terms or elements, which have some relation to what is not, and defines movement by terms that are not themselves beings, but not separable from being either, since it is in and through them that what is *is*. The argument shows Aristotle rejecting the argument for the non-existence of movement by rejecting the thesis that movement implies or is defined by non-being. But it also applies to the argument that movement is the identity of being and non-being. From these things, it should be clear or at least plausible that we should avoid the habit of reading non-being back into Aristotle's account of movement.

CONCLUSION

The opening section showed that movement and the terms *dunamis* and *energeia* are defined in and through one another. It also showed that this hermeneutic problem forms a path, not a closed circle, first of all since Aristotle's definition of movement amounts to a set of distinctions between manifold principles in a structural relationship to one another, second, since our experience of movement is undeniably ample, although jumbled-up, and finally, because it is not the experience of movement but something else, namely, the principles of movement that he aims to discover. We then examined the Aristotle's method: to discover *energeia* and *dunamis* and *kinēsis* through an inquiry into one another, using a method of making distinctions that gains us access to the phenomena. The second section followed up on the advantage that we have in reading Aristotle, namely that his assumptions about movement are so different from ours that they help us suspend our assumptions. Because Aristotle avoids using the resources we would normally expect, our unfamiliarity with his resources can help us

identify what is remarkable about them without reducing them to our own familiar assumptions. This puts us a step or two down the road between what is familiar to us and what is clear by nature, helping us recognize the distinctions he makes and presenting a fresh challenge to understand them.

REFERENCES

Beere, Jonathan, *Doing and Being: An Interpretation of Aristotle's Metaphysics Theta* (Oxford, Oxford University Press, 2009).

Brague, Rémi, "Aristotle's Definition of Motion and its Ontological Implications," trans. Pierre Adler and Laurent d'Ursel, *Graduate Faculty Philosophy Journal* 13:2 (1990).

Burnyeat, Myles. 2008. "Kinêsis vs. Energeia: A Much-Read Passage in (But Not Of) Aristotle's Metaphysics." *Oxford Studies in Ancient Philosophy* 6: 219–92.

Charlton, W. Aristotle's Physics, Books I and II (Oxford: Oxford University Press, 1970).

Descartes, René, *Discourse on Method and Meditations on First Philosophy*, 4th ed. trans. Cress, Donald Cambridge: Hackett Publishing Company, 1998.

Descartes, René, *Principles of Philosophy*, trans. Valentine R. Miller and Reese Miller (Dordrecht: Kluwer Academic Publishers, 1991).

Hagen, Charles, "The "Energeia-Kinēsis" Distinction and Aristotle's Conception of "Praxis," *Journal of the History of Philosophy*, 22:3 (1984), 263-280.

Heidegger, Martin, *Aristotle's* Metaphysics Θ 1-3: *The Essence and Actuality of Force*, Trans. Walter Brogan, Peter Warnek (Bloomington: Indiana University Press, 1995).

Kosman, Aryeh. "Aristotle's Definition of Motion," Phronesis, 14 (1969), 40-63.

Mettrie, Julien Offray de la, *Man a Machine*, trans. Gertrude Carman Bussey, rev. M. W. Calkins, M. Carret and George Santayana (Open Court Publishing Co., 1912).

Ondaatje, Michael, Handwriting (Toronto: McClelland & Stewart, Inc., 1998).

Penner, Terry, "Verbs and the Identity of Actions—A Philosophical Exercise in the Interpretation of Aristotle," in Oscar Wood and George Pitcher, eds. *Ryle: A Collection of Critical Essays* (New York: Anchor Books, 1970), 405-11.

Ross, W. D., ed., *Aristotle's* Metaphysics: *A Revised Text with Introduction and Commentary* (Oxford: Oxford University Press, 1924).

Ross, W. D., ed., *Aristotle's* Physics: *A Revised Text with Introduction and Commentary* (Oxford: Oxford University Press, 1960).

Sachs, Joe, "Motion and its Place in Nature" Internet Encyclopedia of Philosophy, www.iep.utm.edu/aris-mot/.

Sachs, Joe, trans., Aristotle's Metaphysics (Santa Fe: Green Lion Press, 1999).

Sachs, Joe, trans., Aristotle's Physics: A Guided Study (New Brunswick: Rutgers University Press, 1995).

Sentesy, Mark, "Aristotle on the Now and the Generation of Time: A Systematic Reconstruction," forthcoming, 2017.

Sokolowski, Robert, "Making Distinctions," Review of Metaphysics, 32:4 (1979), 639-676.

Sokolowski, Robert, "The Method of Philosophy: Making Distinctions" *Review of Metaphysics* 51:3 (1998): 515-533.

Wittgenstein, Ludwig. *On Certainty*, trans. Denis Paul, and G.E.M. Anscombe (New York: Harper Torchbooks, 1969).

Wittgenstein, Ludwig. Philosophical Investigations (New Jersey: Basil Blackwell & Mott, 1958).