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CHANGE IN ARISTOTLE'S *PHYSICS* 3

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IN *Physics* 3. 1 Aristotle famously defines change (*kinēsis*) as ‘the *entelecheia* of the potential being, *qua* such [potential]’ (201^a10–11).¹ Ostensibly, he defines change because the term *kinēsis* figures in the definition of nature (*phusis*) given earlier in the *Physics*, so that we must understand what change is if we are to understand what nature is (192^b13–14, 21–3; 200^b12–15). Aristotle also saw his definition as a major advance on what had been the fundamental topic of natural philosophy for generations and a stumbling-block for his predecessors. But few readers have echoed Aristotle’s own satisfaction with his definition.²

A primary reason for this dissatisfaction is that the definition appears to pick out the products of change rather than changes themselves. Call this the ‘product puzzle’. For example, the *entelecheia*—usually understood as ‘actuality’—corresponding to a

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¹ ἡ τοῦ δυνάμει ὄντος ἐντελέχεια, ἣ τοιοῦτον, κίνησις ἐστίν (201^a10–11). Compare the definition given in the mirror passage in *Metaphysics K* 9: τὴν τοῦ δυνάμει ἣ τοιοῦτον ἐστίν ἐνέργεια λέγω κίνησιν (1065^b16). I have opted for ‘the potential being’ over both ‘what is potentially’ and ‘that which is potentially’, in order to avoid misunderstanding. Both the latter two options might be thought to pick out that being which enjoys merely potential existence. For example, if we are talking about a pile of bricks that is potentially a house, ‘what is potentially’ might seem to refer to the house (or its form) since the house, one might say, enjoys potential existence. Even if we avoid this construal, perhaps by adding a completing predicate (so: ‘what is potentially a house’ or ‘that which is a house potentially’), these constructions are in a different way too loose. They may suggest some being merely one-in-number with the potential being, rather than that whose very nature is to be potentially something.

² Simplicius, however, claims that Aristotle defines change ‘marvellously’ (θαυμασίως) (*In Phys.* 413. 25 Diels).

potential house seems to be the house, rather than the process of becoming a house. Some commentators have responded to this puzzle by construing *entelecheia* as ‘actualization’;³ others by taking Aristotle to be talking not about a potential being, but about what is potentially becoming, e.g. what is potentially in the process of becoming a house.⁴ Both of these options, however, seem to smuggle the notion of change into the terms of the definition.⁵

According to Kosman’s seminal account,⁶ the solution to this puzzle lies in Aristotle’s addition of the phrase ‘*qua* such’. Although the product of change is the paradigmatic actuality of the potential being, the change, and it alone, is the actuality of the potential being ‘*qua* such [potential]’. Thus, while the definition characterizes change as (i) a genuine actuality of (ii) a genuine potential *being*, and so avoids circularity, (iii) the phrase ‘*qua* such’ ensures that it picks out changes but not the products of change. I shall refer to this skeletal interpretation as the ‘consensus interpretation’, since it has become entrenched in recent years.⁷

³ So H. Cherniss, *Aristotle’s Criticism of Presocratic Philosophy* (Baltimore, 1935), 165; W. D. Ross, *Aristotle’s Physics [Physics]* (Oxford, 1936), 45 and 537; J. L. Ackrill, ‘Aristotle’s Distinction between *Energeia* and *Kinesis*’, in R. Bambrough (ed.), *New Essays on Plato and Aristotle* (New York, 1965), 121–41 at 138–40; T. Penner, ‘Verbs and the Identity of Actions’ [‘Verbs’], in G. Pitcher and O. Wood (eds.), *Ryle* (Garden City, NY, 1970), 393–460 at 427–31; A. L. Peck, ‘Aristotle on *Kínēsis*’, in J. Anton and G. Kustas (eds.), *Essays in Ancient Greek Philosophy* (Albany, NY, 1971), 478–90 at 479; J. Kosman, ‘Aristotle’s Definition of Change’ [‘Definition’], *History of Philosophy Quarterly*, 4 (1987), 3–16. On Ross and Peck see the following note.

⁴ Thus, change could be thought of as the actuality of such a potentiality, in the sense of the goal of that potentiality or what the potentiality is for. Aside from circularity, such an interpretation would violate Aristotle’s dictum that a potentiality is defined by reference to what it is for (*Metaph.* θ 8, 1049^b4–17). See D. Charles, *Aristotle’s Philosophy of Action [Action]* (Ithaca, NY, 1984), 19–20, and R. Heinaman, ‘Is Aristotle’s Definition of Change Circular?’, *Apeiron*, 27 (1994), 25–37, for interpretations along these lines. Peck, ‘Aristotle on *Kínēsis*’, 479, and Ross, *Physics*, 536, suggest such a reading of $\delta\upsilon\nu\acute{\alpha}\mu\epsilon\iota\ \delta\upsilon\nu$, but this makes their kinetic readings of $\acute{\epsilon}\nu\tau\epsilon\lambda\acute{\epsilon}\chi\epsilon\iota\alpha$ (e.g. ‘actualization’) elsewhere superfluous. On the reading in E. Hussey, *Aristotle’s Physics, Books III and IV [III & IV]* (Oxford, 1983), see n. 23 below. I argue that the ‘potential becoming’ reading is unwarranted in sect. 3(b) below.

⁵ For the charge that the ‘actualization’ reading is circular see L. A. Kosman, ‘Aristotle’s Definition of Motion’ [‘Motion’], *Phronesis*, 14 (1969), 40–62 at 41–2; M. L. Gill, ‘Aristotle’s Theory of Causal Action in *Physics* III. 3’ [‘Causal Action’], *Phronesis*, 25 (1980), 129–47 at 130, and *Aristotle on Substance: The Paradox of Unity [Paradox]* (Princeton, 1989), 185; T. K. Johansen, *Aristotle on the Sense-Organs [Sense-Organs]* (Cambridge, 1998), 257; U. Coope, ‘Change and its Relation to Actuality and Potentiality’ [‘Change’], in G. Anagnostopoulos (ed.), *A Companion to Aristotle* (Oxford, 2009), 277–91 at 279–80. See also n. 52 below.

⁶ Kosman, ‘Motion’.

⁷ Although it would be an overstatement to say that there is a single agreed in-

In what follows I shall argue that two components of the consensus interpretation should be left aside. First, the idea that change is defined as an actuality involves difficult and obscure metaphysical theses that are unsupported by, and sometimes in conflict with, Aristotelian doctrines (Section 1). Second, the idea that the *qua*-phrase neutralizes a subsequent threat of picking out the products of change is in tension with the grammar of Aristotle's definition and incompatible with his own explanation of the phrase's function (Section 2).

I offer a comparatively straightforward interpretation that draws on well-attested Aristotelian theses about the metaphysics of change (Section 3). Change is defined as the activity (rather than actuality) of potential being. There is thus no threat of picking out the products of change, and no obstacle to picking out changes. The role of the *qua*-phrase is to specify that change is the *proper* rather than *accidental* activity of a potential being. That is, change is the activity that a potential being engages in precisely because it is a potential being.

This analysis facilitates an attractive account (Section 4) of the definition's role in the complex dialectic between Aristotle and those who harboured doubts about change. Consensus interpreters have generally held that Aristotle addresses—indeed must address—such doubts by bringing change into the sphere of actuality. By contrast, I argue that the primary contribution of Aristotle's definition to this dialectic is not to specify change's ontological status, but rather to certify the scientific respectability of change—its

terpretation, the three components of the consensus reading I identify can be found in Kosman, 'Motion', as well as in Gill, 'Causal Action' and *Paradox*, 183–94, and Coope, 'Change'. Hussey, *III & IV*, appears to reject the consensus analysis of *δυνάμει ὄν* (potential being) at 59–60 but not always; see n. 23 below. S. Waterlow, *Nature, Change, and Agency in Aristotle's Physics: A Philosophical Study* [*Nature*] (Oxford, 1982), Johansen, *Sense-Organs*, 256–9, and M. F. Burnyeat, 'De anima II 5', *Phronesis*, 47 (2002), 28–90 at 42, do not commit themselves to the consensus reading of the *qua*-phrase and Burnyeat has reservations about Kosman's reliance on certain passages in *Metaphysics* *Θ* 6 and *De anima* 2. 5. C. Freeland, 'Aristotle on Bodies, Matter, and Potentiality', in J. Lennox and A. Gotthelf (eds.), *Philosophical Issues in Aristotle's Biology* (Cambridge, 1987), 392–407 at 402, relies on the consensus reading of the *qua*-phrase. Among detractors, Charles, *Action*, 19–20, and Kostman, 'Definition', cite problems in ascribing to Aristotle the view that change is an actuality, while R. Heinaman, 'Kosman on Activity and Change' ['Kosman'], *Oxford Studies in Ancient Philosophy*, 12 (1994), 207–18, raises a quite compelling objection to a feature of Kosman's proposal as stated, but which, I shall suggest, Kosman can safely give up; see n. 15 below.

status as an object of scientific investigation and understanding. In characterizing change as the activity of *potential being*, Aristotle's definition ties change to a kind of being (i.e. potential being) that falls outside the problematic dichotomy of opposite principles to which many of his predecessors were limited, such that they could not adequately explain change. And in specifying that change is the *proper* activity of potential being, the definition posits an intrinsic causal connection between potential being and the change that it undergoes. Aristotle's definition thus shows not merely that change can be coherently characterized, but also how it can be rendered intelligible within the scope of the explanatory science of nature that the *Physics* sets out to construct.

In closing (Section 5), I address Aristotle's use of *entelecheia* in defining change, which has made an interpretation in terms of actuality seem inevitable, and thus constitutes a serious challenge for my interpretation. For although Aristotle uses *entelecheia* interchangeably with *energeia* in this context, there is no independent reason to think that *entelecheia* can mean 'activity'. I argue that while reading *entelecheia* as 'activity' is problematic, it is also problematic to read *energeia* as 'actuality' in this context. And given the philosophical advantages of my proposal, we are entitled to focus primarily on the term *energeia*, a standard connotation of which is activity.

1. Change as actuality

(a) *What is an actuality?*

In addressing the question whether change is defined as an actuality, we immediately run up against the fact that different commentators use the term 'actuality' in somewhat different ways. Waterlow, for example, construes *entelecheia* and *energeia* as indicating that change (or the changing subject) is something 'real, as real as anything else actual is real', as opposed to something of suspect ontological status.⁸ Such glosses, however, might be mis-

⁸ The phrase is from Waterlow, *Nature*, 109. See also Johansen, *Sense-Organs*, 257–9; Burnyeat, 'De Anima II 5', 43, and 'Kinēsis vs. Energeia: A Much-Read Passage in (but not of) Aristotle's *Metaphysics*' ['Passage'], *Oxford Studies in Ancient Philosophy*, 24 (2008), 219–92 at 261 and 264; Coope, 'Change', 280–2. Note that Burnyeat reads the *τις* in ἐνέργειά τις, both at *Physics* 3. 2, 201^b32, and in the reference to that passage at *DA* 2. 5, 417^a16, as having an 'alienans function', indicating that from change we 'cannot expect everything you would normally expect from an

leading. They might suggest that Aristotle's terms mean 'actuality' in a contemporary connotation, indicating that change 'actually' exists in the sense that it is not merely possible, or perhaps in the sense that it is not a fictional or merely imagined entity. Even though change is something 'actual' in both of these senses, neither of them captures the meaning of *entelecheia* and *energeia*, or the significance of Aristotle's definition.⁹

Perhaps the strongest motivation for reading the definition in terms of actuality is Aristotle's use of the term *entelecheia* in defining change, and in fact 'actuality' is often employed simply as a stand-in for that term. Whatever its obscurities, the term *entelecheia* functions primarily as a counterpart to *dunamis* (potential, capacity), especially in their use as adverbial datives modifying a form of the verb 'to be', in phrases such as 'actual [*entelecheiāi*] being' and 'potential [*dunamei*] being'. In such constructions *entelecheia* and *dunamis* specify a way or mode of being *some kind of thing*. Something can be a tree, for example, either *entelecheiāi* ('actually') or *dunamei* (potentially). *Entelecheia* is connected etymologically to the notion of a goal or end (*telos*), and perhaps to being complete (*entelēs*). 'Actuality' in this sense thus involves being at a *telos*, or being a complete and full-fledged being of some kind, and stands in opposition to potential being, for the particular kind of being at issue. We may thus ask: what kind of being is it, such that change is, according to the definition, actually being that? To be sure, not all scholars have explicitly acknowledged the need to answer this

energeia' ('Passage', 264), so that he might opt for a weaker formulation than Waterlow's 'as real as anything else actual is real'.

⁹ Against the first suggestion, Aristotle never uses the terms *ἐνέργεια* and *ἐντελέχεια* in discussions of possibility and necessity, and he claims that the terms *δυνατόν* and *ἀδύνατον*, when they are so used, mean something different from their meaning when said in accordance with having or lacking a *δύναμις* (*Metaph. Δ 12*, esp. 1019^b30–1020^a4), the correlate to *ἐνέργεια* and *ἐντελέχεια*. As for the second, *δύναμις* and potential being are 'actual' in the sense that they 'in fact' exist; they are not fictional or merely imagined. Of course, a potential house is not in fact a house, but potential houses in fact exist. One reason that Aristotle's opponents in *Physics* 1. 8 were unable to see their way out of the dilemma is that they were not in a position to consider the possibility that potential being 'really' exists in this sense. In *Metaphysics Θ 3* Aristotle argues that there is unexercised potential being. On the relation between contemporary notions of actuality and Aristotle's notions of *ἐντελέχεια* and *ἐνέργεια*, I am indebted to the discussion in J. Beere, *Doing and Being: An Interpretation of Aristotle's Metaphysics Theta [Doing and Being]* (Oxford, 2009), 211–15, and I am grateful to him for sharing earlier versions of the manuscript.

question.¹⁰ This, I think, is a mistake, one I shall say more about shortly. I begin, however, by considering a position that both acknowledges and answers this question.

(b) *Constitutive actuality*

Clearly, change is not the *final* actuality corresponding to the product; that is, change is not actually being the product (or that in virtue of which something is actually the product). Change is therefore best thought of as a kind of intermediate actuality. Thus one core idea in Kosman's enormously influential account is that the changing subject is an actual or complete being, but the kind of being it is actually is *potential being*, the very kind of being specified in the qualification '*qua* such'.¹¹ The process of becoming a house, for example, is the 'constitutive actuality' of a potential house. This means that the bricks, while being built and only then, are an actual *potential house*. This process of being built is the potential house's actuality, in the sense of the potential house's *actually being a potential house* (or perhaps: that in virtue of which the bricks are an actual potential house).¹² The house (or its form), by contrast, is the 'deprivative' actuality of the potential house; it is the actual being (or its form) at which the potential house is directed, and which it is potentially. The deprivative actuality of the potential house is not an actual *potential house* but an actual *house*.¹³

The term 'deprivative actuality' reflects Kosman's conviction

¹⁰ Coope describes change as a potential's 'being actual' and its 'being most fully actual as a *potential*' ('Change', 282–3), suggesting the 'constitutive actuality' reading. Gill and Hussey have not, as far as I can tell, clearly acknowledged or answered this question. But while Gill's account seems to be consistent with holding that change is the 'constitutive actuality' of potential being, Hussey at times appears to specify a quite different notion of being the actuality of something; see n. 23 below. According to Waterlow, change is an 'active expression' and 'manifestation' of its subject's nature and is what the subject does 'on account of' its nature as potential being (*Nature*, 117–18).

¹¹ Whether Kosman consistently holds this view is less clear, and so I hesitate to describe it simply as his position. For as we shall see below, several of the texts he relies on involve actualities that, though they preserve the corresponding potential beings, should not, I think, be identified with *being* those potential beings in a certain way. When I speak of 'constitutive actuality' I shall mean the concept that is described above.

¹² Kostman, 'Definition', 8, helpfully puts the 'constitutive actuality' proposal in terms of the iterability of 'actual' and 'potential'.

¹³ Kosman tends to describe this distinction as one between kinds of actuality rather than one between ways in which an actuality is related to that of which it is the actuality. I think the distinction is of the latter kind. Moreover, it can be understood

that the potentiality involved in a change is extinguished once the change has run its course.¹⁴ But other aspects of Kosman's account are sufficient to distinguish the notion of 'constitutive actuality' without any particular commitments as to the persistence of potential being into the product. Such neutrality—which I also hope to maintain in my own account—is preferable given the controversy surrounding the difficult question of persistence.¹⁵

Although Kosman sometimes emphasizes that the potential being *persists* (as potential) into the change, or that it is most *manifest* as a potential being during the change, these claims alone do not warrant thinking of change as a 'constitutive actuality' of potential being. What is required is a difference between the state of the bricks when 'dormant' and their state when changing, and that this difference concern the degree to which they are a potential house: while in the process of being built, the bricks are a potential house in a 'complete' or 'full-fledged' manner, i.e. 'actually'. This may cause concern at the outset. It is not clear that there is a genuine state of actually being a potential being at all.¹⁶ I shall develop this concern

to a significant degree as follows: 'Actuality of X' may signify either the actuality at which X is directed (deprivative) or that which constitutes something's being an actual X (constitutive).

¹⁴ This idea, as well as the correlative idea that the *qua*-phrase distinguishes between the two types of actuality on this basis, is also found in Themistius, *In Phys.* 69. 8 ff. Schenkl.

¹⁵ If, as I have suggested, the notion of 'constitutive actuality' can be made out independently of the extinction thesis, then the core of Kosman's interpretation can survive the rejection of the extinction thesis. Robert Heinaman, 'Kosman', points to a number of texts that appear to contradict the extinction thesis. If the matter for a change should be identified with potential being, we may add to Heinaman's catalogue those texts in which Aristotle characterizes matter as persisting into the product of change and, in the case of substances, as a subject of which form is predicated. Of course, such texts will hardly be decisive in the light of the fact that *Physics* 3. 1 describes the potential and actual being as exclusive: 'in some cases the same things are both potentially and actually, however not simultaneously or not according to the same thing, but, for example, hot actually and cold potentially' (201^a19–22).

¹⁶ To see what is at stake, consider a teenager who claims to be an adult because he is a 'full-grown child'. In this kind of case we might respond by pointing out that one cannot claim to be an adult just by being at the final stage of any (perhaps arbitrarily chosen) period. Adult humans and adult frogs are full-grown human beings and frogs respectively. The concern is that it is inappropriate to speak of a 'full-grown child' because there is no genuine stage of being full-grown for a child. Kosman asks us to understand 'actuality of a potential being' as we might understand 'perfection of a stutter' to refer to the cultivated stutter one develops, for example, for the role of a stuttering character in a play. The cultivated stutter can be called a genuine

in the course of this section. The idea that only the changing subject is an ‘actual potential being’ implies that when dormant, that subject is merely potential in a corresponding way, that it is a merely ‘potential potential being’, so to speak. So thinking of change as the ‘constitutive actuality’ of a potential being requires adding not only an intermediate actuality, but also a corresponding potentiality, to the picture we might otherwise have of change.

We would expect to find some indication that change is a ‘constitutive actuality’ of potential being in *Metaphysics* Θ 7, which contains Aristotle’s only explicit account of ‘when each thing is potentially [*dunamēi*] and when not’ (1048^b37). Indeed, Aristotle is there precisely concerned to *limit* the application of the term ‘potential being’. Yet he never broaches the idea that only the changing subject is fully (‘actually’) a potential being. Instead, as Charles points out (*Action*, 19–20 n. 11), Aristotle envisages the label ‘potential F’ as applying to a ‘dormant’ object, one that is not already in process of becoming F. Moreover, if only an object in the process of becoming F were fully a ‘potential F’, we would expect Aristotle, in *Metaphysics* Θ 3, to concede more to the Megarian position that ‘only when something is active [*energēi*] is it capable [*dunasthai*], and when it is not active, it is not capable’ (1046^b29–30).

Kosman appeals to the descriptions of end-containing activities at *Metaphysics* Θ 6, 1048^b18–35, and of realizations of dispositions (*hexeis*) in *De anima* 2. 5, in order to provide evidence for, or illumination of, the idea that change is a ‘constitutive actuality’ of potential being.¹⁷ As for the former passage, what it tells us explicitly about change is that change is exclusive of its end. This would be at best misleading if there were, in addition to the potentiality for

‘perfection’ in a clear enough sense; it involves the full possession of the ability, for example, to stutter more often, audibly, naturally, persuasively, etc. than before. However, it is telling that, as Beere, *Doing and Being*, 204–5 n. 64, points out, cultivating a stutter in this way does not in general culminate in being rid of the stutter, the other sort of ‘perfection of a stutter’ Kosman asks us to imagine. Indeed, one would ordinarily hesitate to cultivate an unwanted stutter.

¹⁷ Kosman, ‘Motion’, relies only on the *De anima* 2. 5 passage, while in ‘Substance, Being, and *Energieia*’ [‘Substance’], *Oxford Studies in Ancient Philosophy*, 2 (1984), 121–49, he relies on both texts. Hussey, *III & IV*, 59–60, relies on the *De anima* passage, though it is not clear that he does so in support of the ‘constitutive actuality’ proposal. Gill, *Paradox*, 192–3, appeals to the *Metaphysics* Θ 6 passage in order to substantiate an interpretation she claims to find in Kosman, ‘Motion’, but this is an interpretation in terms of ‘activity’, one which ‘avoids circularity because Aristotle carefully distinguishes activities from changes’ and yet ‘captures the dynamic quality of change’ (192).

the product, also a potentiality directed at the change itself (e.g. a 'dormant' potential house's potentiality for being an 'actual' potential house). For in this case the change would contain this *telos*; indeed it would be this *telos*. Thus the characterization of change here, by its silence, tells against the idea that change is a 'constitutive actuality' of potential being.

The passage from *De anima* 2. 5 seems to give us more. It employs a model on which there are intermediate levels of actuality that are at the same time levels of potentiality. For example, the person who possesses, but is not currently using, knowledge qualifies as an actual knower by actually possessing a disposition (*hexis*), which is itself a kind of capacity for further exercise. But it is not, at least not primarily,¹⁸ to the possession of a *hexis* that change is compared, but to the realization of a *hexis*. For as Kosman claims, the *De anima* 2. 5 passage implies that realizations of *hexeis* preserve, rather than exclude, their potentialities.¹⁹ (In describing end-containing activity as an 'active manifesting of a potentiality' ('Substance', 129), Kosman presumably means to imply that such activity too preserves the corresponding potentiality.) Thus realizations of *hexeis* appear to have the preservative structure claimed for change.²⁰ However, the preservative structure of *hexis*-realizations implied by the *De anima* passage is in fact different from that ascribed to change. To say that change is the 'constitutive actuality' of potential being is not to say

¹⁸ Kosman, while drawing on the idea that changes (as he sees them), like $\xi\xi\epsilon\iota\varsigma$, combine actuality and potentiality, is cautious not to push this parallel too far; see 'Motion', 53.

¹⁹ I say 'implies' because I believe, with Kosman, 'Motion', 55, and Burnyeat, '*De anima* II 5', 87–8, that what this passage describes as a 'preservation' and 'development into itself and $\acute{\epsilon}\nu\tau\epsilon\lambda\acute{\epsilon}\chi\epsilon\iota\alpha$ ' (417^b6–7) is not the exercise of a $\xi\xi\epsilon\iota\varsigma$ (this exercise is there called an $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$), such as continuous contemplation of the Pythagorean theorem, but rather the transition from not exercising to exercising, e.g. from merely knowing the Pythagorean theorem to contemplating the theorem (this transition is not called an $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$). However, see R. Heinaman, 'Activity, Change and *De anima* II. 5', *Phronesis*, 52 (2007), 139–87, esp. 160–6, for criticism of this reading. If we read the passage instead so that it is describing the relevant $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$ (e.g. contemplation) as a 'preservation' and 'development into itself and $\acute{\epsilon}\nu\tau\epsilon\lambda\acute{\epsilon}\chi\epsilon\iota\alpha$ ' (417^b6–7), and so a change only in a specialized sense, if at all, it will then be explicitly contrasting change with the kind of $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$ that is thought ultimately to characterize change, telling against an identification of change with this type of $\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\iota\alpha$ on the basis of preservative structure.

²⁰ In fact, Kosman seems to treat both realizations of $\xi\xi\epsilon\iota\varsigma$ and end-containing activities as 'constitutive actualities' of potential beings. See 'Motion', 57, and 'Substance', 128–34, though the latter does not employ the language of 'constitutive actuality'.

that the changing subject is both potentially and actually the same kind of being. It is rather to say, for example, that the changing subject is actually a *potential house* and potentially a *house*. But the *De anima* passage tells us that someone actively contemplating—an actual *contemplator*—is still in possession of his knowledge, and so qualifies as a potential *contemplator*.

The person actively contemplating *would* thereby qualify as an ‘actual *potential contemplator*’—thus securing the desired parallel in preservative structure with change—if contemplating were the ‘constitutive actuality’ of the potential contemplator. For then contemplating would just amount to actually being a potential contemplator. However, Aristotle nowhere indicates that realizations of *hexeis* or end-containing activities are ‘constitutive actualities’ of the corresponding potential beings. For example, he does not claim that actively seeing is a way or mode of being a potential seer, namely, being a potential seer—having the power of sight—*actually*. Actively seeing is rather a matter of actually *seeing*, of being an actual seer. This is not to deny that seeing is an exercise of one’s power of sight, one that preserves and even expresses or manifests one’s power of sight, one’s being a potential seer. But this falls far short of the claim that seeing is or even involves being a potential seer at a higher degree of actuality.²¹ The fact that change too preserves and manifests the corresponding potential being simply does not imply that change is a ‘constitutive actuality’ of potential being.²²

(c) *Actuality in another sense?*

The foregoing might be taken to show that we should discard the notion of ‘constitutive actuality’ as too restrictive, while maintain-

²¹ One of Kosman’s favoured terms, ‘manifestation’, betrays a slide between these two claims, and between the corresponding notions of mere exercise and ‘constitutive actuality’. The manifesting or manifestation of a potentiality might be either (i) the expression of that potentiality in something else, for example, in the corresponding exercise, or (ii) ‘a potentiality [itself] in its full manifestation’ (‘Motion’, 50). I suggested earlier that the ‘constitutive’ vs. ‘deprivative’ distinction can be drawn independently of the extinction thesis about potential being. But the extinction thesis may be required to distinguish between a potential being’s preservative exercise (what I have argued is not in general the ‘constitutive actuality’ of the potential being) and the product of that exercise, so long as both are thought of as actualities of it.

²² It may rather tell against the ‘constitutive actuality’ proposal. For an explanation is needed of why the realizations of *hexeis*, if structurally similar to changes, are not described as constitutive actualities.

ing that change is an actuality of the potential being in whatever sense *can* be gleaned from Aristotle's descriptions of end-containing activities and *hexis*-realizations in these two passages. These sorts of activity exhibit what at least some scholars appear to have in mind in thinking of change as an actuality of potential being. In looking to these activities for guidance, one must of course be careful not to draw on those of their attributes that are denied to changes.²³

However, these passages give no indication that the features *shared* by changes and the other sorts of activity can elucidate or legitimate change's alleged status as an actuality. Note first that *Metaphysics* Θ 6, 1048^b18–35, need not, and I think should not, be read in terms of actuality at all, since every *energeia* that Aristotle mentions there is an activity, and the passage explicitly aims to classify actions (*praxeis*, 1048^b18). More importantly, the one hint at the concept of actuality, namely the notion of completeness, is a point of contrast between change, which is exclusive of its end and so 'incomplete', and end-containing activity, which is thereby 'complete'. *De anima* 2. 5, on the other hand, explicitly invokes the concept of *entelecheia*. Here Aristotle tells us that contemplating is an *entelecheia* (417^b7, 10) and that the person contemplating a being *entelecheiāi* (417^a29, 4). And it is likely that he is telling us that the

²³ Hussey, *III & IV*, is not careful enough. To secure the parallel with $\xi\xi\iota\varsigma$ -realization, Hussey thinks, we must 'take something's admitting of a particular kind of change as a disposition [*hexis*] to change in that way, which will be exercised in appropriate circumstances. The exercise of the disposition will then be the changing, not the having changed; and change will then appear, as required, as an actuality, corresponding to the potentiality as [exercising the disposition] to [having the disposition]' (59). Apparently, he takes $\xi\xi\iota\varsigma$ -realization to be an actuality in the following sense: it is that at which the corresponding $\delta\nu\alpha\mu\iota\varsigma$ is ultimately directed, what the potentiality is ultimately a potentiality for. And so he suggests construing the definition of change in terms of, for example, a 'potentiality to break' rather than a 'potentiality to be broken' (60). But change surely cannot be like the realization of a $\xi\xi\iota\varsigma$ in this respect. He writes that 'the only objection to this reading is that the disposition involved is specified in such a way as to obscure the issue' in so far as Aristotle 'misleadingly' describes the former as the latter, e.g. the 'potentiality to break' as a 'potentiality to be broken' (59–60). But the position that he takes Aristotle to 'misleadingly' suggest (i) makes his analysis of the *qua*-phrase superfluous, (ii) makes Aristotle's definition vulnerable to the most straightforward charge of circularity, and (iii) is inconsistent with Hussey's analysis elsewhere: "[“potentially being”] can only be expanded to “potentially being F” where “F” gives the end-state. And the fact that this is the only plausible reading casts doubt on the reading of “changeable” as “potentially in process of change” . . . so we must understand “changeable” . . . on the model of “potentially having changed”' (59). Some of these concerns about Hussey's analysis are raised by M. L. Gill, 'Review of E. Hussey, *Aristotle's Physics, Books III and IV*', *Philosophical Review*, 94 (1985), 270–3.

person who possesses knowledge is a being *entelecheiāi* at 417^b13. If he does not explicitly call the possession of knowledge *entelecheia* in *DA* 2. 5, this is surely only because it is taken for granted. But Aristotle does not characterize the acquisition of knowledge as *entelecheia*, or the person in the process of acquiring knowledge as a being *entelecheiāi*. If activities that are neither realizations of *hexeis*, nor the activities of actual beings, nor yet end-containing activities, can still qualify as actualities, there is no hint of such a view in these texts. And indeed, once we leave aside these features, we are left with the idea that changes, like these other activities, are exercises that preserve and perhaps even express or manifest the corresponding potentialities. But the notion of a preservative exercise is not a notion of actuality, so that these texts do not elucidate any sense in which change is an actuality. The idea that change is a kind of exercise of potential being, I shall argue, comes very close to capturing the force of Aristotle's definition. But it would be gratuitous to claim, on this basis, that Aristotle defines change as an actuality. Moreover, we shall see that such a claim adds little, if anything, to the philosophical significance of Aristotle's definition.

Although I cannot consider every possible proposal for how to think of change as an actuality, the foregoing discussion reveals a risk for the actuality interpreter who leaves aside the 'constitutive actuality' interpretation, namely the risk of relying on a notion other than that of actuality. But this is not the only risk. For Aristotle defines change not just as *some entelecheia*, but more specifically as the *entelecheia* of potential being. Thus, quite generally, change's alleged status as an actuality must correspond tightly enough to *potential being* for change to be defined as *its* actuality. This point will be strengthened and made more precise in the analysis of the phrase '*qua* such', starting in the next section. While the 'constitutive actuality' proposal does justice to this tight connection between change and potential being, by identifying change as actually being *potential being*, it is not clear how a different kind of 'actuality' interpretation might do so.²⁴ For example, one might point out that change

²⁴ It is helpful to compare two other kinds of case in which such locutions could draw on intrinsic connections between the actuality and what it is the actuality of, even though we are not talking about 'constitutive actuality'. We might think of the house as the actuality of the potential house or of contemplation as the actuality of what is potentially contemplating. In both cases, we might draw on the fact that the actuality involves the very same kind of being that the potential item enjoys, but at a higher degree of actuality. In the one case the actuality enjoys that kind of being

is something real that exists while the potential being exists—even because the potential being exists—or that change is the counterpart, on the side of actuality, of potentially changing.²⁵ But neither of these claims would warrant thinking of change as *potential being's* actuality. Moreover, the sense in which change is precisely potential being's actuality must be robust enough to distinguish the change from the product. The product, while presumably an actuality, should not qualify as an actuality of potential being.²⁶ For, as I shall argue in the next section, if the product is an actuality of potential being, then the definition of change (construed in terms of actuality) will not have the resources to exclude the product from its scope.

2. 'Qua such'

The 'product puzzle', recall, begins from the thought that the products of change are *entelecheiai* and *energeiai*, perhaps paradigmatic ones, of potential beings, so that the definition threatens to pick them out in addition to, or even instead of, changes themselves. The consensus interpretation faces this threat acutely (by reading the Greek terms as 'actuality') but boasts of avoiding it, thanks to its analysis of the phrase 'qua such': while the products of change are actualities of potential beings, only changes are actualities of potential beings *qua potential*.²⁷ Notably, Kosman relies on the *qua-*

(the house is actually a house) while in the other the actuality *is* that kind of being (contemplating just is actually contemplating).

²⁵ This is part and parcel of the view that change is a kind of categorial being. See Simpl. *In Phys.* 401. 5 ff. Diels. I cannot fully address this idea here, though I think there are very good reasons for thinking that Aristotle is committed to placing change in a category. However, the *Categories* does not do so (14, 15^a13 ff.) and I doubt that Aristotle has this idea in mind in *Physics* 3. 1–3, not only for the reasons mentioned above. For this proposal is in tension with Aristotle's claim that 'these having been distinguished according to each kind [γένος] [of being], [being] actually and [being] potentially, the ἐντελέχεια of the potential being, *qua* such, is change' (201^a9–11). If he were here thinking of change as a kind of categorial being, it would follow immediately that there is change of change, and so on *ad infinitum*. Aristotle is here clearly thinking of change as occurring within various categories, in the sense that it is the transition from potential to actual being in each of those categories.

²⁶ We have seen how problematic dealing with these challenges might be in Hussey's reasoning (n. 23 above). He seems to account for the idea that the change alone is the potential being's actuality by claiming that the relevant potentiality is directed ultimately at it rather than at the product (*III* & *IV*, 59–60).

²⁷ So Kosman: 'We may now say: the phrase "as such" signals that it is the con-

phrase not only to exclude the products from the scope of the definition, but also to include changes, since he takes changes to be actualities of potential beings only in a specialized sense. In this section I shall for convenience employ the term *entelecheia* predominantly, although much of what I say here, as in the last section, will have consequences for the relative importance of the two terms.

I begin with a grammatical point about the *qua*-phrase, one which creates an initial challenge for the consensus reading. An analysis of Aristotle's own explanation of what he means by *qua* (201^a29–^b5) will show that the role of the *qua*-phrase is to specify the *proper* rather than *accidental entelecheia* of a potential being, and it will also strengthen the initial challenge. Finally, I argue that the main passage cited in favour of the consensus interpretation of the *qua*-phrase (201^b5–13) lends no support to that interpretation and is consistent with mine. My rejection of the consensus reading of the *qua*-phrase, as well as the account of it that I begin in this section, will be crucial to understanding other aspects of Aristotle's definition, notably its dialectical significance.

(a) *Process, product, and the grammar of the definition*

Let us begin by considering the use of a *qua*-phrase in the relatively simple proposition that the doctor builds '*qua* builder' (*Phys.* 1. 8, 191^b4–5). What exactly does the phrase '*qua* builder' characterize as a builder? It is helpful to expand the claim as it is sometimes translated:

The doctor builds in so far as *he* is a builder.

stitutive and not the deprivative actuality which is referred to in Aristotle's definition. . . . to speak of the actuality of a potentiality *qua* potentiality is to signal that the actuality is constitutive and not deprivative' ('Motion', 50). Hussey is less clear: 'the general purpose of the *qua*-clause is of course to pick out a certain kind of actuality corresponding to a certain kind of potentiality' (*III & IV*, 58). This makes it sound as if the *qua*-phrase distinguishes not different kinds of actuality that a *single* potentiality might have, but rather different potentiality–actuality pairs. He also claims, however, that the *qua*-phrase is 'attached' (58) to *ἐντελέχεια* in the definition, suggesting that there is a single potentiality in play. This account of the grammar of the *qua*-phrase (sect. 3(a) below) supports his claim that his account 'largely coincides' (60) with that of Kosman. More recently, Coope writes that the *qua*-phrase 'distinguish[es] between the process of change and the product of change', which she sees as two different actualities of, for example, the bronze's potential to be a statue ('Change', 283). Even some who read the definition in terms of 'actualization' take the *qua*-phrase to exclude the products of change; see Penner, 'Verbs', 430, and Kostman, 'Definition', 5–7.

Clearly, 'he' refers to the doctor; the *doctor's* being a builder enables him to build.²⁸ We may thus call the doctor the 'subject' of the *qua*-phrase. Here is Aristotle's first statement of the definition of change, expanded in the same way:

The *entelecheia* of the potential being in so far as *it* is such [i.e. potential].

What is the referent of 'it', which is characterized as 'such', i.e. 'potential', or, in later formulations, as 'changeable', 'alterable', etc.? In other words, what is the 'subject' of the *qua*-phrase? There are two basic options:

- (a) The *entelecheia* of a potential being in so far as the *entelecheia* is such [potential].
- (b) The *entelecheia* of a potential being in so far as the potential being is such [potential].²⁹

Reading (a) is amenable to the consensus interpretation, since it suggests a specialized concept of *entelecheia*—an '*entelecheia qua* potential'—that might apply to changes and only to changes.³⁰ However, *entelecheia* cannot be the 'subject' of the *qua*-phrase. For

²⁸ What I call the 'subject' of the *qua*-phrase need not be the grammatical subject of the sentence. This is evident in a claim such as 'The doctor cures the sick *qua* sick.'

²⁹ Kostman, 'Definition', 6, and Penner, 'Verbs', 428–31, offer temporal readings, for example:

- (c) The *entelecheia* of the potential being while it [the potential being] is still potential.

The idea is that while both the change and the product are *ἐντελέχεια* of the potential being, only the former exists while the potential being exists (as potential), so that the *qua*-phrase, on this reading, excludes products. As I have stated it, this reading treats 'potential being' as the subject of the *qua*-phrase. But note that understanding the *qua*-phrase in this way seems to require a somewhat more complex rendering of the definition. 'While it is still potential' is not, I take it, meant simply to carve out one of two time-segments of the potential being, such that the *ἐντελέχεια* of one segment is the process, and that of the other segment is the product (in which case it would not be helpfully illustrated by a case in which the potential being ('the buildable') does not persist into the product). Rather, what is meant is something like 'that *ἐντελέχεια* of the potential being, which [*ἐντελέχεια*] exists while it [the potential being] is still potential'. This seems to read too much into the few words of Aristotle's definition. Moreover, it is not merely 'unnatural', as Penner puts it, for the *qua*-phrase to 'deputize for "while"' ('Verbs', 431). Rather, *qua* (ᾗ) does not have a temporal meaning, and what is uncontroversially Aristotle's explanation of the meaning of *qua* employs an example in which such temporal distinctions cannot be drawn (*Phys.* 3. 1, 201^a34–^b3; see sect. 3(b) below).

³⁰ Hussey alone explicitly endorses this position, claiming that the *qua*-phrase

the *entelecheia* (the change) could not plausibly be characterized as a potential being. Nor, in accordance with various versions of the *qua*-phrase that Aristotle later offers, could it be characterized as ‘changeable’ (201^a29), as ‘potentially something’ (201^a32), or as ‘capable’ (*dunaton*) (201^b5).³¹ Kosman might respond that the *entelecheia* is just the potential being’s being most actual, its being a potential being to the fullest extent, so that the actual being in question is in fact a potential being (changeable etc.). Still, on his view, it is not the *entelecheia* itself (i.e. the change) that is most fully a potential being (changeable etc.), but rather the changing subject.³²

What then of reading (b)? On this reading, the phrase ‘*qua* such’ characterizes the potential being, where ‘such’ (potential) specifies an aspect or feature, broadly speaking, of the potential being: its being a potential being. Even at this linguistic level, we can appreciate

‘must be attached and rephrased as follows: “The actuality-*qua*-potentially-being of that which potentially is”’ (*III & IV*, 58). Kosman, in a later essay, distinguishes the ‘actuality of a potential *qua* potential and the actuality of that potential *qua* end other than itself to which it is directed’ (‘Substance’, 130), and here we may wonder what is being characterized as an ‘end other than itself to which it is directed’, if not the *ἐντελέχεια* itself. Perhaps Kosman means ‘*qua* directed at such an end’, but this seems no different from ‘*qua* potential’. Although the idea that there are two sorts of actuality of a single potential being naturally suggests reading (a), Kosman and Coope, as I understand them, intend to work out this idea along the lines of reading (b).

³¹ Nor, drawing on Aristotle’s later specifications of particular species of change, is an alteration itself ‘alterable’ (201^a12), a growth or decrease itself ‘subject to growth or decrease’ (201^a12–14), a generation or passing away ‘generable or subject to passing away’ (201^a14–15), or a locomotion ‘capable of locomotion’ (201^a15). Finally, the building process is not itself ‘buildable’ (201^a16, ^b9). In support of reading (a) Hussey appeals to 201^a27–8, which he translates: ‘The actuality, then, of what is potentially, when, being in actuality, it is operating, not *qua* itself but *qua* changeable—is change.’ Here, he claims, ‘the *qua*-phrase is clearly attached to the verb “is operating” [ἐνεργῆ], corresponding to “actuality”’ (*III & IV*, 58). If Hussey means that the subject of the phrase ‘*qua* changeable’ is the ‘operating’, then he is clearly mistaken. For the operating is not itself changeable.

³² This issue is perhaps obscured by a free substitution of ‘potential being’ (*δυνάμει ὄν*) and ‘potentiality’ or ‘potential’ (*δύναμις*). Thus Kosman sees Aristotle as claiming that change ‘is not the actuality of a potentiality in the sense of the actuality that results *from* a potentiality, but rather in the sense of an actuality which *is* a potentiality in its full manifestation’ (‘Motion’, 50). Here he claims that the *ἐντελέχεια* is a potentiality—presumably a *δύναμις*—in a certain condition. I find this suggestion difficult to understand. But in any case, it is of no help with the present concern. For the problem is that if *ἐντελέχεια* is the subject of the *qua*-phrase, then it will be characterized as a *potential being* (*δυνάμει ὄν*), as ‘changeable’, as ‘capable’, and so on, not that it will be characterized as a *δύναμις*.

an intuitive challenge for the view that the *qua*-phrase is responsible for excluding the products of change: if the qualification '*qua* potential' serves to exclude the product, then some other qualification, or perhaps a lack of qualification altogether, should give us the product. *Qua* what, we may then ask, does the potential house have the actual house as its *entelecheia*? Not '*qua* potential house', which should give us only the change. Nor '*qua* bricks', the only kind of alternative Aristotle explicitly considers (201^a29–34); for this (unlike '*qua* potential house') does not indicate any directedness towards the product. Nor can we say '*qua* actual house', since this could not characterize the potential house, as reading (b) requires.³³ Perhaps not *qua* anything? But then it seems that we are back to the aspect of the potential house that the *qua*-phrase specifies: its being a potential house.³⁴

(b) *Proper and accidental*

Let us step back from the question of whether the *qua*-phrase might exclude the products of change from the scope of the definition and look at Aristotle's own explanation of his use of '*qua*'. His explanation involves showing how the addition of the phrase excludes a different *entelecheia*, in this case, 'the *entelecheia* of the bronze, *qua* bronze':

λέγω δὲ τὸ ἢ ὠδί. ἔστι γὰρ ὁ χαλκὸς δυνάμει ἀνδρίας, ἀλλ' ὅμως οὐχ ἡ τοῦ χαλκοῦ ἐντελέχεια, ἢ χαλκός, κινήσις ἐστίν· οὐ γὰρ τὸ αὐτὸ τὸ χαλκῶ εἶναι καὶ δυνάμει τινί [κινήτῳ], ἐπεὶ εἰ ταῦτόν ἦν ἀπλῶς καὶ κατὰ τὸν λόγον, ἦν ἂν ἡ τοῦ χαλκοῦ, ἢ χαλκός, ἐντελέχεια κινήσις· οὐκ ἔστιν δὲ ταῦτόν, ὡς εἴρηται. (201^a29–34)

By '*qua*' I mean this: although the bronze is potentially a statue, still, change is not the *entelecheia* of bronze *qua* bronze. For it is not the same to be bronze and to be potentially something since, if it were the same without qualification and according to definition, then the *entelecheia* of the bronze, *qua* bronze, would be change. But it is not the same, as has been said.

As I claimed above, and as reading (b) requires, the *qua*-phrase

³³ On this point see the discussion of 201^b5–13 in sect. 3(d) below.

³⁴ Kosman, like others, suggests that without the *qua*-phrase the definition would naturally be taken to refer to the product. But see n. 30 above. Gill suggests that '*qua* potentially a house' yields the house, while '*qua* potential' yields the change ('Causal Action', 132). As far as I can tell, Gill is not drawing on the fact that '*qua* potentially a house' is more determinate than '*qua* potential'. Indeed, it is hard to see how such a difference would discriminate process from product. But I do not see what other relevant difference she intends.

refers to an aspect or feature of the subject that is to undergo change—its being a potential being. We may now say more precisely that it isolates one among a plurality of merely coinciding beings—beings that are merely one-in-number. The potential statue and the bronze are different in being: ‘it is not the same thing to be bronze and to be potentially something’ (201^a31–2). On the other hand, we may presume that in this case the bronze and the potential statue are one-in-number. Aristotle is more explicit in his illustrative example:

δῆλον δ' ἐπὶ τῶν ἐναντίων· τὸ μὲν γὰρ δύνασθαι ὑγιαίνειν καὶ δύνασθαι κάμνειν ἕτερον—καὶ γὰρ ἂν τὸ κάμνειν καὶ τὸ ὑγιαίνειν ταῦτόν ᾗν—τὸ δὲ ὑποκείμενον καὶ τὸ ὑγιαίνον καὶ τὸ νοσοῦν, εἴθ' ὑγρότης εἴθ' αἷμα, ταῦτόν καὶ ἓν. (201^a34–b3)

It is clear in the case of opposites. To be able to be healthy and to be able to be sick are different, otherwise to be sick and to be healthy would be the same. But what underlies, i.e. what is being healthy and what is being sick, whether moisture or blood, is the same and one.

In this example it is clear that ‘what is able to be healthy’ is one-in-number with ‘what is able to be sick’, because it is the same underlying thing, whether moisture or blood, that is sometimes healthy and sometimes sick. So, the potential statue and the bronze—the beings, one of which, at the most basic level, the *qua*-phrase specifies—are *merely* one-in-number.

Aristotle tells us that it is because the potential statue and the bronze are merely one-in-number that the addition of the phrase ‘*qua* potential statue’ can single out the change (becoming a statue). That is, it is because the bronze and the potential statue are merely one-in-number that ‘the *entelecheia* of the bronze *qua* bronze’ is distinct from the *entelecheia* of the potential statue *qua* potential statue (i.e. the change). On the other hand, if the potential statue and the bronze were not merely one-in-number but one-in-being, then the addition of the *qua*-phrase could not discriminate between the two *entelecheiai*.

In order to understand these claims, it is helpful once again to consider the simpler example of the doctor. The doctor cures ‘*qua* doctor’, but builds a house ‘not *qua* doctor but *qua* builder’ (*Phys.* 1. 8, 191^b4–5). Aristotle implies that the doctor builds only ‘according to what coincides’ (191^b14–18). This means that it is in virtue of being a doctor that the doctor can be said to cure, but it is in vir-

tue of being one-in-number with something else (what coincides), specifically a builder, that the doctor can be said to build.

Applying this distinction to the case at hand, since it is one thing to be a potential statue, and another to be bronze, a single item that is both bronze and a potential statue will have one thing as its *entelecheia* in virtue of being a potential statue (i.e. *qua* potential statue), and another thing as its *entelecheia* in virtue of being bronze (i.e. *qua* bronze).³⁵ Still, even the latter *entelecheia* is in a looser sense an *entelecheia* of the potential statue; it qualifies as an *entelecheia* of the potential statue in virtue of the fact that the potential statue is also something else, bronze. But if being bronze and being a potential statue were the same (if the potential statue and the bronze were 'the same without qualification and according to definition', 201^a32–3), then the *entelecheia* that belongs to something in virtue of its being bronze would also belong to it in virtue of its being a potential statue. That *entelecheia* too would then qualify as a change according to Aristotle's definition.³⁶

While both curing and building could be denoted by the description 'activity of the doctor'³⁷ taken loosely, adding the phrase '*qua* doctor' will narrow the extension of the description to just one of these, namely curing. But it will narrow the extension in this way only because, in a stricter sense, curing is the *only* activity of the doctor. It is the only activity that belongs to the doctor in virtue

³⁵ Here I am assuming that the *ἐντελέχεια* of X *qua* X, given that X is also Y, is also the *ἐντελέχεια* of Y *qua* X. Although Aristotle in the current passage uses only the former sort of description, it is clear from the fact that he takes himself to be elucidating the function of the *qua*-phrase that he intends his remarks to apply to the latter sort of description. That is, he is explaining why adding '*qua* potential statue' to '*ἐντελέχεια* of the potential statue' yields a different extension from adding '*qua* bronze', or even not adding anything at all.

³⁶ Similarly, the fact that what is capable of health and what is capable of sickness are merely one-in-number allows that being healthy and being sick are different ('otherwise to be sick and to be healthy would be the same', 201^b1–2). Presumably we are to think of being healthy and being sick as the *ἐντελέχειαι* of what is able to be healthy *qua* able to be healthy, and of what is able to be sick *qua* able to be sick, respectively. If what is able to be healthy and what is able to be sick were the same not only in number but also in being, we could not distinguish the two *ἐντελέχειαι* in this way: being sick, for example, would also be the *ἐντελέχεια* of what is able to be healthy that belongs to it in virtue of its being able to be healthy. We already know that this *ἐντελέχεια* is being healthy, so that 'to be sick and to be healthy would be the same'. But since being able to be healthy and being able to be sick are distinct, the *ἐντελέχεια* something has in virtue of the former need not be an *ἐντελέχεια* it has in virtue of the latter.

³⁷ *Physics* 1. 8 does not use such a phrase. But it does characterize all these activities as things the doctor does: 'the doctor cures' and 'the doctor builds' (191^b4–6).

of his being a doctor. We may thus call curing the *proper* activity of the doctor. The activities now excluded, such as building, are in this stricter sense activities of some other being with which the doctor coincides, and so activities of the doctor only '*qua* something else'. We may thus call them *accidental* activities of the doctor.

Similarly, both being built and the *entelecheia* of the bricks *qua* bricks (whatever this might be) could be denoted by the description '*entelecheia* of the potential house'. The phrase '*qua* such [potential]' will narrow the scope of the definition to one among what are, in this loose sense, several *entelecheiai* of the potential being. But it will do so only because being built (the change) is in a stricter sense the only *entelecheia* of the potential house; it is the only proper *entelecheia* of the potential house. The *entelecheiai* that the addition of the *qua*-phrase excludes are in this stricter sense *entelecheiai* of some being with which the potential being coincides; they are merely accidental *entelecheiai* of the potential being.

In this way, the *qua*-phrase does not add anything that is not implicit in the strictest reading of the remainder of the definition. Nevertheless, adding '*qua* potential' guards against a less strict understanding of the description '*entelecheia* of a potential being', on which it has a broader extension. This accords precisely with the use of such phrases (as well as some alternatives) in *Physics* I. 8. Aristotle's use of the *qua*-phrase is neither superfluous nor obscure, but something for which we are well prepared.³⁸

(c) '*Qua* such' and the products of change

We are now in a better position to understand why the *qua*-phrase cannot do what consensus interpreters ask of it. If the *qua*-phrase were to exclude the product of a change from the scope of the definition, the product would have to be a merely accidental *entelecheia* of the potential being. But this is implausible. The house, for example, seems to be a proper *entelecheia* of the potential house, if it is an *entelecheia* of the potential house at all; it is precisely because something is a potential house that, when actualized, it becomes a house.

³⁸ Kosman claims that the 'the most serious difficulty' with what he calls the 'actualization' reading is that it makes the *qua*-phrase superfluous ('Motion', 42). By 'actualization of X' he appears to mean 'becoming an actual X', so that it is not clear whether he thinks the same objection holds against my 'activity' reading. Hussey makes the stronger claim that, as he puts it, 'attaching' the *qua*-phrase to 'potential being' (which I take to be reading (b) above) 'give[s] no promise of sense' (*III* & *IV*, 58).

And it is not clear what other being, merely one-in-number with the potential house, has the finished house as its (proper) *entelecheia*. Neither the bricks (which, though one-in-number with the potential house, do not have the house as their proper *entelecheia*) nor the actual house (which is not one-in-number with the potential house) will do. And even consensus interpreters tend to suggest that the house is instead a *proper* actuality of the potential house. This is suggested by their engagement with the product puzzle and by the common idea that the product is the paradigmatic actuality of the potential being.³⁹ But in this case the *qua*-phrase, properly interpreted, could not exclude the product from the scope of the definition. In particular, the *qua*-phrase cannot discriminate between two different concepts or kinds of (proper) *entelecheia* of something, as Kosman's 'constitutive' and 'deprivative' actuality appear to be.⁴⁰ And the *qua*-phrase certainly cannot *add* changes to the extension

³⁹ It must be admitted that scholars are not always explicit on these issues. Coope, 'Change', takes Aristotle to exclude the *entelecheia* of bronze, *qua* bronze, by specifying that he means the *entelecheia* proper to the potential house, not bronze, in the way I have explained. But she then claims that this does not suffice to exclude the state of the finished product from the scope of the definition: 'There are two ways in which the bronze's potential to be a statue might, in this sense, be actual. One is for the bronze to be a statue, the other is for the bronze to be in the process of becoming a statue. For all that has been said so far, either of these could count as the actuality of the bronze's potential to be a statue, *qua* potential' (283). This suggests that the product too is a proper actuality of the potential being. But she then relies on an additional function of the *qua*-phrase, 'to emphasize that the actuality in question is the actuality of something insofar as it is merely *potentially* F', where 'being potentially a house, in the sense [Aristotle] means here, is incompatible with actually being a house' so that the potential house, i.e. the buildable, could not 'be actual' while still buildable (283). This suggests that the product is not an actuality of the potential being at all, since the product is no longer a potential being.

⁴⁰ Kosman's remarks in 'Motion' about the example of the stutter do not come down clearly on the question whether we should not understand 'constitutive' and 'deprivative' as specifying two different actualities of the same entity. He suggests both (i) that there are two kinds of perfection of something, deprivative (being rid of something) and constitutive (something's flourishing), which can be applied to the stutter. But he also claims that (ii) the two perfections are of the stutter '*qua* stutter', and of the stutter '*qua* speech' (or 'as the privation from which', 48) respectively, and it seems here that these *qua*-phrases have the stutter as their subject, indicating two aspects of the stutter. But if (ii) the *qua*-phrases indicate two different aspects of the stutter, then we do not need to (i) posit two notions of perfection. For the flourishing of the stutter and the flourishing of speech (of the 'stutter *qua* speech') are both perfections in the same sense. On the other hand, if (i) we are employing two notions of perfection, then there is no need for (ii) the *qua*-phrases to distinguish aspects of the stutter. Being rid of a stutter is different from the flourishing of that same stutter. Despite this unclarity, the general thrust of Kosman's account suggests that (i) rather than (ii) represents his view.

of a definition that would otherwise pick out only the products of change, as Kosman suggests.

(d) *A difficult passage*

The consensus interpreter will object that in the immediately following passage Aristotle explains how the *qua*-phrase excludes the products of change.⁴¹ This passage, in fact, is thought to show that Aristotle saw a genuine threat of including the products of change in the definition, since they are *energeiai* and *entelecheiai* of potential beings, so that the *qua*-phrase, as the only available option, must exclude them. I consider the passage in two steps, beginning with the main argument:

ὅτι μὲν οὖν ἐστὶν αὕτη, καὶ ὅτι συμβαίνει τότε κινεῖσθαι ὅταν ἡ ἐντελέχεια ἢ αὐτῇ, καὶ οὔτε πρότερον οὔτε ὕστερον, δῆλον· ἐνδέχεται γὰρ ἕκαστον ὅτε μὲν ἐνεργεῖν ὅτε δὲ μὴ, οἷον τὸ οἰκοδομητόν. καὶ ἡ τοῦ οἰκοδομητοῦ ἐνέργεια, ἢ οἰκοδομητόν, οἰκοδόμησις ἐστὶν (ἢ γὰρ οἰκοδόμησις ἢ ἐνέργεια [τοῦ οἰκοδομητοῦ] ἢ ἡ οἰκία· ἀλλ' ὅταν οἰκία ᾖ, οὐκέτ' οἰκοδομητὸν ἐστὶν· οἰκοδομεῖται δὲ τὸ οἰκοδομητόν· ἀνάγκη οὖν οἰκοδόμησιν τὴν ἐνέργειαν εἶναι)· ἢ δ' οἰκοδόμησις κίνησις τις. (201^b5–13)

That change is this, and that it happens that something is being changed when there is this *entelecheia*, and neither before nor after, is clear. For each thing admits at one time of *energein* and at another time not, for example the buildable; and the *energeia* of the buildable, *qua* buildable, is the *oikodomēsis* . . . and the *oikodomēsis* is a kind of change.⁴²

Here Aristotle announces his aim: to confirm his definition by showing that it picks out change, or at least that what it picks out is simultaneous with change. And he will do this by focusing on the case of the buildable. The *entelecheia* of the buildable is identical to, or at least simultaneous with, the relevant change. Aristotle's argument for this conclusion, at least in outline, is straightforward. He identifies the building process (*oikodomēsis*) both with the *entelecheia/energeia* specified by his definition (Aristotle switches terms within this passage) and also with what is intuitively the relevant change. So much is relatively clear and uncontroversial. But Aristotle's support for the identification of the *oikodomēsis* with the

⁴¹ See Kosman, 'Motion', 54, and Coope, 'Change', 283. This passage is the basis of the temporal reading offered by Penner, 'Verbs', 430–3, and Kostman, 'Definition', 6; see n. 29 above.

⁴² In the translation I have left out the parenthetical remark.

relevant *energeia* at 201^b10–13, omitted in the above translation, is grammatically ambiguous. According to the standard grammatical reading, it is as follows:

For either the *oikodomēsis* is the *energeia*, or the house [is the *energeia*]. But when the house is, the buildable no longer is; the buildable is being built. So the *oikodomēsis* must be the *energeia*. (201^b10–13)⁴³

This standard reading of the passage appears to support the idea that the house is an *energeia* of the buildable ('for either the *oikodomēsis* is the *energeia*, or the house [is the *energeia*]', 201^b10–11) and so an entity that Aristotle's definition runs the risk of including. His subsequent exclusion of the house is then taken to explicate the function of the *qua*-phrase, in line with the consensus interpretation.

Granting the standard grammatical reading for now, let us look more closely at how Aristotle excludes the house. He places a constraint on when the relevant *energeia* can exist and points out that the house does not meet this constraint. In general, 'each thing admits at one time of *energein* and at another time not' (201^b7–8). He then applies this principle to the particular case of 'the buildable' in order to show that his definition excludes the house. In accordance with an earlier claim that potential and actual being are exclusive (201^a19–22), he claims that once there is a house, the buildable is no longer (201^b11),⁴⁴ and excludes the house on that basis. The constraint is thus that the relevant *energeia* can exist only when the buildable exists; the house does not meet this constraint. The passage at 201^b10–13 is usually taken to provide a constraint on being the *energeia* of the buildable *qua* buildable, leaving open the possibility that some other *energeia* of the buildable—an *energeia* of the buildable not *qua* buildable—might exist even when there is no longer anything buildable. But Aristotle simply does not say this. Rather, I claim, he provides a constraint on being any *energeia* of the

⁴³ The Greek text is given above; see further n. 45 below.

⁴⁴ I am, however, reluctant to ascribe to Aristotle the view that potential being never persists through a change. The reading of 201^b5–13 above, inspired by Waterlow's discussion (*Nature*, 117–18), depends only on the thesis that potential being is extinguished by the end of the change in this particular case, not on a general extinction thesis. Aristotle's treatment of potential and actual being as exclusive here and earlier in the chapter may be a heuristically useful simplification, in much the same way that, according to D. Ebrey ('Why Aristotle Needs Matter', unpublished manuscript), Aristotle relies on the persistence of matter in *Physics* 1. 7.

buildable, whether ‘*qua* buildable’ or not.⁴⁵ Aristotle’s exclusion of the house does not illustrate the function of the *qua*-phrase.

In support of this claim, note that taking the *qua*-phrase to exclude the house in this passage does not sit well with his explanation of the phrase’s function in the preceding lines. There he explained that the *qua*-phrase distinguishes *energeiai* of two beings that are one-in-number, as one might distinguish between the *entelecheiai* of what is capable of health and what is capable of sickness, which are one-in-number by sharing an underlying subject (whether moisture or blood). In the present text, however, we are not asked to distinguish between two candidate *energeiai* that are proper *energeiai* of two coinciding beings. It is rather that once the house exists, we are not left with anything buildable. Whatever we are left with—whatever the house might be the *energeia* of, if it is the *energeia* of anything—is not one-in-number with the buildable. Moreover, Aristotle’s use of *energein* (201^b8) in stating the principle by which he excludes the house is difficult to square with the consensus reading of the *qua*-phrase. For first, *energein* is a substitute for *energeia* (and presumably, *entelecheia*) but the house does not seem to be an instance of something’s *energein* at all. Aristotle appears to be drawing on the plausible idea that something cannot engage in activity when it does not exist. Second, even if it is granted that being a house is an instance of something’s *energein*, still it is not an instance of the potential house’s *energein*—even accidentally—so long as the potential house does not persist into the finished house, as Aristotle here maintains.

One might object that Aristotle considers the house an *energeia* of the buildable when he considers its candidacy for what the definition picks out: ‘either the *oikodomēsis* is the *energeia*, or the house [is the *energeia*]’ (201^b10–11). If so, one might reason, the *qua*-phrase *must* be responsible for excluding the house. But the fact that Aristotle brings up the house as a candidate for the *energeia* of the buildable *qua* buildable does not imply that he thinks it is or has any plausible claim to be that *energeia* (or any other *energeia*). In par-

⁴⁵ Note that my reading alone can accommodate *τοῦ οἰκοδομητοῦ* at line 201^b10, found in MS E (tenth cent.) and in Themistius. With these words included, the text reads (again, on the standard grammatical reading): ‘For either the *οἰκοδόμησις* is the *ἐνέργεια* of the buildable, or the house [is the *ἐνέργεια*]’ (201^b10–11). If Aristotle meant to specify the *ἐνέργεια* of the buildable *qua* buildable, as opposed to that of the buildable (but not *qua* buildable), he would not characterize the former as ‘the *ἐνέργεια* of the buildable’.

ticular, he simply does not say that the house is an *energeia* of the buildable, or that his definition, without the *qua*-phrase, would pick it out. Moreover, there are several plausible explanations for his bringing up the house. He might do so because the house, though not the *energeia* of the buildable, is an *energeia*, perhaps in some extended sense (see Section 5 below); or because others had difficulty defining change in a way that excluded the products of change; or because only the *oikodomēsis* and the house bear any kind of *per se* connection to the potential house. Whatever the explanation for the house's candidacy, the contrast between the house and the *oikodomēsis* allows Aristotle to illustrate how his definition picks out the change by specifying the subject that undergoes it.

So, even on the standard grammatical reading of this passage, it should not be taken to support the consensus reading of the *qua*-phrase. And on the alternative grammatical reading of the passage, the proposition that the house is a candidate for the relevant *energeia* is not so much as entertained:

For either the *oikodomēsis* is the *energeia* or [the *oikodomēsis* is] the house. But when the house is, the buildable no longer is; the buildable is being built. So the *oikodomēsis* must be the *energeia*. (201^b10–13)

On this reading, the passage considers two candidates for the *oikodomēsis*, the *energeia* and the house, and rules out the latter, thus supporting the earlier claim that 'the *energeia* of the buildable, *qua* buildable, is the *oikodomēsis*' (201^b9–10). One advantage of this reading is that on it Aristotle focuses on limiting the duration of change (the *oikodomēsis*, which is assumed to be a change at 201^b13) so that change occurs *only* when the relevant *energeia* occurs, in line with his explicit aim, which is to argue that 'something is being changed when there is this *entelecheia*, and neither before nor after' (201^b5–7). On the standard reading, Aristotle instead limits the duration of the *energeia* to that of the relevant change (i.e. *oikodomēsis*).⁴⁶

⁴⁶ Pieter Sjoerd Hasper has persuaded me of the plausibility of the alternative reading and pointed out the advantage of it mentioned above. However, I find it very difficult to understand why Aristotle should consider the possibility that the *οἰκοδόμησις* is the finished house. My worry is not that it is obviously, perhaps analytically, false that the *οἰκοδόμησις* is the house. Aristotle need not be taken to be responding to a plausible alternative view. My worry is that on this reading the extension of Aristotle's definition, which is supposed to be puzzling and difficult to understand, is treated as given. On the standard reading, there is something in the way of an explanation of *how* the definition manages to pick out changes.

(e) 'Qua such', the product puzzle, and actuality

I have argued that the *qua*-phrase cannot be responsible for excluding the products of change from the scope of the definition, as the consensus interpretation claims. It follows, I think, that the products of change are not in fact *entelecheiai* and *energeiai* of potential beings, as they are widely assumed to be.⁴⁷ For there is no other mechanism that could then exclude the products of change from the scope of the definition. Once this widespread assumption, that the products of change are *entelecheiai* and *energeiai* of potential beings, is given up, the product puzzle can be rejected out of hand. At the very least, Aristotle does not recognize a risk of picking out the products. And without the assumption that the products of change are *entelecheia* and *energeiai* of potential beings, the sometimes elaborate accounts of how the *qua*-phrase distinguishes products from changes become superfluous.

The problematic assumption that the products of change are *entelecheiai* and *energeiai* of potential beings is entailed by the conjunction of two more basic theses: (i) that *entelecheia* and *energeia* mean 'actuality', and (ii) that the products of change are *actualities* of potential beings.⁴⁸ It should be noted that commentators have

⁴⁷ This assumption is to be distinguished from the similar assumptions that the house (or its form) is an *ἐνέργεια* and *ἐντελέχεια* (full stop), or an *ἐνέργεια* and *ἐντελέχεια* corresponding to a certain potentiality, or an *ἐνέργεια* and *ἐντελέχεια* that some potential is for or directed towards. In view of how often this assumption is made, it is surprising that there is little direct textual evidence in its favour. Aristotle's use of 'ἐνέργεια of X' almost always refers to the activity that X engages in. As far as I know, the only place where Aristotle clearly characterizes the product of a change (or its resulting form) as the *ἐνέργεια* of what is capable of becoming it is at *DA* 2. 2, 414^a8–10, where Aristotle claims that health, which is in one sense that by which we are healthy (*ὑγιαίνομεν*), is 'a sort of shape and form, and account and as it were *energeia* of what is receptive . . . [i.e.] of the curable [*ὑγιαστοῦ*]' . Note that Aristotle is here talking about *health* (*ὑγίεια*) as an *ἐνέργεια*, whereas *Phys.* 3. 1, 201^a34–^b3, is about *being healthy* (*ὑγιαίνειν*), which is in the *DA* passage something we do by virtue of health. The situation with *ἐντελέχεια* is more difficult. In general, 'ἐντελέχεια of X' seems to refer to that in virtue of which something is an X *ἐντελεχεία*, or if not that, at least to that in virtue of which an X (while still X) is the kind of being an X is directed at *ἐντελεχεία*. A full defence of this point would require analysis of several quite difficult and controversial passages; for example, the soul is said to be the *ἐντελέχεια* of an instrumental body, of a body potentially having life (*DA* 2. 1, 412^a19 ff.); light is the *ἐντελέχεια* of the transparent (*DA* 2. 7, 419^a11); the pilot is the *ἐντελέχεια* of the ship (*DA* 2. 1, 413^a8–9). I am not convinced that there is a standard use of 'ἐντελέχεια of X' on which the existence of the *ἐντελέχεια* requires the extinction of X.

⁴⁸ For these reasons, among others, I think the most plausible 'actuality' interpretation will read *ἐντελέχεια* as 'constitutive actuality' unambiguously and independently of the *qua*-phrase, so that the products of change will not qualify as *ἐντελέχεια*

overwhelmingly endorsed the second thesis. In fact, they have often suggested that the products of change are proper or paradigmatic actualities of potential beings, and for this reason they have looked to—and in my view misconstrued—the *qua*-phrase in order to exclude them. In any case, my rejection of the consensus reading of the *qua*-phrase provides an additional, albeit conditional objection to the consensus reading of *entelecheia* and *energeia* as ‘actuality’—conditional on the idea that the products of change are actualities of potential beings.⁴⁹

3. Change as the proper activity of potential being

In this section I present my interpretation of each part of the definition, drawing on the account of the *qua*-phrase already begun, and explain how the definition manages to pick out changes without circularity.

(a) Activity

Aristotle defines change as a kind of *activity*, rather than actuality. I reject much of the framework for thinking about Aristotle's definition that has provided support for the latter reading and believe that my reading can avoid many of the problems that we have encountered with it. As far as the text of *Physics* 3. 1–3 is concerned, my reading would be the most natural by far had Aristotle used only the term *energeia* in characterizing change. I address his use of the

of potential being at all. As I mentioned earlier, a looser conception of the sense in which change is an ‘actuality of’ potential being—or worse yet, a failure to specify such a sense precisely—may make it more difficult to deny that the products of change qualify as actualities of potential being, and so increase the risk of picking out the products of change.

⁴⁹ There is another way in which my analysis of the *qua*-phrase so far, as specifying that Aristotle means the proper rather than accidental *ἐντελέχεια* and *ἐνέργεια* of the potential being, is difficult to square with a reading in terms of actuality. To speak of an ‘accidental actuality’—especially an ‘accidental constitutive actuality’—of something is awkward in the way that it would be awkward to speak of something's ‘accidental *οὐσία*’ or ‘accidental matter’. To be sure, one could, if necessary, find sense to assign to such phrases. Still, talk of the actuality of a thing is naturally and immediately understood to refer to its proper actuality, so that Aristotle's emphasis on the *qua*-phrase seems misplaced. Versions of this point were brought to my attention on separate occasions by Klaus Corcilius and Christoph Helmig, although they might not see it as supporting my reading of *ἐντελέχεια* and *ἐνέργεια*.

term *entelecheia*, which does not elsewhere mean ‘activity’, in Section 5 below.

Menn⁵⁰ shows decisively that the *Protrepticus*, *Eudemian Ethics*, *Topics*, and *Magna Moralia* use *energeia*, often interchangeably with *chrēsis* (use), to refer to the exercise of a *dunamis* or *hexis*. The paradigmatic case is that of using or exercising knowledge as opposed to merely having it, and Aristotle applies the same language to sense perception, living, and virtue. It should be noted, however, that *energeia* applies indiscriminately to end-containing activities, the realizations of *hexeis* (such as contemplation and seeing), and ‘ordinary’ changes. The distinctions of *De anima* 2. 5 and *Metaphysics* Θ 6 between types or levels of *energeia* are not in evidence in these works. The concept of activity, as the standard meaning of *energeia*, is also indiscriminate between agency, i.e. acting on something, and ‘patiency’, i.e. suffering or being acted on. In particular, when the patient of change is changing, it is exercising a potential. It is in this sense engaged in activity. This point is crucial, since I take Aristotle to define change as the patient’s activity of suffering.

Thus Aristotle has a concept of *energeia* as activity that uncontroversially covers changes but is not limited to them, so that he may use it to define change without circularity.⁵¹ And in employing this concept in his definition of change, Aristotle is not characterizing change in terms of some specialized kind of *energeia*, such as *hexis*-realization or end-containing activity, with which change is otherwise contrasted. In this regard, my interpretation draws on the well-attested Aristotelian thesis that all, but not only, changes are activities. It does not require attributing to him stronger and more questionable theses about the metaphysics of change.

It is extremely important to distinguish this notion of activity from that of actualization. Actualization, at least as I understand it, involves reference to an initial state before the actualization and to a state of being actual that the actualization aims to reach. Actualization is a transition from potentiality to actuality. This is the source of a circularity charge I mentioned earlier.⁵² But the concept

⁵⁰ S. Menn, ‘The Origins of Aristotle’s Concept of *Ἐνέργεια*: *Ἐνέργεια* and *Δύναμις* [‘Origins’], *Ancient Philosophy*, 14 (1994), 73–114 at 78–87.

⁵¹ Waterlow, *Nature*, 113–14, points this out.

⁵² Whether a definition in terms of ‘actualization’ is in fact circular depends on whether the relevant notion of transition is identical to the notion of change being defined. Thus, one might take ‘actualization’ to apply also, for example, to the transition from merely having knowledge to actively contemplating, while denying that

of activity is, as I mentioned, wider than, and thus distinct from, that of change. Moreover, activity is not essentially a transition to actuality, since there are activities that are their own ends, and so already involve being in the relevant state of actuality.

Finally, reading *entelecheia* and *energeia* as 'activity' brings to the fore a threat to Aristotle's definition: that it will also pick out activities that are not changes. Exactly which activities these are remains controversial. My own view is that Aristotle's definition should exclude (i) the realizations of *hexeis* discussed in *De anima* 2. 5, such as seeing and contemplating, (ii) end-containing activities as specified at *Metaph.* θ 6, 1048^b18–35, and (iii) transitive agency—an agent's acting on (even changing) a patient (leaving open how these three classes intersect). But it is not obvious how these activities should be excluded from the scope of the definition. Note that most if not all of them are activities of potential beings. For example, contemplation (of the human variety) is the activity of a 'potential knower' in the sense specified at *DA* 2. 5, 417^a27–8; in fact, it is the activity that a potential knower engages in, as Aristotle might put it, '*qua* potential knower'. Here I would like to point out only that excluding these activities is no more a challenge for my interpretation than for an interpretation in terms of actuality. For if changes are actualities of potential beings, then surely some of these activities are as well; indeed, realizations of *hexeis* and end-containing activities are often taken as models for thinking of change as actuality.⁵³

this transition is a change. In my view, the most decisive objection to the 'actualization' reading is that neither *ἐντελέχεια* nor *ἐνέργεια* means 'actualization'. This is especially clear if 'actualization' is understood broadly as suggested above. For while the continuous realizations of *ἕξεις* (e.g. seeing, contemplating) are characterized as *ἐνέργειαι*, the transitions to those activities are merely transitions 'to *ἐνέργεια*' (*DA* 2. 5, 417^b1) but not themselves called *ἐνέργειαι*.

⁵³ Kosman's answer to this challenge, as far as I can tell, is that in the case of change alone there is an 'ultimate' actuality distinct from it, which is deprivative ('Motion', 57), or that 'for an *energeia* [in the sense of end-containing activity] there is no difference between the acting out of a potentiality *qua* potentiality and the acting out of that potentiality *simpliciter*' ('Substance', 130). These claims, however, imply that the non-change activity at issue is still a 'constitutive actuality' and 'the acting out of a potentiality *qua* potentiality' (whatever else it might be in addition), and so do not explain why it should be excluded from the definition's scope. See above, n. 20. Commentators often rely on the distinction between end-containing and end-exclusive activities at *Metaph.* θ 6, 1048^b18–35, in order to exclude certain activities from the scope of Aristotle's definition. See Penner, 'Verbs', 447, Gill, 'Causal Action', 136, and Waterlow, *Nature*, 186. However, it is not clear whether the account of change in *Physics* 3. 1–3 involves or implies that distinction.

(b) *Potential being*

I take Aristotle to be talking about potential *being* rather than potential *becoming*. The kinds of potential being Aristotle has in mind are more specifically potential being in the four categories of substance, quality, quantity, and place. Also, I mean potential being (*dunamei on*) rather than the power or capacity (*dunamis*) in virtue of which something is a potential being. For example, I mean an acorn that is a potential tree rather than the acorn's capacity to become a tree.⁵⁴ Thus, for example, alteration is defined as the activity of what is potentially qualified, not of what is potentially in process of alteration, nor of the power or capacity (*dunamis*) to be or become qualified.

Regarding the choice between potential being and potential becoming, it must be admitted that Aristotle repeatedly, and more often than not, refers to the subjects of change as the 'changeable', the 'alterable', etc., and this preponderance suggests that he means a potential 'becomer' after all. I believe, however, that such an interpretation is unwarranted, though Aristotle's use of such terms cannot be fully explained away.

First, as several scholars have pointed out, an interpretation in terms of potential becoming would make the definition vulnerable to a straightforward charge of circularity, and is thus extremely uncharitable.⁵⁵ Second, when Aristotle introduces the relevant concept of potentiality, it is clear that he has in mind potential being rather than becoming. Aristotle begins the discussion of

⁵⁴ This is important in so far as one might naturally take 'ἐνέργεια of a δύνανμις' to mean something like 'exercise of a potential', which would not obviously make sense if applied instead to some actual being (e.g. 'exercise of bronze'). This is not to deny that the ἐνέργεια of a potential being is in general the exercise of the corresponding δύνανμις. The present passage offers no indication that talk of δυνάμει ὄντα can be reduced to talk of δυνάμεις, or of how such a reduction might go, except for the interpretative desideratum that the relevant sense of δύνανμις not be itself defined in terms of change.

⁵⁵ See Kosman, 'Motion', 44; Waterlow, *Nature*, 114; and Coope, 'Change', 281. I am not convinced by Charles's attempt to defuse the charge by claiming that phrases such as 'changeable' leave 'a gap for a positive characterization of the basis and nature of the relevant capacity' (*Action*, 20–1). For aside from telling us that changes issue from capacities for change, this account, as Charles admits, 'rests on the assumption that there is a distinctive type of capacity which is actualised in all cases of change' (21). The problem is that we have no independent grasp of what this 'positive characterization' is, and so of what the capacity is, and so we have gained no insight into what change in general or each kind of change is. This will not help us understand what φύσις (nature) is, which is the explicit purpose of the definition of change.

change by introducing the concepts of being potentially (*dunamei*) and being *entelecheiāi*, which comprise one of the four divisions of being that are candidates for separate study in the *Metaphysics*.⁵⁶ The adverbial dative uses of *dunamis* and *entelecheia* here (200^b26–9) are meant to modify kinds of (categorical) *being*. That Aristotle intends to rely on a distinction between potential and actual categorical being is evident also from the very sentence that offers the first statement of his definition, where that distinction is repeated: ‘these having been distinguished according to each kind [*genos*] [of being], [being] actually and [being] potentially, the *entelecheia* of the potential being, *qua* such, is change’ (201^a9–11). In addition, since this is the first statement of the definition, it should be given significant weight. Finally, when Aristotle uses phrases of the form ‘what is F potentially [*dunamei*]’ in this chapter to talk about particular examples, he talks only about beings in the categories of quality and substance: ‘what is potentially cold’ (201^a21–2) and ‘what is potentially a statue’ (201^a30).

Nothing I have said above explains away Aristotle’s employment of the troublesome phrases such as ‘changeable’ and ‘alterable’. Perhaps, having given his general definition of change and made clear that it is intended to employ the concept of potential being, Aristotle turns his attention at least partly to classifying and distinguishing the different kinds of *kinēsis* in the way that his general definition suggests: different types of change will be proper activities of different types of potential being. That this is an important task can be seen, for example, in the opening chapters (especially 1. 1) of *On Generation and Corruption*, where one of the framing questions is whether generation and alteration are the same or different, or in *Physics* 7 and 8, where various relations, dependencies, and contrasts are posited between different kinds of change. A word such as ‘alterable’, although it does not mention the category of being which the object is potentially, characterizes the subject of a certain kind of change in a way that invites one to correlate it to the particular kind of change it undergoes. Talk of ‘the alterable’, while strictly inappropriate in a context of defining alteration, is thus understandable if Aristotle’s interest has shifted partly to showing how the structure of his definition allows him to classify and distinguish types of change. In addition, there is no single word that means ‘potentially

⁵⁶ See *Metaph.* Δ 7 and E 2, 1026^a33–^b2.

qualified', and so on, for each of the four relevant categories, making talk of potential being rather cumbersome.⁵⁷

So far I have argued that Aristotle intends to characterize change in terms of potential being rather than potential becoming—that terms such as 'potential being', rather than terms such as 'changeable', represent his considered view. But even if this is granted, a deeper concern remains, namely, that even talk of potential being (*dunamei on*), for Aristotle, can ultimately be understood only in terms of change. For there is only one analysis of the term *dunamis* that could plausibly be taken to be a definition of the term, and it characterizes *dunamis* in terms of change (*Metaph. Θ 1, 1045^b32–1046^a19; Δ 12*). I cannot here address this deeper concern.⁵⁸

(c) 'Qua such'

With the phrase 'qua such' Aristotle makes it clear that he means the proper activity of a potential being, rather than just any, even

⁵⁷ The reasons Gill, *Paradox*, 189, cites for Aristotle's use of 'changeable' etc. are of a similar nature, but she also suggests that these phrases are intended to capture the idea that the notion of potential being at issue is privative. I do not find either of our explanations fully satisfying because Aristotle insists that, just as there is no being apart from and common to the various categories of being, since change is always change according to some category, neither is there change apart from (and presumably common to) the particular species of change (200^b32–201^a3). This suggests that Aristotle needs to define the species of change in addition to (if not instead of) change in general. But he nowhere gives a definition of a species of change in terms of potential being in the relevant category. For terms such as 'alterable' infect every characterization of an individual species of change.

⁵⁸ There are, I think, (at least) three ways in which one might reasonably resist the force of these considerations. First, one might claim that in an adverbial dative construction such as *δυνάμει ὄν*, which appears in the definition of change ('potential being'), the term *δύναμις* takes on a meaning different from, and independent of, the notion of *δύναμις* as capacity. That the adverbial dative construction involves a *different* meaning of *δύναμις* ('potentiality' rather than 'capacity' or 'power') is suggested by many recent studies of *Metaphysics Θ*: M. Frede, 'Aristotle's Notion of Potentiality in *Metaphysics Θ*', in T. Scaltsas, D. Charles and M. L. Gill (eds.), *Unity, Identity, and Explanation in Aristotle's Metaphysics* (Oxford, 1994), 173–93; C. Witt, *Ways of Being: Potentiality and Actuality in Aristotle's Metaphysics* (Ithaca, NY, 2003); S. Makin, *Aristotle: Metaphysics Book Theta* (Oxford, 2006). These studies do not, as far as I can tell, take a stand on whether the notion of potentiality is *definitionally independent* of the notion of capacity. They also do not explicitly address the circularity problem arising from the use of *δύναμις* in the definition of change. A second strategy is to accept that talk of *δυνάμει ὄντα* is to be understood in terms of capacities but to insist that these are capacities for being rather than the capacities characterized in terms of change in *Metaphysics Θ 1* and *Δ 12*. Third, one could accept that talk of *δυνάμει ὄντα* is to be understood in terms of those capacities characterized in terms of change, but insist that those capacities can *also* be understood without reference to change, as capacities for being. See Waterlow, *Nature*, 114–15.

accidental, activity of that being. The *qua*-phrase thus enables the definition to exclude activities that, strictly speaking, are activities of a being with which the potential being merely coincides. The phrase cannot do what the consensus interpretation requires of it—to exclude the products of change—but no such need arises for my interpretation, since the products of change are not activities of potential beings.⁵⁹

Up to now I have focused on the extensional work of the *qua*-phrase, but the phrase's function does not consist entirely or even primarily in excluding some other activity it might otherwise be taken to include. More generally, the purpose of the definition is not merely to specify the right extension. Indeed, if we focus only on the extensional work of this aspect of Aristotle's definition, his choice of examples is perplexing. What Aristotle does with the case of the bronze that is also a potential statue (201^a29–34) is straightforward enough, but we may wonder what the activity of bronze *qua* bronze amounts to. Is there a proper activity of being bronze—something perhaps easier to accept in the case of living organisms—or perhaps no such proper activity at all?⁶⁰ The extensional function of the *qua*-phrase might be better illustrated by a case of two uncontroversial *energeiai* belonging, the one properly, the other accidentally, to the same being. If, for example, an object grows and alters at the same time, we can distinguish these *energeiai* as different kinds of change by noting that they are properly speaking *energeiai* of different beings, the one of what is potentially so-qualified, the other of what is potentially large.⁶¹

Turning away from extensional concerns, let me now say more about what the *qua*-phrase contributes to the meaning of the definition. Earlier, I said that to be the proper *entelecheia* (or *energeia*)

⁵⁹ At least there is no general need. But perhaps there are cases in which being is an activity—the activity, for example, of being human. My position is consistent with at least a version of this Thomistic view. So long as these *actus essendi* are proper activities of actual rather than potential beings, they will be not be picked out by Aristotle's definition, as I understand it. See Kosman, 'Substance', n. 1, and Menn, 'Origins', 77–8, esp. n. 8, on the Thomistic view.

⁶⁰ On this reading, Aristotle does not presuppose that there is such an activity, but only points out that change, as he defines it, is not such an activity, as the current Spanish king might say, 'Of France, I am not the king'.

⁶¹ As for activities that are not changes of any kind, e.g. contemplation, the *qua*-phrase may well distinguish the proper subject of change from the proper subject of contemplation. This alone would not explain why, for example, contemplation does not satisfy the definition by being the proper activity of its proper subject.

of some being is to qualify as that being's *entelecheia* in virtue of that being's being what it is, as opposed to its being something else. This cumbersome phrasing reflects a desire to remain neutral on the interpretation of *entelecheia* and *energeia*. We may now ask, more specifically, what is meant by calling change the proper *activity* of some being, i.e. that being's proper *energeia* in the broad sense I have mentioned. To start, the definition clearly picks out two entities that are for Aristotle related as (material) cause and thing caused—the proper subject of change and the change itself that this subject undergoes. The fact that the definition picks out causally related entities does not yet imply that the definition *posits* such a causal relation. However, it seems to me that to call change the proper activity of something is to posit a causal relation between change and that whose activity it is. We may speak loosely of any activity a thing engages in as an instance of its *energein*. But to specify the activity as a being's *proper* activity—as the activity of that being 'qua such'—is for Aristotle to specify the activity as causally explained by that being.⁶² If so, we may reformulate the definition as follows: change is the activity a potential being engages in *because* it is a potential being.

Aristotle's aim is to say what change is, and this requires saying what being it is whose proper activity is change, even if that being always, even necessarily, coincides with some other being. To bring out this point, consider the view that the privation and the relevant potential being (which I take to be *matter*) are necessarily one-in-number during the change.⁶³ For example, the unmusical and the potentially musical (the man) are necessarily one-in-number during the man's becoming musical. Thus, becoming musical is in some sense the activity of the unmusical. But Aristotle would forcefully deny that becoming musical is the proper *energeia* of the unmusical—that something becomes musical because it is un-

⁶² However, not every being—not even every potential being—is the *material* cause of its proper activity. For example, an agent (e.g. a housebuilder) is the efficient, not material, cause of its own proper activity. If such an agent is also to be described as a potential being, then the proper activity of a 'potential being' in this sense need not have that potential being as its material cause. I have here benefited from a related suggestion made by Christian Pfeiffer that Aristotle's use of *δύναμις* and *ἐνέργεια* can often be seen as indicating that the phenomenon they describe is a causal structure of one sort or another.

⁶³ This view seems to me implied by the present text in combination with *Physics* 1. On this necessity see S. Kelsey, 'Aristotle *Physics* I. 8', *Phronesis*, 51 (2006), 330–61.

musical, just as he denies that what is musical comes-to-be from what is not musical, *qua* not musical.⁶⁴

4. Aristotle and his predecessors

One might worry that the account I have offered leaves Aristotle without a compelling response to his predecessors—Parmenidean and others—who harboured doubts about the possibility or ontological status of change.⁶⁵ Faced with such worries, scholars contend, Aristotle responds, as he must, by defining change as an actuality.⁶⁶ (The unremarkable idea that change is an activity is comparatively impotent in this regard.) But it is rather the rest of the definition, 'of a potential being, *qua* such', that is crucial in responding to such doubts. This part of the definition enables Aristotle to address the scientific respectability of change in a way that is deeply connected to his discussion of change in *Physics* 1, especially to his treatment of the so-called Parmenidean dilemma in chapter 8. As for the problematic previous accounts of change that he mentions in *Physics* 3. 2, Aristotle's central innovation is to see that the notion of potential being is needed, and how it should be employed, in giving sufficient conditions for change.

The suggestion that Aristotle should define change as an actuality in order to respond to his predecessors is implausible, both in general and with regard to the particular sorts of doubt at issue.

⁶⁴ I take Aristotle and his Parmenidean opponent to agree that this is impossible in *Physics* 1. 8. See 191^a27–31 for the statement of the opponent's position and 191^b13–18 for Aristotle's agreement on the version of that position mentioned above. Because Aristotle distinguishes matter and privation in *Physics* 1, and denies to the latter the status of that out of which, as such, things come-to-be, I am reluctant to have the definition depend on 'potential being' implying the corresponding privation. See Gill, 'Causal Action', 132, and *Paradox*, 190–1; Waterlow, *Nature*, 115–18; and Coope, 'Change', 283.

⁶⁵ Waterlow writes of the 'actualization' reading: 'to offer such a definition would be to give up the fight to show that process and change are themselves real and actual. For if one says only that a change tends towards some eventually actual end-state, one is left with no basis for maintaining that the tending itself is real while it continues and of an ontological status commensurate with that of the actuality brought about' (*Nature*, 112). Surely she would say the same about my 'activity' reading, except that it does not even have the virtue of implying that change 'tends towards some eventually actual end-state'. See also Johansen, *Sense-Organs*, 257–9, and Coope, 'Change', 280.

⁶⁶ See Waterlow, *Nature*, 109–12; Johansen, *Sense-Organs*, 257–9; Burnyeat, 'De anima II 5', 43, and 'Passage', 261 and 264; and Coope, 'Change', 280–2.

First and in general, Aristotle's definitions are intended to structure knowledge, and so we should hold them not to standards determined by the dialectical context in which he finds himself, but to standards of truth. This does not mean that definitions can be arrived at independently of consideration of the received views, or even that such definitions are useless in responding to his opponents. But if they are useful, presumably it will be because his opponents have overlooked some part of the nature of a thing that Aristotle's definition makes clear, or that they have failed to see how to define something without contradiction, or some such error.

Second, with regard to doubts about the very possibility and existence of change, even if Aristotle's opponents were to accept that change is by definition a kind of actuality, they might insist that the concept of change is not and perhaps cannot be instantiated for other reasons.⁶⁷ And in fact, many of them found the very concept of change problematic in ways that are simply not addressed by characterizing change as *entelecheia* or *energeia*, however these are understood. Aristotle's Parmenidean predecessors, for example, had an enormously influential argument behind their admittedly counter-intuitive conclusion,⁶⁸ an argument that works by showing that there is nothing *out of which* things could intelligibly come-to-be. To insist, against their conclusion, that change is something actual or otherwise ontologically respectable would be futile.

Third, with regard to doubts about the ontological status of change—for example, whether change is 'as real as anything else actual is real'—I have already argued that *entelecheia* and *energeia* do not mean 'actuality' in the connotations that would be most helpful here, namely, the senses of 'actuality' that are opposed to the merely possible or to the fictional, imaginary, or otherwise unreal. But if we draw more cautiously on the notion of *entelecheia* as a mode of being some kind of thing fully or completely, the

⁶⁷ The same goes for Kosman's suggestion in a later paper that Aristotle's definition 'is aimed precisely at explaining the respect in which becoming is a "kind" of being' ('Substance', 129), though he does not suggest that this might have any value against those who have doubts about the existence or ontological status of change. My claims here accord with what Aristotle says in *Posterior Analytics* 1. 8 and 2. 10 about definitions that are 'demonstrative' in that they are deductions that differ in arrangement. For the demonstration will depend on the existence of the prior terms as a premiss: in this case, for example, 'potential being'.

⁶⁸ Plato's *Parmenides* (128 A–D) represents Zeno as defending 'ridiculous' Parmenidean positions by showing that the alternatives are yet more ridiculous.

definition may not provide a characterization of change robust enough to counter doubts about its ontological status. On the 'constitutive actuality' proposal, for example, the relevant kind of being is *potential being*, so that the definition will say that a change is 'actually being a potential being', thus ascribing to change only the level of actuality that potential beings can achieve. The ontological status of change will be left no better off than that of potential being, and an opponent with doubts about the ontological status of change might well have similar doubts about that of potential being. And even for Aristotle, it is precisely in comparison with potential being that *entelecheia* as actuality is thought of as having a higher ontological status.⁶⁹ We shall see that while some thinkers relegated change to a lesser ontological status, this does not lie at the forefront of Aristotle's dispute with them.

I now offer an account of how the definition is useful in responding to two kinds of doubts mentioned above, taken in turn. As I understand it, Aristotle's dispute with the Parmenidean opponent in *Physics* 1. 8 involves not ontology but the structure of explanation. The Parmenidean is faulted for his failure to grasp a formal principle: that causal explanation is sensitive to the differences between merely coinciding beings. Aristotle seeks that out of which, *qua* itself, things come-to-be. Seeing that 'everything is or is not' (191^b26–7), the Parmenidean opponent thinks that 'what is' and 'what is not' are the only available candidates for this *per se* source of coming-to-be. He is unable to isolate the causal contribution of some third being (e.g. an acorn) since it would have to coincide with 'what is' or with 'what is not' (e.g. what is a tree or what is not a tree). That is, the opponent is unable to conceive of there being a third explanatory principle of change in addition to the agreed-upon opposites.⁷⁰

Aristotle's resolution of the dilemma in *Physics* 1. 8 commits him to the idea that that out of which, *qua* itself, things come-to-be—matter—must be one-in-number with, but distinct-in-being

⁶⁹ More generally, there is a tension between the idea that *ἐντελέχεια* should be understood as a mode of being *some kind of being actually* and the idea that the definition bolsters the ontological status of change by characterizing it as *ἐντελέχεια*. For if the first idea is correct, then simply specifying that change is an actuality will not necessarily imply that changes enjoy some unitary degree of actuality shared by all actual beings, but only that they enjoy the degree of actuality appropriate to the particular kind of being at issue.

⁷⁰ I hope to develop this interpretation elsewhere.

from, the privation. However, aside from some hints in *Physics* 1. 9 (192^a16–29), there is no indication in the first book of the *Physics* that matter essentially involves potentiality. In *Physics* 3. 1 Aristotle's allowance for potential being within his ontology is explicit.

Note that Aristotle's definition of change exploits the same formal principle in its use of the *qua*-phrase. For to say that change is the activity of a potential being '*qua* such' is to distinguish change from accidental activities of the potential being. These other activities will be proper activities of some other being with which the potential being coincides—perhaps even *must* coincide if it is to undergo change—such as the corresponding privation.

Moreover, such an intrinsic relation between a potential being and the change it undergoes is required for potential being to play the (unmistakably causal) role of matter in a change, i.e. as that out of which, *qua* such, something comes-to-be. To this extent, the definition of change provides the conceptual underpinnings for the idea that change has a material cause distinct from the two opposites, form and privation. Note that this point holds not only if the definition posits a causal relation between change and its subject, as I suggested earlier, but also if it posits only a weaker logical or conceptual relation.

Finally, this intrinsic connection between change and what undergoes it—a relation without which change will be left unintelligible—is here codified into an account of what change is, rather than a statement of the causes and principles of change. In sum, while Aristotle's treatment of the Parmenidean dilemma makes room for the requisite material cause of change by removing an obstacle to there being an explanatory principle of change in addition to the opposites, the definition of change specifies change as intrinsically tied to, and essentially explained by, potential being. The definition of change thus legitimates the enterprise of natural science in so far as it ensures that one of its primary objects of study is subject to scientific treatment.

One might think that the account of the dialectical significance of the definition given so far is equally available to an interpretation in terms of actuality. After all, if Aristotle defines change as the actuality of potential being, surely he means the *proper* actuality, so that the definition, so understood, will posit an intrinsic connection between the change and the potential being that is its material cause. However, an entity is not in general the material cause of its

own 'constitutive actuality'. For example, a man is not a cause of his constitutive actuality, in the sense of his actually being a man or that in virtue of which he is an actual man—his form. The actuality we are talking about here is already a component or aspect of the man. Similarly, the potential house is not a material cause of the alleged 'constitutive actuality' of the potential house; for this actuality (the being built) is on this view already a component or aspect of the potential house.⁷¹ And even if the proper activity of potential being can in some other way be understood as an actuality of that potential being—what I have expressed doubts about in Section 1(c)—this certainly does not add anything with respect to the causal underpinnings of change.

Aristotle does not mention a Parmenidean opponent in *Physics* 3. But he does compare his own definition favourably to others' attempts to understand change:

That this has been said correctly is clear both from what others say about change and from the fact that it is not easy to define it in another way. For one would not be able to put change and *metabolē* into another genus. This is clear if we examine how some people assign it, claiming that change is difference and inequality and what is not. None of these necessarily changes—neither when things are different nor when unequal nor when they are not; and *metabolē* is not even into or from these things any more than [into or] from their opposites. The reason for assigning it to these is that change is thought to be something indefinite, and the principles of the second column are indefinite because they are privative; none of them is a 'this' or a 'such', or belongs to any of the other categories. And the reason why change is thought to be indefinite is that it is not possible to assign it either to *dunamis* of things that are or to [their] *energeia*; for neither what is able [*dunaton*] to be of some quantity nor what is of some quantity in *energeia* [*energeiā*] necessarily changes. (201^b18–31)

I shall not give a full analysis of these views and their shortcom-

⁷¹ It may seem that, in insisting on this point, I am asking for too much precision in Kosman's (and perhaps Aristotle's) phrasing. Can we not discern, in the phrase 'ἐντελέχεια of the potential house', a reference to the bricks and planks in abstraction from, or even before, their being built? I think we cannot, because the definition would then refer not to the 'potential house', some component of which is the being built, but instead to the potential house considered merely as a 'potential potential house', that is, in a way we could equally consider the dormant bricks and planks. But if this 'potential potential house' is the entity the definition refers to as 'potential being', then we are no longer talking about that of which change is the *constitutive* actuality. For the change does not constitute actually being a 'potential potential house' any more than the form of man constitutes actually being a potential man.

ings. However, we may note the following: Aristotle certainly does consider views that define change as ‘difference and inequality and what is not’ and in general as indefinite and privative. He is thus concerned to counter views that, in these ways, relegate change to a lesser ontological status. However, first, Aristotle does not fault them for assigning to change a lesser status any more than he faults the view that change is (unqualified) *energeia* for assigning to it a greater status. His basic objection to these accounts of change is that they do not provide necessary and sufficient conditions for change, whether they are understood as attempting to specify the poles of change or the changing subject. And this form of objection applies equally to accounts of change as ‘difference, inequality and what is not’ and to accounts of change as *dunamis* or *energeia* of ‘things that are’. Different and unequal things, as well as ‘what is not’, neither necessarily change nor have a better claim than their opposites to being the poles of change (201^b21–4). Similarly, ‘things that are’ do not necessarily change, either when they are merely potentially or when they are ‘in *energeia*’ (201^b29–31). Second, although the first set of views Aristotle considers (that change is ‘difference, inequality, and what is not’) arise from a more basic thought that change is something indefinite (201^b24–5), this thought in turn arises from the thought that ‘it is not possible to assign it either to *dunamis* of things that are or to [their] *energeia*’ (201^b27–9). Thus, these theorists do not need to be told that change is something real. They need to be shown *how* to give sufficient conditions for change (how to ‘assign it’), so that they will not need to relegate change to the indefinite.

5. *Energeia* and *entelecheia*

Had Aristotle consistently used the term *energeia*, my position would be quite obvious and natural, and I mean to draw heavily on my understanding of that term. But his use of *entelecheia* is problematic for my interpretation since this term does not elsewhere have a connotation of activity. And the term *energeia*, used interchangeably here, appears to have a well-attested meaning of actuality in addition to its original one.

However, before appraising this challenge, I would like to review some of the conclusions reached so far concerning the philosophi-

cal support for, and ramifications of, the 'actuality' and 'activity' readings of these terms. I do so not only for the sake of summary, but also and more importantly in order to clarify the relative importance of Aristotle's use of these terms in assessing the two readings.

- (1) The 'actuality' reading is not necessary in order to avoid circularity in the definition, since the 'activity' reading does not make the definition circular.
- (2) While the idea that changes are activities of potential beings draws on well-attested Aristotelian doctrine, the same cannot be said of the idea that changes are actualities of potential beings. The 'constitutive actuality' proposal is relatively obscure and in tension with Aristotle's other stated views regarding changes and actuality or completeness. And it is not clear how else change should qualify as the actuality 'of the potential being, *qua* such'.
- (3) Conditional on a widely held assumption—that the products of change are actualities of the corresponding potential beings—the 'actuality' reading is vulnerable to the threat of picking out the products of change, a threat that cannot be avoided by the addition of the *qua*-phrase. Moreover, while the products of change are not 'constitutive actualities' of potential beings, the products may well be actualities of potential beings if 'actuality' is construed in some other way. On the other hand, there is no obvious reason to think that the products of change or their forms are activities of potential beings.
- (4) Defining change as an actuality would not in any significant way enable Aristotle to address his predecessors' doubts about change. In fact, we have seen that the 'constitutive actuality' proposal precludes taking the definition to have the consequences I have claimed it does for the causal explicability of change, and so for legitimating the change's central role within natural science.

For these reasons, reading the definition in terms of actuality does not make the definition more plausible or add to its philosophical value. On the contrary, much is to be gained by rejecting this reading in favour of the 'activity' reading. Thus, whatever advantage the 'actuality' reading has over the 'activity' reading—at least with respect to the considerations explored in this essay—will lie in its abi-

lity better to accommodate Aristotle's use of the terms *entelecheia* and *energeia* in characterizing change.

But the extent to which the 'actuality' reading has even this advantage is not as straightforward as one might think. For although *entelecheia* does not elsewhere mean 'activity', and although, in some contexts, *energeia* has a meaning that either is or approaches 'actuality', still, I shall argue, Aristotle's remarks about the term *energeia* tell against its having such a meaning here. I first offer a brief overview of Aristotle's use of the two terms in *Physics* 3. 1–3 and *Metaphysics* K 9, then point out a passage in *Physics* 3. 1 that is difficult to square with the 'actuality' reading, and finally, argue that the only explicit guidelines Aristotle gives us for using *energeia* with a meaning that approaches 'actuality' make it unlikely that it is so used in the definition of change.

Within the texts of *Physics* 3. 1–3 and *Metaphysics* K 9, *entelecheia* is not favoured by the number or prominence of its occurrences. While Aristotle's first statement of the definition in *Physics* 3. 1 and the discussion of the next thirty or so lines use only *entelecheia*, Aristotle switches to *energeia* within the argument about the buildable (201^b8), and the latter term predominates thereafter up to the end of *Physics* 3. 3. *Metaphysics* K 9 first gives the definition in terms of *energeia* (1065^b16), which is thereafter used more often. In fact, Simplicius claims to have found *energeia* in *Physics* 3. 1, noting only that others claimed to find, apparently as exceptions to the rule, *entelecheia* in certain manuscripts.⁷²

At 201^b7–8, as we saw, Aristotle uses the verb *energein* in work-

⁷² 'It is worth noting that Aristotle, defining change, at first said that it is the *ἐνέργεια* of the changeable *qua* changeable, but Alexander, Porphyry, Themistius, and others explicating the definition, reading Aristotle a bit later calling it *ἐντελέχεια*, and having found, in certain manuscripts, the text "the *ἐντελέχεια* of the potential being, *qua* potential", substituted *ἐντελέχεια* for *ἐνέργεια*—as being equivalent for Aristotle—in the definition of change' (Simpl. *In Phys* 414. 15–20 Diels). His remark, in fact, implies that *ἐνέργεια* enjoyed better support in the manuscripts available to him, although he does not elaborate, and the currently recorded manuscripts do not support his claim. If *ἐνέργεια* is the only correct term, we might explain the presence of *ἐντελέχεια* by citing the fact that Aristotle begins the sentence in which the definition of change occurs with the distinction between being *δυνάμει* and being *ἐντελεχείᾳ* (201^a9–10). This might lead one to 'correct' *ἐνέργεια* to *ἐντελέχεια* on the grounds that the definition is meant to draw on the concept of *ἐντελέχεια* here specified. Such an emendation might seem warranted by the thoughts—all of them still current—that there is a close relation between the two terms *ἐνέργεια* and *ἐντελέχεια*, that the standard meaning of *ἐνέργεια* would invite a circularity charge, and that Aristotle can respond to sceptics about change only by characterizing change as *ἐντελέχεια*.

ing out the extension of the definition: 'For each thing admits at one time of *energein* and at another time not.'⁷³ *Energein* here cannot easily be understood in terms of actuality and cannot be replaced by a cognate of *entelecheia*. The verb *energein* here does not mean 'to be actual'. And Aristotle gives no indication that with this term he is employing a different concept from the one he has been using up to now with *entelecheia*. In fact, the principle expressed in this line, as we saw, is meant precisely to help us understand when the *entelecheia* mentioned in the previous line (201^b6–7) exists. So, in this passage, the standard meaning of *entelecheia* will not do.

Recall that Aristotle's early concept of *energeia*—which I take him to employ here—is that of activity, broadly understood. Since this primary and original use of *energeia* does not mean 'actuality', we must ask how a term that originally means 'activity' might take on a quite different connotation of actuality.⁷⁴ *Energeia* is often thought to signify 'actuality' (and to approach the standard meaning of *entelecheia*) in adverbial dative constructions, such as *energeiāi on*, which generally pick out actual and complete beings. But it would be presumptuous to infer from this usage that the word *energeia* means 'actuality'.⁷⁵ For we could analyse such constructions as 'being in activity', 'being in virtue of activity' or 'being according to activity'.⁷⁶ Such constructions might pick out actual beings even if the term *energeia* itself does not refer to an actual being or an actuality.

But *energeia* in the nominative case sometimes picks out actual beings or their forms (by virtue of which they are actual). Aristotle

⁷³ The same clause appears at *Metaph. K 9*, 1066^a1

⁷⁴ In fact, the translation 'actuality' for *ἐνέργεια* (as well as 'actually' for the adverbial dative) derives from the Latin *actualitas*, itself derived from *in actu*, which translates the adverbial dative *ἐνέργεια*. But the connection between *actus* and *ἐνέργεια* is plausible because *actus* expresses *doing*, not because it expresses actuality.

⁷⁵ Here I follow Kostman, 'Definition', 3–4. See also the next note.

⁷⁶ The formulation 'in activity' suggests the Thomistic corollary that being is an activity, as in the cases of, for example, being a builder, knower, or perceiver *ἐνέργεια*. The Thomistic strategy is less straightforward in the cases of, for example, being red, or being a knower *ἐνέργεια* in the sense of *having* knowledge. But the alternative formulations, 'according to activity' and 'in virtue of activity', leave open whether the *ἐνέργεια* at issue is an activity that *constitutes* being *ἐνέργεια* (as e.g. the activity of seeing constitutes being a seer *ἐνέργεια*) or an activity that *brings about* the being *ἐνέργεια* (as e.g. the activity of being built brings about a house). The latter option could then be cashed out in terms of the activity of the being that is now actual (Beere, *Doing and Being*, 200–7) or (also) in terms of the activity of an external agent (Menn, 'Origins', 98–100, 107).

indicates, in one of the so-called ‘etymological’ remarks in *Metaphysics* Θ , that this usage involves an extension of the term *energeia* from its original one: ‘The term *energeia*, which is tied together with *entelecheia*, has been derived from changes [*kinēseis*] to apply also to other things. For *energeia* seems most of all to be change [*kinēsis*]’ (Θ 3, 1047^a30–2). The ‘derived’ usage enables *energeia* to apply to other things. There is no indication that the derived usage will also apply to changes, part of the original extension of the term.

As Menn points out, there is only one passage in which Aristotle offers any kind of justification for this usage.⁷⁷ It implies, I think, that this usage involves an extended sense of *energeia* that cannot easily be taken to characterize change. This passage appears within a broader argument for the priority in being of *energeia* on the grounds that ‘*energeia* is a *telos*, for whose sake the *dunamis* is acquired’ (*Metaph.* Θ 8, 1050^a9–10). In general, capacities for activities (such as seeing, housebuilding, and contemplating) are acquired for the sake of their exercise, and not the other way around (1050^a10–14). This implies that in those cases in which ‘the last thing is the use [*chrēsis*] (for example of sight, seeing, and no other *ergon* beyond this comes-to-be from sight)’ (1050^a23–5), the activity (*energeia*) is the *telos*. Aristotle wants to extend the connection between *energeia* and *telos* (and so the priority of *energeia*) to the case of substantial form. And so he claims, in the second etymological remark, that ‘the *ergon* (work, function) is a *telos*, while the *energeia* is an *ergon*. And so even the word *energeia* is said in accordance with *ergon* and tends towards *entelecheia*’ (1050^a21–3). This remark facilitates the extension of his thesis that *energeia* is a *telos* to the case of a product that exists beyond the mere exercise or use of some ability (1050^a25–6). And even in such a case, the *energeia* that is the process of becoming is ‘more *telos* than *dunamis*’,⁷⁸ since it comes-to-be at the same time as the product and takes place in the product (1050^a27–8).⁷⁹ Presumably the change itself is less of

⁷⁷ The analysis here of Aristotle’s extension of the term *ἐνέργεια* is heavily indebted to Menn’s discussion in ‘Origins’, especially at 105–12. One might think that *Metaphysics* Θ 6’s analogical extension of the terms *δύναμις* and *ἐνέργεια* in the first half of the chapter is another place where *ἐνέργεια* is extended from the process of change to the product, or the form of the product. I think that Aristotle commits himself only to the claim that a substance is an *ἐνεργεία ὄν*, and believe that this can be analysed along the lines suggested in the previous note.

⁷⁸ Or alternatively: ‘the *ἐνέργεια* is more of a *τέλος* than the *δύναμις* is’.

⁷⁹ *ἐνέργεια* here refers only to the process, not to the product; for it is counted as a *τέλος* only in a measured sense and is interchanged with *χρῆσις* in the next sentence.

a *telos* than the product. Aristotle concludes that it is 'evident that the *ousia* and the form is *energeia*' (1050^b2–3).

The only ground Aristotle offers for calling the product an *energeia* is that it, as well as the process that produces it, is an *ergon*, and of course *ergon* can mean 'work' both in the sense of 'task' and in the sense of 'finished product'. Add to that the further idea (implicit in the thought that the change's status as a 'more of a *telos*' derives from its connection to the product) that the product is the primary *telos*, and Aristotle's conclusion, that the product-*energeia* (being the primary *telos*), like a process-*energeia* when it is the final *telos*, is prior to the potential being, follows. Note that while the product is an *ergon* and thus an *energeia* in an extended sense, which has to be argued for, the process is assumed uncontroversially to be an *energeia* in the original use throughout the passage. It seems, then, that (i) *energeia* in the extended sense has the connotation not of actuality or completeness but rather of *ergon* (even though finished *erga* are in fact complete, and all *erga* are actually existent), (ii) if *energeia* in the extended sense were somehow to pick out a change, it would have to treat the change as finished product rather than as task-*ergon*, which is absurd, especially since, (iii) in the current passage, the change is assumed to be an *energeia* and an *ergon* in the sense of a task, and the finished *ergon* the result of such an *energeia*. Thus, (iv) if the word *energeia* is used to describe a change, as it is in *Physics* 3, it is far more likely to do so because change is an exercise or an activity—an *ergon* in the sense of function or task rather than (in some peculiar way) in the sense of a product. That is, it is far more likely to be employed in its original sense, or perhaps in a broad sense that spans *erga* of both kinds.⁸⁰

Given that *energeia* and *entelecheia* are used interchangeably—and Simplicius indicates that *energeia* might have been more prevalent in earlier manuscripts than it is now—we must rely on the standard meaning of one term at the relative expense of the other.

⁸⁰ One may wonder whether the argument extracted from *Θ* 8 is behind every instance of using *ἐνέργεια* to refer to an actual substance or a substantial form. Again, this is, as far as I know, the only justification for such a use that Aristotle offers. One might alternatively see Aristotle as sloppily using the nominative *ἐνέργεια* for the dative adverbial construction *ἐνεργείᾳ ὄν* here, as he may do elsewhere (e.g. *Metaph.* *Θ* 6, 1048^b5). This would mirror his occasional use of *δύναμις* where he should use *δυνάμει ὄν* (potential being). At *DA* 2. 1, 412^a9, and 2. 2, 414^a15–16, and *Metaph.* *H* 5, 1045^a2, and *Θ* 8, 1050^b27, Aristotle characterizes matter as *δύναμις*; *δύναμις* also stands in, I think, for *δυνάμει ὄν* at *Θ* 6, 1048^b8. Such passages do not show that *δύναμις* can also mean 'potential being'.

I accept that my interpretation comes at a steep price in so far as *entelecheia* does not elsewhere mean ‘activity’. I have argued, however, that an interpretation in terms of actuality also comes at a significant price, since it is difficult to read *energeia* in that way here. And I hope that once the philosophical advantages of my interpretation are taken into account, it will be seen as a relative bargain.

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