

Aristotle on the Cause of Unity: The Argument of

Metaphysics H.3–6

Christian Pfeiffer | ORCID: 0009-0002-7709-3797
University of Toronto Scarborough, Toronto, ON, CA
Christian.pfeiffer@utoronto.ca

Abstract: I argue that *Metaphysics* H.6 is not an isolated chapter but the conclusion of an argument begun in H.3. This view will provide further and better arguments for the following view about long-standing interpretative debates: first, Aristotle provides a substantive account of the unity of the *composite* substance (although he also briefly addresses the unity of the form); second, neither Aristotle’s conception of matter nor his account of form changes between H.1–5 and H.6; and third, H does not rely on and is not completed by book Θ in any significant way.

Keywords: Aristotle, Unity of Definition, Hylomorphism, Matter, Form, *Metaphysics* H, H.6

1 Introduction¹

For Aristotle, substances are the primary entities, and as such they must be definable. Defining is not merely clarifying the character of an entity or identifying it: we can clarify that a pale human is a human who possesses the property of pallor, and we can identify pale humans, but Aristotle is adamant that a pale human as such does not have a strict definition (Z.4 1030a2–17). Homer described the wrath of Achilles and its consequences in the *Iliad*, but the *Iliad* is not a definition because its unity derives only from the connectives (‘and then...’) in it (H.6 1045a12–13). A definition must be of a primary and highly unified entity, and the unity of definition derives from the unity of the entity defined (H.6 1045a12–13). Thus, to understand the unity of definition, we must understand the unity of substance, the primary entity in Aristotle’s ontology.

¹ I would like to thank two anonymous referees, Andreas Anagnostopoulos, David Charles, Brad Inwood, Marko Malink, Jessica Moss, Christof Rapp, and Gabriel Richardson Lear for their comments, as well as audiences in Leuven, Munich, Notre Dame, and Pittsburgh for comments on earlier versions.

It is therefore unsurprising that H.6, Aristotle's most extensive treatment of the unity of definition, outside Z.12, has attracted much scholarly attention. Yet the countless studies have failed to produce a consensus on even the most basic questions: Is Aristotle addressing the unity of substantial form, or the unity of the hylomorphic composite substance? If the latter, what grounds its unity? Is the unity of a composite grounded in form or in matter and form? If the latter, what conception of matter and form underlies the solution? Does Aristotle offer a substantive solution, or is the problem of unity simply dissolved because form and matter are one (in some way that is spelled out appropriately)?

In this paper, I aim to clarify and improve an existing line of interpretation by locating H.6 in the context of Z.17–H, especially H.3–5. I will argue that H.6 does not introduce systematic considerations that go significantly beyond the theory of form and matter expounded in Z.17–H.5; instead, after proving that form is a cause of being, Aristotle shows in H.3–5 that the form is also the cause of unity. This involves showing on the one hand that the form is the principle of unity and not an additional element, and on the other hand that the matter is potentially the substance. According to my interpretation, both form and matter are constituents of the hylomorphic composite and are prior to it (though, in the case of matter, the priority will be qualified).

My interpretation thus falls in the camp of the so-called traditionalists, who take an explanatory approach to the unity of a hylomorphic substance.² However, the debate between them and the non-traditionalists – who argue that the unity of the composite is basic – has

² For a helpful overview of the opposition between traditionalists and non-traditionalists, including their central doctrines, see Rhenius (2005). I take the label 'explanatory approach' from David Charles: 'The *explanatory approach* ... is one in which at least one of the pair matter/form (or potentiality/actuality) is taken to be independent of, and prior to, the notion of a composite unified substance' (Charles 1994, 79). Besides Charles, an explanatory view is defended by, among others, Haslanger (1994), Lewis (1995a), and Loux (1995). The opposing, non-explanatory view is defended in various forms by Rorty (1973), Halper (1984), Kosman (1987), Gill (1991, 2010), Scaltsas (1994), Kim (2008), Marmodoro (2013), and Delcomminette (2014).

mainly taken place without reference to H.3–5. Instead, commentators have, explicitly or implicitly, adopted Burnyeat’s dictum that H.6 is placed at the end of H for emphasis and does not rely on H.3–5, which Burnyeat sees as folders containing ‘reminders and corollaries’ (Burnyeat 2001, 71) about form and matter. Those who connect it with other passages connect it to either Z.12 or book Θ .³

In this paper, I argue that this approach is mistaken and that H.3–6 presents a unified argument. With this, I hope to improve our understanding of the argument of H and contribute to the systematic debate surrounding the unity of definition. Thus, while my answer is not radically new – given the variety of interpretations already provided by others, it would be a futile enterprise to hope to present a completely new interpretation – the argument supporting this answer is novel because it takes its premises from H.3–5, the doctrines of which have not been mined for an answer to how H.6 should be read.

I cannot discuss here all the complexities of the argument of H.3–5, but will focus only on those passages that are directly relevant to H.6. This method faces the difficulty that aspects of H.3–5 remain unexplained; moreover, since H.3–5 are themselves contested chapters with no obvious interpretation, relying on them for interpreting H.6 might seem problematic. I have no answer to this challenge other than to note that a demonstration of how H.3–5 unlocks the riddle of H.6 would in itself constitute evidence for how to understand these chapters. By the end of my paper, I hope to have established that the proper framework for interpreting H.6 is found in H.3–5, and that my interpretation of these chapters does in fact correctly answer many questions about H.6.

³ Since Aristotle describes the form as actuality and matter as potentiality in book H, and these notions are the topics of book Θ , one might expect that Θ will clarify the account in H, specifically the one in H.6. See, e.g., Gill 2010, 117–18; Charles 2010, 169. While I do not deny that Θ , especially Θ .7, is connected to H, I think that H is a self-contained treatise in that it provides the materials for understanding the claim that form is actuality and matter is in potentiality.

2 H.6: The Unity of Definition

2.1 What Is the Puzzle?

To appreciate Aristotle's solution, one must first understand what question he wants to answer.

H.6 begins with a reference to an earlier aporia:

Περὶ δὲ τῆς ἀπορίας τῆς εἰρημένης περὶ τε τοὺς ὀρισμοὺς καὶ περὶ τοὺς ἀριθμοὺς, τί αἴτιον τοῦ ἓν εἶναι; πάντα γὰρ ὅσα πλείω μέρη ἔχει καὶ μὴ ἔστιν οἷον σωρὸς τὸ πᾶν ἀλλ' ἔστι τι τὸ ὅλον παρὰ τὰ μόρια, ἔστι τι αἴτιον, ἐπεὶ καὶ ἐν τοῖς σώμασι τοῖς μὲν ἀφῆ αἰτία τοῦ ἓν εἶναι τοῖς δὲ γλισχρότης ἢ τι πάθος ἕτερον τοιοῦτον.

Regarding the problem we have already mentioned concerning definitions and numbers: what is the cause of their being one? Whenever anything which has several parts is such that the whole is something over and above its parts and not just the sum of them all, like a heap, then it always has some cause. Indeed, even in the case of bodies, there is a cause of their unity – sometimes contact, sometimes stickiness, or some other attribute of this sort. (*Metaph.*

H.6 1045a7–14; trans. Bostock 1994, slightly altered)

Aristotle has mentioned the problem of the unity of definition earlier, in Z.11 1037a18–20, and identified it as a puzzle to be discussed later. Although Aristotle does address the unity of definition in the next chapter, Z.12,⁴ the explicit reference to a puzzle about definitions *and*

⁴ In Z.12, however, Aristotle refers to the unity of definition as a puzzle from the *Analytics*, which might cast doubt on the claim that Z.12 answers Z.11. At any rate, H.6 seems not to assume any prior discussion of the unity of definition. Since Z.12 is also not mentioned in the summary in H.1, it can be surmised that Aristotle does not presuppose Z.12 in H but develops his solution to the unity of substance independently of it. Of course, this still leaves open the complicated question of whether he *could have done* so, that is, the question of how the theory of H.6 and Z.12 are related. My own view (for which I cannot argue here) is that these chapters deal with different kinds of definitions. It is stated explicitly in Z.12 that the chapter is about definition by division (1037b28–29), whereas H.6, like the whole of Z.17–H.6, relies on causal

numbers suggests that he refers to H.3, where he had discussed the Platonic identification of substances with numbers:

καὶ τὸν ἀριθμὸν δεῖ εἶναι τι ᾧ εἷς, ὃ νῦν οὐκ ἔχουσι λέγειν τίνι εἷς, εἴπερ ἐστὶν εἷς (ἢ γὰρ οὐκ ἔστιν ἀλλ' οἶον σωρός, ἢ εἴπερ ἐστὶ, λεκτέον τί τὸ ποιοῦν ἐν ἑκ πολλῶν). καὶ ὁ ὀρισμὸς εἷς ἐστίν, ὁμοίως δὲ οὐδὲ τοῦτον ἔχουσι λέγειν.

There must be something in virtue of which a number is one, though they cannot now say in virtue of what it is one, if indeed it is one. (For either it is not, but is like a heap, or it is, and then it must be said what it is that makes it one out of many.) Similarly, a definition is one, and again people cannot say this either. (*Metaph.* H.3 1044a2–6)

The puzzle common to both passages, the one in H.3 and the one in H.6, is this: How is that something that has many parts can be one whole? Note that the question is not, or not primarily, how something can be one. For example, a point or a monad is one, and Aristotle grants this to

definitions. From *Posterior Analytics* 2, it appears that Aristotle does not think that these definitions are reducible to one another; see the discussion in Bronstein 2016, chaps. 10 and 12 regarding the view that these are distinct kinds of definitions dealing with causally simple and causally complex essences respectively, and the discussion in Steinfath 1996, who proposes that they rely on two different models of unity: unity as simplicity and unity as allowing a difference.) Based on this, one might wonder whether Z.12 and H.6 also deal with different *objects* of definition. Halper 1984, for example, argues that Z.12 deals with the unity of form, and that H.6 deals with unity of the composite. Though this is an attractive proposal, I am more inclined to think that the causal definitions in Z.17–H supersede the account in Z.12; cf. Bostock 1994, pp. 184, 282–4. To discover the essence of substances, the method by division does not work. In this way, Z.17–H go beyond the account of the *Posterior Analytics*, since it shows that (hylomorphic) substances have causally complex essences. (For a view along those lines, see also Code 2010.) That said, it is undeniable that Aristotle relies on a similar line of argument in both cases, insofar as some relatively undetermined subject, such as matter or genus, is made determinate by a cause or by a differentia. Notably, Aristotle calls the cause of being ‘differentia’ in H.2, which signals a connection, although I do not think that this is a technical use of the term (the differentiae of threshold and lintel, namely, lying above and lying below are not differentia of wooden beams in the technical sense). For the view that the two chapters are closely connected on the ground that the unity of genus and differentia is the same or analogous to the unity of form and matter, see Rorty 2010; Gill 2010; Menn, forthcoming.

his opponents in the passage immediately following the quote of H.3. (I will return to it in a moment.) Rather, the puzzle is more specifically how one thing can be composed of many parts.⁵ Why is a number, if it is indeed a substance as the Platonists assume, one and not many, a heap of monads? Why are the *B* and the *A* not a heap but one whole, the syllable *BA*? Note further that both passages suggest that to answer the puzzle one must specify a cause of unity. The plurality of parts is not a whole in virtue of itself. Its unity is not primitive, like the unity of a point, but is derived from a *cause* of unity.

The way the puzzle is set up is, I submit, *prima facie* evidence for an explanatory approach to the unity of a hylomorphic substance, according to which Aristotle does not take the unity of a form-matter composite to be basic but rather to be in need of explanation. As David Charles puts it: ‘The *explanatory approach* ... is one in which at least one of the pair matter/form (or potentiality/actuality) is taken to be independent of, and prior to, the notion of a composite unified substance’ (Charles 1994, 79). The position I will argue for is that both form and matter are prior to the composite substance (though, in the case of matter, the priority will be qualified), and that the form is the cause of unity that explains why the material parts constitute a unified whole.

The explanatory reading, however, is not suggested only by the way the puzzle is set up in H.6, or even by the whole discussion of H.3–6. Rather such a reading is strongly suggested by the whole context of Z.17–H, which I take to be a connected treatise.⁶ In Z.17 1041a9–10, Aristotle announces a fresh approach to the inquiry of substance, one based on the so-called Causal-Explanatory Model of substance (Peramatzis 2018). According to this model, for a hylomorphic substance to be is for some material parts to be informed by the form: the form is

⁵ As already noted by Jaeger 1912, p. 56, the puzzle in H.3 is, more specifically, how something composed of indivisible parts can be one.

⁶ In taking Z.17–H as a unity, I follow Code 1997, Charles 2000, chap. 11, and Burnyeat 2001, pp. 62–8. For the view that Z.17 is not continuous with H but supersedes it, see Devereux 2003.

the cause of being precisely because it explains why the material parts constitute the hylomorphic substance (See *Metaph.* Z.17 1041b4–9; H.2 1042b25–28, 1043a2–12). Aristotle elaborates on this model in H.1–2; arguably, then, Z.17–H.2 are devoted to an explanatory approach to substance.

However, the focus of these chapters is to spell out how the form is a cause of *being* (cf. *Metaph.* Z.17 1041b28; H.2 1042b25–43a12, esp. 1042b25–28 and 1043a2–4). However, Aristotle has not shown how this model which explains the being of substances also can explain their unity.⁷ In saying this, I do not want to deny that Aristotle thinks that hylomorphic substances are unities: he obviously does, and he says so (1041b11). But it is one thing to hold that a substance is a unified whole that is not identical with its material parts because it has a further constituent (form, *differentia*, cause) that explains its being; it is quite another thing to show that this constituent *explains* the unity. Such a demonstration is, I submit, the task of H.3–6.

2.2 The Unity Condition on Definitions

Since the unity of a definition depends on the unity of the defined object (H.6 1045a12–14), one must understand what it is to be a definable whole. Otherwise, one cannot ascertain whether Aristotle’s solution is satisfactory. By setting different standards of evaluation, what counts as a satisfactory solution for one scholar might not for another. I believe this is another reason

⁷ In the second half of Z.17, 1041b11–33, Aristotle also argued that a whole differs from a heap because it has a further constituent that is not a material part but a cause of being (Z.17 1041b25–28). Similarly, the phrase ‘even among bodies, in some cases contact is the cause of their being one, in other stickiness, or some other such attribute’ (H.6 104511–12) refers back to the list of *differentiae* in H.2, specifically the ones Aristotle calls ‘perceptible attributes, such as hardness and softness, density and rarity, dryness and wetness’ (H.2 1042b22–23). First, both Z.17 and H.2 explicitly state that the cause cannot be a *material* part or element. (I say ‘material’ because there is a question of whether the form is a part of the composite; see Koslicki 2006. For present purposes, we can leave the question open.) Thus, when he says in H.6 that whenever a plurality of parts constitutes a whole, there must be a cause, Aristotle has already secured the result that this cause cannot be a material part. However, and this is crucial for our purposes, he has not shown in Z.17 or H.2 how this cause is a cause of *unity*.

why H.6 has remained hotly disputed and seemingly intractable. I will base my answer on Aristotle's account in Z.4.

The similarities between Z.4 and H.6 are striking. In both passages, Aristotle emphasizes, using the same examples, that a definition is not one because of some feature of language. Neither grammatical features, such as connecting particles, nor having a single term, such as 'cloak', guarantees that a proper object of definition exists, for the surface grammar may not adequately reflect the object's ontology. In contrast to H.6, however, Z.4 offers a criterion for something being one definable object.⁸ A definition, Aristotle tells us, 'is a formula of something primary, and primary things are those which do not involve one thing's being said of a different thing (*allo kat' allou*)' (Z.4 1030a10–11; cf. 1030b7–13). As an example of something that involves one thing being said of a different thing, Aristotle offers 'pale human'. Even if it can be signified by a single term such as 'cloak', *pale human* is not a definable unity because it involves an ontological⁹ predication of pallor of human.

The reason why ontologically predicating pallor of human entails that *pale human* does not satisfy the unity constraint on definability is that, for Aristotle, the subject, human, has a distinct essence of its own. The predicate, pallor, does not state what the subject, human, is because what it is to be a human is different from and independent of what it is to be pale.¹⁰ As Aristotle puts it, the predicative relation between predicate and subject is one of 'participation'

⁸ On Z.4, see especially Peramatzis 2010; Angioni 2014. They differ in the details of interpretation of Z.4, but I take my account here to be compatible with both their views.

⁹ I say 'ontological' because the item predicated is the property pallor, and the subject is a substance, a human.

¹⁰ It is not clear whether Aristotle holds that the predicate, pallor, also has an independent essence. One could read Z.4 differently, as stating that *both* subject and predicate have independent essences. I think that the text of Z.4 requires only that the subject have no essence independently of the predicate for them to constitute a unity, but this does not affect my main argument here. Aristotle's point in H.6 is that matter does not have essence independently of form, and that form is prior because it is the actuality of the material parts. The question of the essential independence of the form is not addressed, and my argument neither denies nor presupposes it.

or ‘as an accident’. Human is an underlying subject, a substance, of which an accident is predicated, but what the subject is, is independent of the predicate. Thus, *pale human* is a case of one thing being predicated of something different, and hence the composite *pale human* is not a definable unity.¹¹

2.3 Definitional Unity: Aristotle against the Platonists

Applying Z.4’s requirement that a definable unity not involve one thing being said of a different thing, the point of H.6 will then be to show that form is not ontologically predicated of matter as something different. As I will argue, this is precisely what Aristotle does in H.6.¹² However, this line of thought cannot readily be extracted from H.6. Indeed, Aristotle seems nonchalant about the details of his solution to the unity of the defined object:

εἰ δ’ ἐστίν, ὥσπερ λέγομεν, τὸ μὲν ὕλη τὸ δὲ μορφή, καὶ τὸ μὲν δυνάμει τὸ δὲ ἐνεργείαι, οὐκέτι ἀπορία δόξειεν ἂν εἶναι τὸ ζητούμενον. ἔστι γὰρ αὕτη ἡ ἀπορία ἢ αὐτὴ κἂν εἰ ὁ ὅρος εἴη ἱματίου στρογγύλος χαλκός· εἴη γὰρ ἂν σημεῖον τοῦνομα τοῦτο τοῦ λόγου, ὥστε τὸ ζητούμενόν ἐστι τί αἴτιον τοῦ ἐν εἶναι τὸ στρογγύλον καὶ τὸν χαλκόν. οὐκέτι δὴ ἀπορία φαίνεται, ὅτι τὸ μὲν ὕλη τὸ δὲ μορφή.

¹¹ Note that an *allo kat’ allou* predication is a specific kind of predication in which the subject has an essence that is independent of the predicate. This does not imply that there is no account whatsoever of pale human. One can ask ‘What is a pale man?’ and answer that it is a human who has pallor predicated of him. The point is that *pale human* is a compound of two different things, pallor and human, both of which may have a definition, and hence there is no single unified thing whose being is just to be that: to be a pale man. Thus, *pale human* is not a unity in the required sense.

¹² An alternative way of understanding the denial of *allo kat’ allou* predication is that a definable unity is ontologically simple; this would speak in favour of the view of the non-traditionalists. But this cannot be correct, for Aristotle also thinks that every definition must be of something complex (see H.3 1043b28–32; Z.13 1039a14–24). Indeed, everything leading up to H.6 strongly suggests that the unity problem is genuine and that one must explain how a form is the cause of unity.

However if, as we say, the one is matter and on the other shape, and the one is potentially while the other is actually, what is sought after will no longer seem a difficulty.¹³ For this difficulty is the same as would arise if the definition of a cloak were a round bronze. The word would then be a sign of the formula, and what is sought after would be: What is the cause of the roundness and the bronze being one? The difficulty has thus disappeared, since the one is matter and the other form. (*Metaph.* H.6 1045a23–29)

Why is Aristotle so confident? Why is form-matter predication not predicating one thing of another thing? Why would there be no problem defining *cloak* if ‘cloak’ signified *rounded bronze*? After all, *rounded bronze* seems to be just as complex as *pale human* in Z.4, which has no definition.¹⁴ Aristotle insists that ‘the proximate matter and the shape are the same and one’ (1045b18) and that ‘there is no other reason why the potential sphere is actually a sphere, but this was what it is to be for each of them’ (1045a30–33). Since this statement is meant to explain why the puzzle about unity disappears (cf. 1045a22–29), commentators have rightly

¹³ I take ‘the one ... the other’ to refer to the elements in the definition. Alternatively, they could refer to ‘animal’ and ‘biped’ in line a21; in that case, Aristotle would be correcting the Platonic view of animal and biped and recalling his solution from Z.12. But while this is possible, I think it is more likely that Aristotle is making a general point about the elements of definition, and this passage neither affirms nor denies that biped is the form. The case for this reading is strengthened when one considers that Aristotle argues in book H that animal and biped are *matter* according to the Platonists. Thus, animal and biped are treated like the letters *A* and *B*, and as H.3 1043b10–13 argues, this means that the form and cause of unity is not mentioned at all by the Platonists.

¹⁴ Moreover, merely asserting that one thing is form and the other matter cannot be the solution, and Aristotle hardly explains this further. To be sure, he goes on to say that ‘the proximate matter and the shape are the same and one’ (1045b18), and that ‘there is no other reason why the potential sphere is actually a sphere, but this was what it is to be for each of them.’ But to my mind, these remarks are not helpful on their own, and require further explanation. See section 3.3.

focused on this sentence.¹⁵ Admittedly, however, it is undeniable that Aristotle's argument in H.6 is rather cryptic.

In light of Aristotle's seemingly deflationary comments in H.6, some scholars have proposed that, for Aristotle, there is no problem of unity because the form-matter composite is ontologically fundamental. According to this deflationary view, form and matter are mere abstractions from the composite, so there is no need for a substantive explanation of why the composite is one (see esp. Scaltsas 1992, 1994; Marmodoro 2013). However, not only do the chapters leading up to H.6 strongly suggest that Aristotle is in fact giving an explanatory solution, but most importantly, H.6 does as well.

At any rate, there is a distinction between offering a deflationary view and offering a deflationary view without explaining why Aristotle thinks he is justified to do so, and those reading H.6 in isolation commit Aristotle to the latter. Since this is unacceptable, others have proposed that Aristotle states his solution in H.6 but does not develop it there; showing how matter and form are one, they argue, is ultimately the task of *Metaphysics* Θ (see Charles 1994; Gill 1991; Kosman 2013). But this proposal also has its costs, for it is hard to see where exactly in Θ Aristotle addresses this puzzle, and, if he does indeed address it, it is unclear whether he offers the proposed solution. Second, although Θ discusses *dunamis* and *energeia* at length, it remains to be established that the conception of matter and form as *dunamis* and *energeia* in Θ further explains the conception we find in H. Indeed, I would argue that it is the other way around, and Θ relies on H.¹⁶ But we do not need to enter this debate, since a more straightforward and, to my mind, more attractive proposal is available. Aristotle is confident

¹⁵ An exception is Harte 1996, who maintains that the puzzle is solved in 1045a36–b7. I agree with Harte that Aristotle intends these lines to show that forms are immediate unities. I do not agree, however, that H.6 is concerned with the unity of form or that the unity of the composite is solely grounded in the unity of the form, as both claims are contradicted by the argumentative strategy of H.3–6.

¹⁶ For this proposal, see also Beere 2009, p. 311 n. 38.

because the conception of matter and form developed in H.3–5 shows why the problem disappears for him but not for his opponents. H.6 is thus part of a continuous argument which Aristotle begins in H.3 and completes with H.6.

2.4 Definitional Unity: Learning from the Mistakes of Others

Since Aristotle develops his solution against the backdrop of a critique of his opponents, I will begin by outlining why he thinks that his opponents cannot account for the unity of definition. By explaining why they fail, one can extrapolate further criteria and conditions for successfully accounting for the unity of the composite.¹⁷

Aristotle is adamant that ‘those who proceed with definitions and explanations in this way, as they usually do, cannot give an account which solves the problem’ (H.6 1045a20–22). A passage in H.3 makes clear where Aristotle sees the problem with their usual manner of definition:

οὐδὲ δὴ ὁ ἄνθρωπος ἐστὶ τὸ ζῷον καὶ δίπουν, ἀλλὰ τι δεῖ εἶναι ὃ παρὰ ταῦτά
ἐστὶν (εἰ ταῦθ’ ὕλη), ὃ οὔτε στοιχεῖον οὔτ’ ἐκ στοιχείου, ἀλλ’ ἢ οὐσία ὃ
ἐξαιροῦντες τὴν ὕλην λέγουσιν. εἰ οὖν τοῦτ’ αἴτιον τοῦ εἶναι, καὶ οὐσία
τοῦτο, αὐτὴν ἂν τὴν οὐσίαν οὐ λέγοιεν.¹⁸

Nor, then, is human identical to animal *and* two-footed, but if these are matter, then there must also be something over and above them, which is not an element nor composed of elements but the substance; and by eliminating this they state only the matter. So if this is the cause of being, and this is the

¹⁷ For this strategy, see also Harte 1996, p. 280. I agree with Harte that H.6 must be understood as a dialectic with Platonism, but I will reach a different conclusion about what this strategy entails. Also, Harte does not consider in detail H.3, a chapter I believe is crucial.

¹⁸ Jaeger follows the β family and does not read the οὐ. But the context is that that the Platonists state only the matter, and hence they *fail* to state the substance; thus, reading οὐ, with the α family, gives the better sense.

substance, they will be failing to state the substance itself! (*Metaph.* H.3
1043b10–14)

Aristotle points out that Platonists¹⁹ treat *animal* and *biped* as if they were the matter, which is tantamount to saying that they do not state the cause that unifies the material parts into one whole. Thus, according to their usual manner of definition, they end up with merely a heap and not a definable unity. As the immediately preceding examples of the house and syllable show, the upshot is not that the Platonists fail to understand the role of the differentia, *biped*. Instead, the point is that a definition cannot consist solely of uncombined material elements – be they *A* and *B* in the case of the syllable *BA* or *biped* and *animal* in the case of *human*. Since Platonists ‘make every principle an element’ (*Metaph.* N.4 1092a6–7), they fail to state the *ousia*, the cause that unifies the elements into a single whole.²⁰

Later, in H.6, Aristotle hints at the fact that his opponents might be aware of this difficulty:

διὰ ταύτην δὲ τὴν ἀπορίαν οἱ μὲν μέθεξις λέγουσι, καὶ αἴτιον τί τῆς μεθέξεως
καὶ τί τὸ μετέχειν ἀποροῦσιν· οἱ δὲ συνουσίαν [ψυχῆς], ὥσπερ Λυκόφρων

¹⁹ I assume that the unnamed philosophers who fail to state the cause of being are Platonists, but nothing hangs on this.

²⁰ This also helps in understanding the structure of H.6. Aristotle assumes in H.3 that *animal* and *biped* are the matter and asks what the cause of their unity is. He does not say that *biped* is a differentia, and so no cause of unity is needed. If this is correct, the example of defining *human* as *biped* and *animal* in H.6 1045a14–20 is not an indication that Aristotle has changed the topic and is now addressing definition by genus and differentia, as, e.g., Ross (1924) and the London group (Burnyeat, ad loc.) think. For the parallel passage in H.3 makes it clear that *biped* and *animal* are taken to be material parts, so that the example is still guided by the causal question with which Aristotle opened H.6, namely, ‘What is the cause of their being one?’ (1045a8) Moreover, the phrase ἄλλως τε δὴ καὶ εἰ ἔστιν, ὥσπερ φασί τινες, αὐτό τι ζῷον καὶ αὐτό διπῶν does not signal a transition from Aristotle’s view to a Platonist view; rather, it suggests that the problem is particularly pressing if one assumes that the constituents are Platonic forms, of which it is characteristic that they are uncombined. While this does not rule out the view that H.6 applies not just to causal definitions but also to definitions by genus and differentia, it does require an argument that the unity of matter and form is the same as, or analogous to, the unity of genus and differentia.

φησὶν εἶναι τὴν ἐπιστήμην τοῦ ἐπίστασθαι καὶ ψυχῆς· οἱ δὲ σύνθεσιν ἢ
σύνδεσμον ψυχῆς σώματι τὸ ζῆν.

On account of this difficulty some talk of participation, though they cannot say what it is or what its cause is; others talk of communion, for instance Lycophron, who says that knowledge is the communion of knowing and the soul; others say that life is the composition or tying together of soul with body. (*Metaph.* H.6 1045b7–12)

Since they cannot explain how the uncombined elements make up a unity, they posit a ‘unifying account’ (1045b17) to explain why these things are one. One might think that Aristotle is hinting at a regress argument here, but I think his point is different.²¹ The unifying account is unsuccessful because the unifying element is extrinsic to the parts of the defined objects. The parts still have independent essences. As we have seen, the pale human is also one by participation, but is still not a definable unity. Aristotle will conclude from this that the matter of an F must be potentially an F.

3 H.3–6: From Causes of Being to Causes of Unity

My main points so far have been the following: (1) The difficulty is to explain how something can consist of many parts and yet be one whole. (2) The unity condition requires that a definition not include an *allo kat’ allou* predication. (3) Aristotle’s opponents cannot solve the difficulty because (a) they treat the constituents of the definition as uncombined elements and (b) seek a further bond unifying the elements but conceive of this bond as something extrinsic and model the unity of substance on the unity of a monad.

²¹ Lewis (1995a, pp. 48-50) and Loux (1995, pp. 267-8) also propose that Aristotle does not have a regress argument in mind, but that he requires any account of unity must be specific, that is, that there is no account of unity that holds for all things. I agree, but I want to suggest that this passage does not address only the need for a specific cause of unity but also the corresponding potentiality of matter.

How does Aristotle's theory satisfy points 1 and 2 without committing the mistakes of point 3? Points 1 and 2 taken together entail that the problem of unity is genuine. Since form is the cause that explains the unity of the material parts, matter and form cannot be identical (cf. Cohen 1978; Sirkel 2018). However, if form and matter are distinct, why is form not predicated of matter as something different, and why are matter-form composites not accidental composites such as *pale human*? Aristotle's answer is that form is actually what the matter is potentially, and that a composite F exists when matter exercises its capacity to constitute an F. This answer, however, requires a substantive account of both matter and form.²² As noted above, a central claim of this paper is that this account is found in H.3–5. According to this view, H.6 is not an isolated chapter, nor does it rely on material from other books of the *Metaphysics* or other works of Aristotle; instead, it is part of a continuous argument. Another advantage of this interpretation is that it explains why Aristotle states his solution to the difficulty so succinctly. He does not need to explain in H.6 why, for example, 'the cause is the essence of form and matter' (H.6 1045a33), since this should have become clear from the immediately preceding chapters.

3.1 H.3: Form as a Cause of Unity

Aristotle aims to show that his cause of being is *ipso facto* a cause of unity. To this end, he contrasts the way Platonists think of the substance of something with the way he thinks about it:

²² An anonymous referee suggested to me that the same analogy between problems of unity concerning substance and accident and problems of unity concerning matter and form is also present in the relationship between Z.4 and Z.11. While it is true that Z.11, especially lines 1037b4-7, suggests that the unity of a form-matter composite is different from the unity of an accidental composite, Aristotle does not spell out the reasons why this is so. Indeed, I am inclined to think that this question is not answered anywhere in Z. According to this view, Z.10-11 go beyond Z.4 in introducing hylomorphism and pointing out that hylomorphic composites differ from accidental composites. However, the resources for an adequate explanation of this fact are not yet available, since this requires understanding form as actuality and matter as potential being, which occurs only in H.

καὶ ὁ ὀρισμὸς εἷς ἐστίν, ὁμοίως δὲ οὐδὲ τοῦτον ἔχουσι λέγειν. καὶ τοῦτο εἰκότως συμβαίνει· τοῦ αὐτοῦ γὰρ λόγου, καὶ ἡ οὐσία ἐν οὕτως, ἀλλ' οὐχ ὡς λέγουσί τινες οἷον μονάς τις οὔσα ἢ στιγμὴ, ἀλλ' ἐντελέχεια καὶ φύσις τις ἐκάστη.

A definition is a unity, and similarly people cannot explain this either. This is not surprising, for the explanation is the same; substances are one in this way, not by being a kind of unit or point, as some say, but because each substance is an actuality and a certain nature. (*Metaph.* H.3 1044a5–9)

The context of this passage is the Platonic claim that substances are numbers.²³ But if substances are numbers, says Aristotle, they are not substances ‘by being numbers of monads’

²³ See *Metaph.* H.3 1043b32–44a11. What is the point of this passage? As repeated in the summary of H.3, this passage concerns the reduction of substances to numbers. The term ‘reduction’ (ἀναγωγή) also occurs in Z.11 1036b11 (there as ἀνάγεσθαι) in a critique of Platonic reduction. Thus, Z.11 and H.3 can be seen as having complementary projects. (Generally, ‘reduction’ refers to the reduction of something to its principles. It appears in *Metaph.* Z.3 1044a14; Γ.2 1004a1; Z.11 1036b22; I.4 1055b29.) However, the way Aristotle proceeds in H.3 is different. Unlike Z.11, the point here is not that the reduction is wrong. The strategy rather seems to be this: Grant Platonic reduction; even so, there is still no adequate explanation of substances, since Platonists miss crucial features in the explanation of substances. Since this is a project of Platonists, and Aristotle does not believe in this reduction, the main point of this passage is negative: the whole passage is a conditional whose antecedent is affirmed by Platonists but not by Aristotle. It is therefore important to see what we cannot conclude from this passage. Since there is no indication here or elsewhere that Aristotle affirms the antecedent, the passage does not tell us anything about Aristotle’s conception of numbers. To say that if numbers were substances, they must be such and such, does not commit one to the assumption that numbers are such and such. For example, Aristotle does not think that numbers have a principle of unity (cf. *Metaph.* M.7 1082a15–16). His point is that, if numbers were substances, then they must have one. But it does allow us to extract some positive doctrines. By comparing the definition of substances to that of numbers, Aristotle employs criteria that a successful definition must meet. Aristotle sets a standard of explanation and shows that Platonic conceptions of numbers and substances cannot meet this requirement. Focusing on this standard shows how substances should be defined and how Platonist approaches fail, even if we grant that substances can be reduced to numbers. In this way, it is connected to the preceding paragraphs in H.3. Aristotle does not switch to an entirely new and ill-connected topic, as Ross 1924, p. 231 and Bostock 1994, p. 261 think; rather, after explaining in the first sections of H.3 how the form is the cause of being and how this leads to a successful definition in which one part is matter and another part form, he shows that, on the Platonist’s way of conceiving substances as numbers, this crucial insight is lost. For a Platonist,

(H.3 1043b33–34). Admittedly, this is a cryptic remark, but I suggest understanding it as follows: If the number seven were a substance, its being, that is, its essence, would consist of seven monads, and its definition would spell out this fact. As we have seen, however, this cannot account for the unity because monads are uncombined elements. Hence, if the being of the substance is being a collection and number of seven monads, the substance turns out to be a heap (H.3 1044a2–5).

In the passage quoted above, Aristotle says that some Platonists account for the unity of a number by citing a monad or point as the cause of unity. Thus, this passage explicitly addresses the two-place notion of substance. This is also suggested by Aristotle calling substance a nature and actuality and by the following line, where Aristotle calls it ‘the substance according to form’ (1044a10–11). If this is correct, I propose interpreting the passage as follows: Platonists recognize that the substance of an F must be one in itself if it is to ground the unity of an F; for if the unity of the substance of an F needs to be grounded in the same way as the F of which it is the substance, a regress looms. Seeing this, Platonists argue that the substance of an F is a basic unity.²⁴ Aristotle objects that it is a unity of the wrong sort: a point or a monad is a unity but cannot be a *unifier* because its essence is unrelated to what it combines. Thus, according to Aristotle, Platonists mistakenly believe that the cause of unity is something like a monad.

Against this conception, Aristotle will show that his causes of being are *as such* causes of unity. In virtue of being an actuality, a form is both a unity (thereby avoiding a regress) and a unifier. First, as he explicitly says, the form is a unity. (Aristotle will pick this up in H.6

the ‘form’ or ‘substance’ of a thing is an additional element, and as a consequence they cannot solve the unity problem.

²⁴ This interpretation fits well with the historical fact that Neoplatonists such as Proclus will rely on this line of thought and ground the unity of everything in participation in the One, which is conceived of as a simple partless entity.

1045a36–b7.) If it were not a unity, it could not account for the unity of the composite. Just as a two-place substance (substance-of) must itself be a one-place substance because something that is not a substance cannot explain why something else is a substance, so something that is not a unity cannot ground the unity of some other thing. Aristotle never fully justifies these principles, but it is natural to assume that they are based on explanatory priority and the threat of regress.²⁵ What explains something being F must itself be F, and if one had to ground the unity of the cause of unity, one would end up in an infinite regress. This does not mean that there is no question about the unity of form, but only that its unity is not grounded in the same way. The question posed is, What unites the material parts into a single whole? Insofar as the form has no material parts, this question does not arise in the same way for it.²⁶

Second, implicit in the passage quoted above, but no less important for that, is the idea that the form also sets the standard of unity. For material parts to be informed is for them to

²⁵ Aristotle states this causal principle explicitly in *Metaph. a.1* 993b24–31. The principle is the common ground between Aristotle and the Platonists.

²⁶ An apparent counterexample is *DA* 1.5 411b5–12, where Aristotle raises the question of whether the soul has parts and, if so, how it can be a unity. So it would seem that there is a parallel question, namely, ‘What unites these non-material parts into a whole?’ and that the problem does arise in the same way after all. But I think that on closer examination the problems turn out to be quite different. While both questions are intelligible and have the same grammatical form, the underlying problem is different. Only in the case of material parts does Aristotle require an explanation of how the many parts are unified by a cause into a single whole. In the case of the non-material parts of the soul, on the other hand, there is no unifying cause. In fact, the way Aristotle phrases the problem in *DA* 1.5 shows that the problems are different. For he states that if the parts of the soul were held together by another entity, that entity would be the soul, properly speaking (*DA* 1.5 411b9–10). And if it were possible to ask what is the cause of its unity, we would end up in a regress. Thus, the introduction of form as a cause of unity in *Z.17*, a cause that is not another material part, is intended to avoid precisely the problem of having to explain the unity of the unifier in the same way as the unity of the material parts. It is noteworthy here that when Aristotle discusses the parts of the soul in the second book of *De Anima*, he chooses an entirely different model for explaining the unity of the soul, according to which the parts form an ordered series. While the details of this model are obscure, it is clear that its guiding question is not how multiple parts are united into a whole. For a discussion of the unity of form and whether it has parts, see also Koslicki 2006; Harte 1996; Furth 1987. I would like to thank an anonymous referee for pressing me on this point.

display the kind of being and unity specified by the form as an actuality and nature. This idea is illuminated by a passage from the *De Anima*:

διὸ καὶ οὐ δεῖ ζητεῖν εἰ ἓν ἡ ψυχὴ καὶ τὸ σῶμα, ὥσπερ οὐδὲ τὸν κηρὸν καὶ τὸ σχῆμα, οὐδ' ὅλως τὴν ἐκάστου ὕλην καὶ τὸ οὗ ἢ ὕλη· τὸ γὰρ ἓν καὶ τὸ εἶναι ἐπεὶ πλεοναχῶς λέγεται, τὸ κυρίως ἢ ἐντελέχειά ἐστιν.

For this reason, it is also unnecessary to inquire whether the soul and body are one, just as it is not necessary to ask this concerning the wax and the shape, nor generally concerning the matter of each thing and that of which it is the matter. For while one and being are spoken of in several ways, what is properly so spoken of is the actuality. (*DA* II.1 412b6–9; trans. Shields 2016)²⁷

According to this passage, the actuality is both what *is* and what is *one* in the proper sense (κυρίως). I take this to mean that the actuality specifies both what being is for an F and what being *one* is for an F. In this sense, the form not only is one in itself but also sets a standard of unity in that having this form is the cause of the unity of the material parts. There is no standard of unity independent of the kinds of things that are one, and consequently there is no single explanation of why things are one. Thus, in asking whether some material parts are *one* whole,

²⁷ This passage does not assert that form and matter are identical and does not imply that this question is ill-posed. Instead, Aristotle argues that *with a correct understanding of the soul-body relation*, this question does not arise. See Shields 2016, p. 173:

Aristotle might, in principle, offer such an admonition if he thought it obvious on hylomorphic grounds that the soul and body are identical. Yet he has in this very chapter argued that the soul and body are not identical (see note to 412a11–21). More generally, the wax and its shape are not identical with one another, since, as Aristotle himself rightly notes in *Metaphysics* Z 17 (1041b11–25; cf. *Gen. et. Cor.* 322a4–16), a form can sustain a change in the matter, and, at least in non-organic bodies, the matter can outlast the form (see note to 412b10–413a3). So, he evidently cannot be thinking that it is necessary not to ask this question (or indeed even that it is not necessary to ask it) because its answer is so blindingly obvious, viz. that soul and body are identical.

we ask whether they display the kind of unity specific to this kind of whole. For some wax to be one candle is for it to be shaped in a particular way. If some wax is shaped in this way, no further question arises as to how the material parts constitute one whole.

I propose to understand H.6 1045a36–b7 in this light:²⁸

ὅσα δὲ μὴ ἔχει ὕλην μήτε νοητὴν μήτε αἰσθητήν, εὐθὺς ὅπερ ἓν τί [εἶναί] ἐστὶν ἕκαστον, ὥσπερ καὶ ὅπερ ὄν τι, τὸ τόδε, τὸ ποιόν, τὸ ποσόν—διὸ καὶ οὐκ ἔνεστιν ἓν τοῖς ὀρισμοῖς οὔτε τὸ ὄν οὔτε τὸ ἓν—καὶ τὸ τί ἦν εἶναι εὐθὺς ἓν τί ἐστὶν ὥσπερ καὶ ὄν τι—διὸ καὶ οὐκ ἔστιν ἕτερόν τι αἴτιον τοῦ ἓν εἶναι οὐθενὶ τούτων οὐδὲ τοῦ ὄν τι εἶναι· εὐθὺς γὰρ ἕκαστόν ἐστιν ὄν τι καὶ ἓν τι, οὐχ ὡς ἓν γένει τῶ ὄντι καὶ τῶ ἐνί, οὐδ’ ὡς χωριστῶν ὄντων παρὰ τὰ καθ’ ἕκαστα.

But of the things which have no matter, either perceptible or intelligible, each immediately is essentially a kind of unity, just as it is essentially a kind of being – a this, a quality, or a quantity – for this reason neither ‘being’ nor ‘one’ is present in definitions – and an essence is immediately a kind of unity as it is a kind of being – for this reason there is no other thing which is a cause of its [sc. essence] being one, nor of its being a kind of being; for each essence is immediately a kind of being and a kind of unity, not as being in the genus ‘being’ or ‘one’ nor in the sense that it exists apart from particulars.

(*Metaph.* H.6 1045a36–b7)

Things without material parts have no cause of their unity but are immediately one. Forms and essences thus stand in contrast with hylomorphic composites, whose existence depends on their

²⁸ For the purposes of this paper, I set aside the question of whether Aristotle addresses the unity of the categories here, as Ross (1924, p. 238) thought. The important point is that it does address the unity of form. Cf. Harte 1996, p. 290.

matter having a cause of being one. Again, this does not mean that no question about their unity can ever arise, but only that there is no *other* entity that is a cause of their unity. Forms are unities not because they exist as separate entities but because they are ways of being one. That is to say, associated with each form, a standard exists such that if material parts display it they constitute one unified whole. If the letters *A* and *B* are arranged with the *B* before the *A*, they constitute *one* syllable, and here our explanations stop.²⁹ Forms are causes of being *and* unity. Again, this contrasts sharply with the Platonic conception, in which unity is seen as a kind of simplicity or is explained by a universal form such as the One.³⁰

3.2 H.4–5 Matter and Potentiality

One might believe that this solves the problem of unity.³¹ But in fact it does not, since the unity of the composite cannot solely be grounded in the unity of its form.³² Instead, for a substance to be unified, its matter must be potentially a substance and a this (H.1 1042a27–28). Showing this is the task of H.4–5.³³ It involves two ideas. First, the matter of an *F* must have the capacity

²⁹ Lewis captures this idea well with his Content Requirement: ‘A form plays the role it does as the principle of unity among different parts of a given thing if and only if, and *just because*, it is also the substance of the thing and the cause of its being’ (Lewis 1995a, p. 42). Cf. Loux 1995, pp. 268–9.

³⁰ On this, see also Z.16 1040b16–27.

³¹ Harte (1996) seems to assume this when she argues that composites are one because they have one form.

³² For the view that the unity of the composite is solely due to the form, see Harte 1996, pp. 292–3.

³³ Since Aristotle does not signpost the argumentative structure of H.4–5, these chapters might seem to discuss issues that are only vaguely connected with the main line of argument in book H. For example, the members of the London group express a common sentiment when they state that Aristotle ‘fails to say, as he so easily could have done, that the matter we are comparing with actuality has to be correctly specified. We had the now familiar feeling that Aristotle is patching in material originally put together for another context’ (Burnyeat 1984, p.35) (Burnyeat 1984, p. 35). Ironically, in this passage they give a fairly good description of one of the purposes of H.4–5, namely, to establish that matter must be properly specified with respect to form. However, this purpose becomes apparent only if H.4–5 is seen as an integral part of an argument for the unity of substance.

to constitute an F; if matter did not have this capacity, the form could not be a cause of the unity of the material parts. Second, the matter must be a substance *only* potentially.

One can see why the second point is important and distinct from the first by reflecting on an objection by Loux (1995). Loux objects to those who posit a fundamental distinction between substantial and accidental unity in H.6, noting that in both cases what changes is potentially the product. Socrates is potentially tanned because he has the capacity to be tanned, and he is tanned if this capacity is exercised; similarly, the matter of Socrates is potentially Socrates, and Socrates exists if the capacity of the matter is exercised. If the analysis of change in terms of *dunamis* and *energeia* turns out to be the same for both accidental and substantial change, relying on those notions to solve the problem of the unity of a substance will turn out to be useless. Moreover, if matter persists in substantial changes, why is having the form not an accident of it, just as being tanned is an accident of Socrates?³⁴ Thus, for a composite to be a substantial unity, the matter must be a substance *only* potentially. The matter of an F must not have an essence and form independently of F, for otherwise a form-matter composite would have two essences – the essence of an F and another essence belonging to matter – and would therefore not be a unity.

One must therefore distinguish between the question of whether there is a single unifying cause and the question of what the ontological status of the unified parts is. An orchestra has a single unifying cause, which explains why many musicians make up one single orchestra, but it is not a substance because the musicians who constitute the orchestra are themselves substances (they are essentially humans). Only if the musicians had no essences independent of the unifying cause could an orchestra be a substance.

³⁴ Kosman 1987 and Gill 2010 argue that this is the main problem for a view like the one presented here.

Let us begin with the first way in which matter is potentially a substance – by having the required capacities to constitute a substance. Since a hylomorphic composite may be made up of several layers of matter, which layer is the matter that is potentially the substance? For instance, a statue is made of bronze, which in turn is made up of tin and copper, which are in turn made up of the elements. As Aristotle makes clear in H.4, it is only the bronze that is the matter in the strict sense of the statue:

δεῖ δὲ τὰ ἐγγύτατα αἴτια λέγειν. τίς ἢ ὕλη; μὴ πῦρ ἢ γῆν ἀλλὰ τὴν ἴδιον.

One must give the nearest causes. What is the matter? Not fire or earth, but the matter peculiar to the thing in question. (*Metaph.* H.4 1044b1–b3)³⁵

Only the proximate (or peculiar) matter has the relevant capacities to constitute the composite.³⁶ The bronze, in contrast to earth and fire or tin and copper, is *ready* to be turned into a statue.³⁷ It is already in such a state that it does not have to undergo further changes before it can take on the form. The matter of a composite substance just is what has the

³⁵ Cf. *Metaph.* H.4 1044a15–18: Even if everything does come from the same primary stuff, or stuffs, and even if it is the same matter that functions as a principle of the things that come into being, there is nevertheless a different matter appropriate to each. (εἰ καὶ ἐκ τοῦ αὐτοῦ πάντα πρώτου ἢ τῶν αὐτῶν ὡς πρώτων καὶ ἡ αὐτὴ ὕλη ὡς ἀρχὴ τοῖς γιγνομένοις, ὁμως ἔστι τις οἰκεία ἐκάστου.)

³⁶ In the case of artefacts, Aristotle recognizes that the same kind of matter can constitute various things and that various kinds of matter can constitute the same thing. Thus, ‘peculiar’ does not imply a one-to-one correspondence. However, a full explanation of why this form rather than that form is realized includes the moving cause; see H.4 1044a25–32. Nonetheless, the matter must *ready* to be turned into an F in these cases, too: we can build a bed and a box from wood, but the wood must be potentially both. Moreover, if we answer the question ‘Why does X belong to Y?’ by specifying the cause, the causes of different objects will be different. Moreover, Aristotle emphasizes that when two things are different, although they have the very same kind of proximate matter, their moving cause differs. In this way, the specificity requirement is still respected, albeit somewhat more abstractly.

³⁷ This connects H.4–5 with Θ.7, where Aristotle also addresses the question ‘When is something potentially X?’ by analyzing the generation of an F. I cannot pursue this here, but Θ.7 is certainly the most important chapter of Θ for the theory developed in H. For interpretation of Θ.7, see Beere 2006; Makin 2006; Charles 2010.

proximate capacity to constitute it, and the composite exists when the matter exercises this capacity.

This answer is not the uninformative truism that whatever happens to constitute something must have the capacity to do so.³⁸ It will not do for Aristotle to say that the matter of a house is material that can be used to build a house or that the matter of wine is whatever can constitute wine. Instead, as I understand Aristotle's insistence on the proximate matter, one must state why some matter, such as bricks and stones, in contrast to earth and water, has the proximate capacity to constitute a house. Only then will it become clear why the exercise of the capacity results in the existence of a hylomorphic substance.

Aristotle explicates this idea further in H.5. He argues, using the somewhat odd example of water, wine, and vinegar, that the matter relates to form and privation differently.

ἔχει δ' ἀπορίαν πῶς πρὸς τὰναντία ἢ ὕλη ἢ ἐκάστου ἔχει. οἶον εἰ τὸ σῶμα δυνάμει ὑγιεινόν, ἐναντίον δὲ νόσος ὑγίαια, ἄρα ἄμφω δυνάμει; καὶ τὸ ὕδωρ δυνάμει οἶνος καὶ ὄξος; ἢ τοῦ μὲν καθ' ἕξιν καὶ κατὰ τὸ εἶδος ὕλη, τοῦ δὲ κατὰ στέρησιν καὶ κατὰ φθορὰν τὴν παρὰ φύσιν.

There is a problem concerning the relation of the opposites to a thing's matter. Thus, if the body is potentially healthy, and disease is the opposite to health, must the body be potentially both? And is water potentially both wine and vinegar? Or is it rather that it is the matter of the one in virtue of its state and form, but of the other in virtue of the privation of that state and a decay that is contrary to its nature? (*Metaph.* H.5 1044b29–34)

Water is the matter of wine 'in virtue of its state and form' (καθ' ἕξιν καὶ κατὰ τὸ εἶδος), but it is the matter of vinegar 'in virtue of a privation and a decay that is contrary to its nature'

³⁸ On this point, see also Haslanger 1994, p. 164..

(κατὰ στέρησιν καὶ κατὰ φθορὰν τὴν παρὰ φύσιν). Aristotle is speaking of form and privation as they relate to *water*. His point is not that vinegar is the privation of wine (though this is also true); rather, he is arguing that the capacity to possess the form of wine is in the nature of water, whereas water is the matter of vinegar only if it has lost its capacity to be wine.³⁹ This interpretation is confirmed by the passage immediately following, where Aristotle points out that, while vinegar can come directly from wine, wine cannot come from vinegar because ‘it must [first] revert to its matter’ (H.5 1045a4). The reason for this asymmetry is that water is not, as it were, a neutral substrate that has a capacity for both. Instead, water is wine in capacity; for it to constitute vinegar is due to the corruption of this capacity. When vinegar reverts to being water, the water’s capacity to constitute wine is restored, a capacity it has in virtue of its nature.

The phrase ‘in virtue of its state and form’ introduces the idea that matter has the capacity to constitute something in virtue of what it is. This sounds problematic; indeed, Aristotle’s example of water and wine adds to this worry (unless you are in the winemaking business and your competitor produces vinegar).⁴⁰ Does water have an innate drive to be wine? To make sense of the claim that the capacity to possess the form of wine is in the nature of water, I suggest connecting it to the point that the form determines matter and that matter always is the matter for some product.⁴¹ The wine form determines that its matter must have certain properties and capacities. (Strictly speaking of course, for the example to work out as Aristotle probably intends, it has to be assumed that the ‘water’ in question is actually some kind of fermentable grape.) Without these capacities, the matter of wine could not constitute wine. H.5 describes this fact from the side of the matter. For some appropriately fermented grape juice to

³⁹ See also Code, n.d., pp. 5–6.

⁴⁰ Yet another worry is that speaking of the nature of matter seems to conflict with Aristotle’s statement that matter is nothing in itself. I will address this worry below.

⁴¹ For this interpretation of the wine-vinegar example, see also Lewis 1994, pp. 250–1.

be the matter of wine, it must have these capacities essentially. To put the point abstractly: It is essential to the matter of an F to have the capacity to constitute an F.

The upshot for the discussion of the unity of the substance is that constituting an F just is the exercise or actuality of matter's capacity, which is essential to it, and the existence of a substance is nothing other than the exercise of this capacity.⁴² Thus, the question of how matter can constitute the substance – which, as we have seen, is intractable for Platonists – has a straightforward answer for Aristotle. It is not accidental that some appropriately fermented grape juice is ready to be wine, nor is it a claim about the regularity that wine is produced from fermented grape juice. Instead, it is a claim about the essence of the matter of wine, namely, that it essentially has the proximate capacity to constitute wine. Moreover, since something is the matter of an F only if it possesses this capacity to be informed, there is no independent way to pick out the matter that is appropriate to some kind of substance other than by its capacity to constitute that substance. Whether some bricks and stones are potentially a house is determined by whether exercising the capacity of *exactly these* materials results in a house. If this is right, H.4–5 pave the way for understanding Aristotle's reference in H.6 1045a33 to the essence of matter. The essence of the matter of F is to have a capacity whose exercise results in the existence of an F.

At this point, one should note that the examples of artefacts or quasi-artefacts are imperfect, but they are in line with Aristotle's tendency to use them to illustrate the case of natural organisms. The examples are imperfect in two ways. First, it is unclear that the matter of an artefact has the capacity to constitute that artefact by virtue of its own essence. Water can be what it is, or so it seems, independently of its capacity to constitute wine. When it comes to the matter of a human, however, it seems appropriate to say that it has the capacity to constitute

⁴² In this respect, the description of the cause of unity as an actuality and nature in H.3 is telling. On this point, cf. Makin 2006, p. 170.

a human by virtue of its essence. This is witnessed by the fact that if some human matter does not develop into a grown human, we look for an explanation of why things ‘went wrong’.

Second, in the case of artefacts, there is typically no one-to-one correspondence between the matter and form. Some wood can constitute both a box and a bed, so the same matter is potentially F and potentially G in virtue of its essence. But how can one and the same entity be essentially several things, even only potentially? While I think this difficulty is often exaggerated,⁴³ Aristotle explicitly allows that such cases are possible. Therefore, in order to explain why the wood comes to constitute a bed and not a box, one must include the moving cause (cf. H.4 1044a25–32), for a moving cause is needed in all cases where something that is F in capacity becomes an F in actuality. Now, including the moving cause in the case of an artefact must mean that one refers to the artisan’s *decision* to produce a bed rather than a box. In the case of natural substance, however, the matter is essentially one thing; that is, in virtue of its essence it is potentially only one thing. For example, the matter of a human is capable of developing only into a human. Hence, if it is asked what the matter of a human is, only one answer is possible: a human in capacity. In Θ.7 1049a13–16, Aristotle further suggests that, strictly speaking, something is potentially a human only if it has the principle of generation within it (Θ.7 1049a13–16). The exact meaning of this claim is disputed, but I suggest that it must mean minimally that the capacity whose exercise results in a human is solely the capacity of matter. To explain why a bed comes to be one must include the decision of the artisan, but if an F is a natural substance its matter will develop into an F without an external principle precisely because it essentially has the capacity for being an F; thus, in the right circumstances it will exercise this capacity.⁴⁴

⁴³ Often the matter of artefacts is apt to constitute only one thing. Think of an Ikea shelf: you cannot build much else with it.

⁴⁴ See Makin 2006, p. 164. Beere 2009, pp. 255–9 argues that Θ.7 implies that what is potentially a human already possesses, in a sense, the form of human because the form of

Yet even with these corrections in place, saying that the matter of an F must have the capacity to constitute an F cannot be the complete answer. For Aristotle must also show that matter has no *other* essence. Before turning to this problem, however, I should note two further upshots of my interpretation. First, the same matter, water, can exist throughout: it exists before it constitutes wine and while it constitutes it.⁴⁵ In the wake of J.L. Ackrill’s influential article on the *De Anima* (Ackrill 1972), some scholars have held that matter cannot exist without form, but this is not the theory of H.⁴⁶ In a sense, the matter is related to the form only contingently, since it can exist without being informed. At the same time, as my remarks have hopefully shown, being contingent is not the same as being accidental. It is one thing to say that what is potentially an F need not exercise its capacity to constitute an F, and hence is contingently informed; it is quite another thing to maintain that this entails that exercising this capacity is extrinsic and accidental to what is potentially F. The latter is false.⁴⁷

Second, one argument that might be made against taking H.3–5 as the background to H.6 is that H.3–5 appears to address the pre-existing matter, that is, the matter which is potentially F because it can come to constitute an F, whereas H.6 concerns concurrent matter, that is, the

human is the principle of generation. Beere defends the consequence that something can have the form of F without being an actual F.

⁴⁵ Presumably, the water also continues to exist while it constitutes vinegar, even though it is deprived of its essential capacity to constitute wine.

⁴⁶ For an extended argument, see Code, n.d. In this paper I will not take a stance on whether this contradicts other texts, except to note that H.5 also holds that a corpse is not potentially alive. Indeed, H.5’s asymmetry addresses precisely the point that if the matter has lost its capacity, it is that matter only homonymously. Hence, Aristotle says the corpse must ‘first revert to matter’ (H.5 1045a4). The point is that the matter of an F essentially has its capacity for being an F, but having essentially the capacity to be alive does not entail that it necessarily exercises this capacity.

⁴⁷ Indeed, the fact that exercising the capacity to be an F is intrinsic to the matter was the ground for saying that matter was potentially F in the first place. See *Metaph.* Θ.8 1050a15–16: ‘Furthermore, the matter is potentially, because it may go into the form; and when it *is* actually, then it is in the form. (ἐτι ἢ ὕλη ἔστι δυνάμει ὅτι ἔλθοι ἂν εἰς τὸ εἶδος· ὅταν δέ γε ἐνεργείᾳ ἢ, τότε ἐν τῷ εἶδει ἐστίν.)’

matter which is potentially F while actually constituting an F.⁴⁸ One can resolve this tension by distinguishing matter's capacity for being from its capacity for becoming. Water has the capacity to *become* wine, and once the water constitutes wine this capacity is lost because it can no longer become wine. But water equally has a capacity for *being* wine, which is Aristotle's concern in H.6 (cf. Freeland 1987, p. 397; Frede 1994, pp. 191–2). Capacities for being satisfy what Makin calls the NOLOSS requirement: 'It is not the case that A loses the capacity to ϕ as a consequence of having exercised it (having ϕ -ed)' (Makin 2006, p. 171). Thus, the exercise of the same capacity explains why water becomes wine and now constitutes wine.⁴⁹

Yet, even if one grants all of this, one might still think that matter also has an essence independent of its capacity to constitute the substance so that there are still two essences around, and the hylomorphic substance is an accidental composite.⁵⁰ This leads us back to Loux's challenge, namely, to explain why matter's being potentially the substance should differ from a substance's potentially having an accident. In Aristotle's view, however, the matter is a substance *only* potentially precisely because it has no essence independent of the form.

That this must be Aristotle's view can be seen from his distinction between what underlies accidents and what underlies substance:

οὐδ' ὅσα δὴ φύσει μέν, μὴ οὐσίαι δέ, οὐκ ἔστι τούτοις ὕλη, ἀλλὰ τὸ
ὑποκείμενον ἢ οὐσία.

⁴⁸ It is not true, however, that Aristotle shows no concern for generation in H.6. In fact, as I will argue below, one answer as to why the matter constitutes (an) F is that the mover imposed the form of F on the matter.

⁴⁹ There is a complication: The capacity that allows a potential F to be turned into an actual F needs to be the same capacity that allows it to *be* an F. Malleability allows the bronze to be turned into a sword, but this is not what makes it apt to constitute a sword. On this, see Makin 2006, p. 169.

⁵⁰ Gill 2010, p. 100 raises this objection explicitly and uses it to motivate her own account.

Things that are by nature, but are not substances, also do not have matter, but what underlies them is the substance. (*Metaph.* H.4 1044b8–9)

What underlies accidental composites is a substance; what underlies substance is matter.⁵¹ A substance is a *tode ti*, which I will take to be a determinate and unified individual with a definable essence.⁵² For our purposes, it is important that something's being a *tode ti* entails that it has non-arbitrary conditions of identity and unity, and that these conditions are given by the substance kind it falls under.

Matter, on the other hand, is not a *tode ti*, except potentially:

ὅλην δὲ λέγω ἢ μὴ τόδε τι οὐσα ἐνεργεῖαι δυνάμει ἐστὶ τόδε τι.

I mean by matter that which is not a this-somewhat actually, but is a this potentially. (*Metaph.* H.1 1042a27–28)

As this passage shows, Aristotle holds that matter, taken in itself, is not a determinate individual with an essence. If its capacity to constitute the hylomorphic composite is not exercised, matter

⁵¹ Corollary: Since only perceptible and perishable substances have matter in the sense of *dunamei tode ti*, we see again that the question of unity in H.6 concerns primarily these things.

⁵² The notion of a *tode ti* has been subject to a great deal of scholarly controversy, and I will not attempt here to give a complete analysis of it. For an interpretation similar to mine, see Wedin 2000, p. 218, who argues that a this is 'something having a structure that is captured by a separate formula or definition', and Gill 1991, p. 31, who argues that it 'sometimes specifies a particular falling under a kind, and sometimes a determinate kind', and Furth 1987, p. 255, who also emphasizes that a *tode ti* must be unified. For a recent paper on the various ways of how to construe the phrase *tode ti*, see Corkum 2019. Corkum himself takes *ti* not as general but as specifying an arbitrary member of the class of *tode*. I agree with the construal but not with Corkum's interpretation. According to him, this is the class of demonstrable items. I do not want to deny that a *tode ti* is typically demonstrable, but on Corkum's construal we risk losing the critical connection to definability. Alternatively, one could follow the view of Smith, who argues that both *tode* (this) and *ti* (somewhat) are general, so that a *tode ti* is 'a placed and dated specimen of some definable and substantial nature' (Smith 1921, p. 19). The first component, individuality, is suggested by the *Categories*, where Aristotle states that being a *tode ti* is a mark of primary substances because they are 'indivisible and numerically one' (*Cat.* 3b12). The second component, definability and having an essence, is suggested by Z.4 1030a3–7.

does not constitute anything and is not a substance. It is just some matter, and thus has no non-arbitrary unity conditions that would explain why it is *one* individual.

While many commentators agree that Aristotle thinks this, they disagree about what he means by the claim. As indicated above, I do not think that it means that matter is some mysterious potential entity whose identity is dissolved in the composite or that matter is akin to a property.⁵³ Rather, the reason matter does not have an essence is because it is a heap, that is, it is not *one* individual.⁵⁴ This view is motivated by Aristotle's explicit statement that the material parts of a thing, taken without the form, are only a heap (*Metaph.* Z.16 1040b5–10; Z.17 1041b12; H.6 1045a9). We also find traces of this view in the following passage:

ἡ μὲν ὕλη τόδε τι οὕσα τῷ φαίνεσθαι (ὅσα γὰρ ἀφῆ καὶ μὴ συμφύσει, ὕλη καὶ ὑποκείμενον).

The matter ... is a this merely by appearing so (for what is in contact and not an organic unity is matter and substratum). (*Metaph.* Λ.3 1070a9–11)

One difference between a heap and a whole is that the parts of a heap are merely in contact, while the parts of the whole form an organic unity. Using Aristotle's example from Δ.6 1016b11–16, the material parts of a shoe lying next to each other or randomly put together do not constitute a whole.⁵⁵ Instead, they are merely a heap: a plurality of parts. By contrast, if these parts are combined to constitute a shoe, they are one whole. This contrast again

⁵³ The first view is explicit in Scaltsas 1992, 1994; Marmodoro 2013, and the second in Gill 1991, 2010.

⁵⁴ I have defended this interpretation in detail in Pfeiffer 2021.

⁵⁵ In *Metaph.* Δ.6, Aristotle says that they are one due to being continuous. This is in tension with the passage in Λ.3 and Aristotle's definition of continuity from *Physics* 5.3, which contrasts being continuous and being in contact and defines the continuous as something grown together. But I think that Δ.6 uses continuity in the broader sense that covers being in contact. In this sense, some parts are continuous because they are directly adjacent and touching so that no other thing is between them. Heaps, for Aristotle, are continuous in this sense. Aristotle does not consider mereological sums as they are defined today. The sum of my left arm and the moon is not a heap for Aristotle.

underscores how matter depends on form. The disassembled parts of a shoe can be picked out as one thing only insofar as they can constitute a shoe, that is, insofar as they are potentially a shoe. Without reference to the form of a shoe, they would be just some stuff lying around without a cause that makes them one. There would be no way of telling whether we are presented with one or several objects.⁵⁶

As I said, this interpretation has the advantage that it does not force us to assume that the matter is some mysterious potential entity. Take bricks and stones that are potentially a house, or the bronze that is the matter of a statue. Both exist in a straightforward sense. They exist actually, if you will, as bricks and stones or as some bronze. One can refer to the matter, as Aristotle does in $\Theta.7$, by using deictic pronouns: *These* bricks and stones are the matter of *this* house (see *Metaph.* $\Theta.7$ 1049a19–20). The point is that bricks and stones that are just lying around are not a substance but a heap, and as such they are not a unity.⁵⁷ A house, by contrast, is a substance and a *tode ti*, and it has non-arbitrary unity and identity conditions because it falls under a substance kind. (Again, the examples are defective because presumably *house* and *statue* are not substance kinds. Artefacts are nonetheless useful examples precisely because their matter is both readily identifiable and a heap.)

⁵⁶ One might think that matter can be individuated in terms of mass terms such as *this much water*. On Aristotle's view, however, masses and pluralities are alike in that they do not count as *one* individual. There is no principled way of deciding whether we are confronted with one single or two, merely contiguous masses of waters. For the characterization of masses, e.g., the four elements, as heaps, see *Metaph.* $Z.16$ 1040b5–10, and the argument in Pfeiffer 2021, pp. 157–9. I would like to thank an anonymous referee for pressing me on this point.

⁵⁷ Note that the matter of, e.g., a statue is not the *lump* of bronze, but *bronze*. This emerges from, among others, $Z.7$ 1033a5–23. Speaking of 'the bronze' suggests that the matter falls under a dummy-sortal such as *lump*, but strictly speaking the matter is not an unshaped lump of bronze but simply *some bronze*. One can count and individuate lumps of bronze, but one cannot do the same for *some bronze*.

3.3 Interpreting H.6 in Light of H.3–5

The analysis of H.3–5 offered here is not intended to address all the relevant issues in these chapters. Nor do I want to suggest that the function of these chapters in the context of book H is exhausted by their contribution to H.6. Nevertheless, a major task of H.3–6 is undoubtedly to show how hylomorphic composites can be unities. The problem here is to explain why form is not predicated as something different of matter, and why matter-form composites are not accidental composites like *pale man*. I have argued that Aristotle provides a substantive account of form and matter in H.3–5, which is then applied to the unity problem in H.6. Before turning to the application of this account in H.6, let me briefly summarize the crucial parts of it that I take to have been established: (1) Form, by virtue of being an actuality, is itself a unity. The question, ‘How are several parts unified into a whole?’ does not apply to form; thus, the question of the unity of form is not analogous to the question of the unity of the composite. Aristotle is therefore not confronted with an explanatory regress. (2) The form sets a standard of unity. For the material parts to be unified is for them to be one F. There is a standard associated with the form F such that if the material parts exhibit it, they constitute a whole of the kind F. (3) The form is the cause of unity, since it explains why several material parts constitute one whole (in the sense of ‘whole’ in point 2). (4) The form F can be a cause of the unity of the material parts of a thing only if the matter of an F essentially has the capacity to constitute an F. The matter is potentially what the form actually is, and a composite F exists when the matter exercises its capacity to constitute an F. While points 1–4 explain how a unified composite F exists, they do not explain why this composite is not a substance consisting of substances. Therefore, we must add one more point: (5) matter is only potentially a substance. Form is not predicated of them as something different only if the material parts do not actually have any other essence.

Let us now put this interpretation to the test and ask whether on its basis we can give a satisfactory explanation of the crucial passage in H.6:⁵⁸

τί οὖν τούτου αἴτιον, τοῦ τὸ δυνάμει ὄν ἐνεργεία εἶναι, παρὰ τὸ ποιῆσαν, ἐν ὅσοις ἔστι γένεσις; οὐθὲν γάρ ἐστιν αἴτιον ἕτερον τοῦ τὴν δυνάμει σφαῖραν ἐνεργεία εἶναι σφαῖραν, ἀλλὰ τοῦτ' ἦν τὸ τί ἦν εἶναι ἑκατέρωφ.

What, then, is the cause of this, i.e., that what is potentially exists in actuality ([1] aside from the maker in cases where there is generation)? [2] There is no further cause of what is potentially a sphere being actually a sphere; but [3] this was the essence for each of them. (*Metaph.* H.6 1045a30–33)

Here is how I read this passage in light of H.3–5: (1) Aristotle wants to explain why something potentially F constitutes something actually F. The question is not the non-starter identified in Z.17, namely, ‘Why is an F an F?’ Instead, it is the real question of why something that is only potentially an F has, in fact, exercised its capacity to be an F. Since the bronze is only potentially a sphere, and it is contingent (in the sense specified above) whether it is informed, we must explain why it exercises its capacity to constitute a sphere.⁵⁹ The answer is that the mover – namely, the artisan who imposes the form – accounts for why matter exercises its capacity.⁶⁰

⁵⁸ I disagree with Harte (1996, p. 278) who argues that this passage does not contain Aristotle’s solution for the unity of the composite. She believes that the solution is offered at 1045a36–b7. I think she is right that this passage contains Aristotle’s account of the unity of form, but as I argued above, the unity of form is insufficient to ground the unity of the composite.

⁵⁹ I consider this an additional reason against the view that the matter is somehow essentially informed. If this were the case, referring to a mover would make no sense.

⁶⁰ This is a substantive explanation that has been prepared for by H.4 1044a25–32. It is substantive because it presupposes that the mover has the appropriate active capacities and that the matter has the appropriate passive capacities. Aristotle certainly thinks that this is another point on which the theory of his opponents fails, as the following passage shows: ‘Further, in virtue of what the numbers, or the soul and the body, or in general the form and the thing, are one – of this no one tells us anything; nor can anyone tell, unless he says, as we do, that the mover makes them one’ (*Metaph.* Λ.10 1075b34–37; cf. Z.8 1034a4–5). It should also be noted

(2) There is, however, no *further* cause in addition to the moving cause that explains why a potential sphere is an actual sphere. If the matter exercises its capacity, the composite exists. No other unifier, such as the One, participation, or communion, is needed to tie potential being to its actuality (see *Metaph.* H.6 1045b15–23). Importantly, this does not entail that the form is not a cause of unity. The form unifies the *material parts* into a hylomorphic substance. In the passage under discussion, Aristotle denies the altogether different claim that a further unifier is needed to explain how the form can unify the material parts, that is, how form and matter can be united.

(3) Aristotle’s answer to this problem lies in the much-discussed remark that this is the essence for the matter and the composite.⁶¹ Interpreting this claim is complicated because it is unclear what ‘this’ (τοῦτ’) refers to. I assume it refers to the cause, that is, the form (see Charles 1994, p. 88; Harte 1996, p. 292).⁶² As I explained in the previous section, the matter of the

that H.4 1044a332–34 implies that a complete scientific explanation must include the mover. Thus, it seems clear that the moving cause is the cause of a potential F being actually F. The moving cause also explains why some matter is an F rather than a G in cases where the matter is potentially both. If some wood is potentially a box and potentially a bed, the question of why it constitutes one thing and not the other is answered by the mover. But once we have given this answer, the explanation of the unity of matter and form is along the same lines as in cases where there is a one-to-one correspondence between matter and form. For when that which is potentially an F has exercised its capacity to constitute an F, an F exists. And since what is potentially F is defined in terms of the form F, it is true that the form is the essence of the matter also in these cases. (See below for my interpretation of this phrase.)

⁶¹ I take the referents of ‘each of them’ (ἐκάτερον) to be the matter and the composite; cf. Ross 1924, vol. 1, p. 238, ad loc.; Gill 2010, p. 99. Among modern scholars, only Delcomminette (2014, pp. 103–4) follows Pseudo-Alexander and assumes that it refers to the sphere and to human.

⁶² Another option, following Ross 1924, vol. 1, p. 238., is to take ‘this’ to refer to the whole clause ‘the potential sphere being actually a sphere’. According to this interpretation, there is no cause of unity of matter and form, but they are united in virtue of what they are. As I have already said, many proponents of the non-explanatory reading take this to imply a kind of identity that is non-necessary. Keeling 2012, p. 251 thinks they are merely correlative: ‘Their natures are not the same; they are correlative: the bronze of a bronze sphere is by its nature the matter of that sphere, while the spherical shape is by its nature the form of it. The two are by their very nature united with one another.’ I have argued against the general strand of the non-explanatory reading, but I should also note that the claim that form is defined by reference to matter seems to contradict Aristotle’s insistence that form is prior to matter and that its definition does not contain matter (see *Metaph.* Z.10 1035a1–6, 1035b13–22). Menn

sphere is potentially a sphere, and since the form is the actuality and exercise of matter's capacity, the identity of the matter depends on the form.⁶³ Similarly, the essence of the composite is the form. Thus, there is a single essence, the form, which determines what the matter and the composite are.

However, this claim is liable to be misunderstood, so some clarifications are in order. First, it does not imply that matter and form are 'virtually' identical.⁶⁴ As far as I can tell, Aristotle never *identifies* matter and form, or a capacity and its exercise. Nor, secondly, can it mean that the essence of the matter of an F is to be *actually* F. Thus, as mentioned above, I propose to understand the claim that the essence of the matter is the form in light of the point in H.5 that a potential F is defined in terms of its actuality. On this understanding then, the essence of the matter of F is to have a capacity whose exercise results in the existence of an F; in this sense, the matter is defined in terms of the form.⁶⁵ Matter has no essence other than what it has the capacity for.

(forthcoming) makes a similar claim about correlativity. Another option, close to the view proposed here, is to take the referent to be 'being a sphere'. See Lewis 1995b, p. 538:

The subordination of matter to form in this story is centered around the idea that the form is actually the very so-and-so, namely, (a) sphere, that the matter is potentially. This is the correct interpretation of Aristotle's difficult claim that 'the proximate matter and the form are the same and one, the one potentially and the other actually' (H 6.1045b18–19). The form of Aristotle's assertion is not: the proximate matter is the same as the form – that is, the two are 'somehow identical,' as Gill supposes. Rather, Aristotle says that there is one and the same thing, namely, (a) sphere, such that the matter is that thing potentially, while the form is that thing actually. So there is not one nature here, but two, the matter and the form, the first appropriately subordinated to the second.

I agree with Lewis that matter and form are not identical, but I do not think that there are *two* natures or essences. There is only one essence, that of the form. For a general discussion, see Charles 1994; Lewis 1995a, p. 75 n. 53; Gill 2010, p. 100.

⁶³ For this point, see also Makin 2006, p. 180.

⁶⁴ On this phrase, see Halper 1984, p. 158.

⁶⁵ Menn (forthcoming) takes it to be a decisive objection against taking τοῦτο to refer to the form that the essence of form and matter are never explicitly identified and we must take their essences to be correlatives. This objection assumes that matter has an essence that is not exhausted the essence of the form. As I have argued, I think matter has no other essence than the essence of form. Of course, there is more to matter than just the form, which is why they

This falls short of claiming identity between matter and form: it claims only that there is a single essence that characterizes both. To illustrate: When defining a sphere, we explain why the matter, the bronze, constitutes a sphere.⁶⁶ The bronze must be potentially a sphere if it is to qualify as the appropriate matter. The bronze *qua* unshaped has no essence in actuality and it is not a substance.⁶⁷ Thus, if we ask about a piece of bronze in the artist's studio, 'What is this?' the correct answer is that it is not an individual substance of any kind. However, since the bronze has the capacity to constitute a sphere, we could have answered that it is (potentially) a sphere. In short, the essence of the bronze (*qua* unshaped) is what it has the capacity to be. The sphere exists when the bronze exercises its capacity to be shaped spherically, and the form is the cause of this because being (actually) shaped spherically answers the question of why the bronze constitutes a sphere. Since the matter and the composite share a single essence, being spherical, the bronze and the sphere are not related as two things with independent essences, but as that which is potentially F and that which is actually F. By exercising its capacity, the matter of an F displays the kind of unity given by the form F.

4 Conclusion

In analyzing the unity of a composite as the unity of what is potentially F and what is actually F, Aristotle goes far beyond what he says in Z.17. Although he says there that the cause of unity is not another material part, and might claim, albeit obliquely, that form-matter

are not identical, but this does not imply that the potential F has any other essence than the actual F.

⁶⁶ The example is limited because bronze is not the *per se hupokeimenon* of sphericity, which is three-dimensional extension.

⁶⁷ Note that this does not imply that we cannot identify matter or characterize it further. There is no problem involved in picking out some bronze and saying that it is bronze, etc. Aristotle's point is that it is not a substance, not an individual with an essence. But of course not all things in Aristotle's ontology are substances. Most notably, according to the *Metaphysics*, the elements are not; see *Metaph. Z.16 1040b5–10*.

predication is not an *allo kat' allou* predication,⁶⁸ he does not spell out how to account for the unity of the composite. For example, since it is stated in Z.17 1041b14–16 that the material parts can exist by themselves, it is unclear why these material parts do not have their own essences and why the unifying cause is not external to them. To explain this, one must introduce the framework of potentiality and actuality, since the potential substance is defined in terms of its actuality.

Indeed, I would argue that Aristotle characterizes form as actuality and matter as what is potentially in H specifically to account for the unity of hylomorphic substances in H.6. The notions of actuality and potentiality are largely absent from book Z. Their most prominent appearance there is in Z.13 1039a3–14. Although this passage concerns the unity of substance ('no substance can consist of substances'), the chapter ends aporetically (see *Metaph.* Z.13 1039a14–23), and Aristotle does not resolve the aporia within book Z, including Z.17. And although H.1–2 introduce these notions, I agree with the London group's observation (Burnyeat 1984, pp. 8–9) that it is unclear how much theoretical 'heavy lifting' they do.

In H.3–6, however, these notions become crucial for explaining the unity of the hylomorphic composite.⁶⁹ For since the essence of the matter of an F is to be potentially F, the

⁶⁸ Cf. *Metaph.* Z.17 1041a32–b3. I say 'obliquely' because, first, my interpretation presupposes that we read *κατ' ἄλλων* in line a33, instead of *κατ' ἀλλήλων* (which is a conjecture). In the α family J preserves the reading *κατ' ἄλλων*. E has *κατ' ἄλλω μένοις*. It is plausible, however, that the text the scribe of E was copying had the same reading as J – namely, *κατ' ἄλλων λεγομένοις* – but ν *λεγο* went missing due to a scribal error. Hence, the α -family, as a whole, supports *κατ' ἄλλων*. Second, Aristotle does not say explicitly in Z.17 that form-matter predication is not an *allo kat' allou* predication, but rather that substances such as human are not predicated of other things, and so must be separated out, that is, they must be explained according to a model that has a predicative structure. This predicative structure is form-matter predication, which, as we know from Z.13 1038b4–6, differs from the predication of an accident. So it seems reasonable to assume that this is meant to imply that form-matter predication is not an *allo kat' allou* predication. But even if this interpretation is correct, it does not show *why* form-matter predication is not an *allo kat' allou* predication; to answer this, we need the account in H.3–6.

⁶⁹ The hypothesis that the pair potentiality-actuality in book H is introduced specifically to account for the unity of hylomorphic substance also distinguishes this investigation from book Θ . Book Θ has a much broader focus, since it investigates these notions as one of the ways in

form F is not predicated of the matter as something different. As we have seen, in an *allo kat' allou* predication, the subject has its essence independently of the predicate. But matter does not underlie as a substance and *tode ti*.⁷⁰ Thus, if the sphere form is predicated of bronze, it is not predicated of *another* substance.⁷¹ The essence, which determines what the thing in question is, lies in the predicate, that is, the form. For this reason, it is a (brazen) *sphere*, not some *bronze* shaped spherically. The contrast with accidental predication is readily intelligible: If pallor is predicated of a human, the pale (human) is pale by being something else, namely, human. There are two essences, that of pallor and that of human, and for this reason *pale human* is not a unity in the required sense. By contrast, it is not the case that the spherical (thing) is a sphere by being something else, namely, bronze. Hence, it is a definable unity.

Bibliography

- Ackrill, J. L. 1972. Aristotle's Definitions of *Psuche*. *Proceedings of the Aristotelian Society* 73, pp. 119–33.
- Angioni, L. (2014). Definition and Essence in *Metaphysics* vii 4. *Ancient Philosophy* 34 (1), pp. 75–100.
- Beere, J. (2006). Potentiality and the Matter of Composite Substance. *Phronesis* 51 (27), pp. 303–29.
- Beere, J. (2009). *Doing and Being: An Interpretation of Aristotle's Metaphysics Theta*. Oxford.
- Bostock, D., ed. (1994). *Aristotle: Metaphysics Books Z and H*. Oxford.
- Bronstein, D. (2016). *Aristotle on Knowledge and Learning: The Posterior Analytics*. Oxford.
- Burnyeat, M. (2001). *A Map of Metaphysics Zeta*. Pittsburgh.
- Burnyeat, M. (1984). *Notes on Book Eta and Theta of Aristotle's Metaphysics*. Oxford.

which being is said (Θ.1 1045b, referring back to Δ.7), and is not concerned specifically with the unity of hylomorphic substances.

⁷⁰ For this distinction, see also *Metaph.* Z.13 1038b4–6; Θ.7 1049a27–36.

⁷¹ For the worry that Aristotle's model in H.1–5 implies that there are two things, see Kosman 1987; Gill 1996.

- Charles, D. (1994). Matter and Form: Unity, Persistence, and Identity. In: Charles, Scaltsas, T., Charles, D., and Gill, M.L., eds., *Unity, Identity, and Explanation in Aristotle's Metaphysics*, Oxford, pp. 75–105.
- Charles, D. (2000). *Aristotle on Meaning and Essence*. Cambridge, England.
- Charles, D. (2010). *Metaphysics* Theta. 7 and 8: Some Issues Concerning Actuality and Potentiality. In: Lennox and Bolton, eds., pp. 97–121.
- Charles, D., Gill, M.L., and Scaltsas, T., eds. (1994). *Unity, Identity and Explanation in Aristotle's Metaphysics*. Oxford.
- Code, A. (1997). Aristotle's Metaphysics as a Science of Principles. *Revue Internationale de Philosophie* 51 (201), pp. 357–78.
- Code, A. (2010). An Aristotelian Puzzle about Definition: *Metaphysics* Z.12. In: Lennox and Bolton, eds., pp. 78–96.
- Code, A. (n.d.). Aristotle on the Matter of Corpses in *Metaphysics* H5. Unpublished manuscript. <https://www.philosophy.rutgers.edu/joomlatools-files/docman-files/Matter-of-Corpses-Draft.pdf> (last accessed 11/1/2023)
- Cohen, S.M. (1978). Essentialism in Aristotle. *Review of Metaphysics* 31 (3), pp. 387–405.
- Delcomminette, S. (2014). *Métaphysique* H 6: Unité de l'*ousia*, unité de l'*eidos*. *Elenchos: Rivista di studi sul pensiero antico* 35 (1), pp. 89–125.
- Detel, W. (2009). *Aristoteles: Metaphysik, Bücher VII und VIII*. Frankfurt am Main.
- Devereux, D. (2003). The Relationship Between Books Zeta and Eta of Aristotle's *Metaphysics*. *Oxford Studies in Ancient Philosophy* 25, pp. 159–211.
- Frede, M. (1994). Aristotle's Notion of Potentiality in *Metaphysics* Theta. In: Charles et al., eds., pp. 173–93.
- Freeland, C. (1987). Aristotle on Bodies, Matter and Potentiality. In: Gotthelf and Lennox, pp. 392–407.
- Furth, M. (1987). Aristotle on the Unity of Form. *Boston Area Colloquium in Ancient Philosophy* 2, pp. 243–67.
- Gill, M.L. (1991). *Aristotle on Substance: The Paradox of Unity*. Princeton.
- Gill, M.L. (1996). *Metaphysics* H1–5 on Perceptible Substances. In Rapp, ed., pp. 209–28.
- Gill, M.L. (2010). Unity of Definition of *Metaphysics* H.6 and Z.12. In: Lennox and Bolton, eds., pp. 97–121.

- Gotthelf, A., and Lennox, J.G., eds. (1987). *Philosophical Issues in Aristotle's Biology*. Cambridge, England.
- Halper, E. (1984). *Metaphysics Z 12 and H 6: The Unity of Form and Composite*. *Ancient Philosophy* 4 (2), pp. 146–59..
- Harte, V. (1996). Aristotle *Metaphysics* H6: A Dialectic with Platonism. *Phronesis* 41, pp. 276–304.
- Haslanger, S.. (1994). Parts, Compounds, and Substantial Unity. In: Charles et al., eds., pp. 129–70.
- Jaeger, W.W. (1912). *Studien zur Entstehungsgeschichte der Metaphysik des Aristoteles*. Berlin.
- Keeling, E. (2012). Unity in Aristotle's *Metaphysics* H6. *Apeiron* 45 (3), pp. 238–61.
- Kim, H.K. (2008). *Metaphysics* H 6 and the Problem of Unity. *Journal of the History of Philosophy* 46 (1), pp. 25–42.
- Koslicki, K. (2006). Aristotle's Mereology and the Status of Form. *Journal of Philosophy* 103 (12), pp. 715–36.
- Kosman, L.A. (1987). Animals and Other Beings in Aristotle. In: Gotthelf and Lennox, pp. 360–91.
- Kosman, L.A. (2013). *The Activity of Being: An Essay on Aristotle's Ontology*. Cambridge, MA.
- Lennox, J.G., and Bolton, R., eds. (2010). *Being, Nature, and Life in Aristotle: Essays in Honor of Allan Gotthelf*. Cambridge, England.
- Lewis, F.A. (1994). Aristotle on the Relation between a Thing and Its Matter. In: Charles et al., eds., pp. 247–77.
- Lewis, F.A. (1995a). Aristotle on the Unity of Substance. *Pacific Philosophical Quarterly* 76 (3–4), pp. 222–65.
- Lewis, F.A. (1995b). Substance, Predication, and Unity in Aristotle. *Ancient Philosophy* 15 (2): 521–49.
- Loux, M. (1995). Composition and Unity: An Examination of *Metaphysics* H.6. In: Sim, M., ed., *The Crossroads of Norm and Nature*, Lanham, MD, pp. 247–79.
- Makin, S. (2006). *Aristotle: Metaphysics, Book Theta*. Oxford.
- Marmodoro, A. (2013). Aristotle's Hylomorphism without Reconditioning. *Philosophical Inquiry* 37 (1–2), pp. 5–22.

- Menn, S. (forthcoming). *The Aim and Argument of Aristotle's Metaphysics*.
- Peramatzis, M.M. (2010). Essence and *per se* Predication in Aristotle's *Metaphysics* Z.4. *Oxford Studies in Ancient Philosophy* 39, pp. 121–82.
- Peramatzis, M.M. (2018). Aristotle's Hylomorphism: The Causal-Explanatory Model. *Metaphysics* 1 (1): 12–32.
- Pfeiffer, C. (2021). What Is Matter in Aristotle's Hylomorphism? *DIALOGOI: Ancient Philosophy Today* 3 (2), pp. 148–171.
- Rapp, C., ed. (1996). *Aristoteles Metaphysik: Die Substanzbücher (Z, H, Θ)*. Oldenburg.
- Rhenius, R. (2005). *Die Einheit der Substanzen bei Aristoteles*. Berlin.
- Rorty, R. (1973). Genus as Matter: A Reading of *Metaphysics* Z–H. In: Lee, E.N., Mourelatos, A.P.D., and Rorty, R., eds., *Exegesis and Argument: Studies in Greek Philosophy Presented to Gregory Vlastos* (Phronesis Supplementary Volume 18), Assen, pp. 393–420.
- Ross, W.D., ed. (1924). *Aristotle's Metaphysics: A Revised Text with Introduction and Commentary*. 2 vols. Oxford.
- Scaltsas, T. (1992). Substratum, Subject, and Substance. In: Preus, A., and Anton, J., eds., *Aristotle's Ontology* (Essays in Ancient Greek Philosophy 5), Albany, NY, pp. 179–211.
- Scaltsas, T. (1994). Substantial Holism. In: Charles et al., eds., pp. 107–28.
- Shields, C., ed. (2016). *Aristotle: De Anima*. Oxford.
- Sirkel, R. (2018). Essence and Cause: Making Something Be What It Is. *Discipline Filosofiche* 28 (1), pp. 89–112.
- Steinfath, H. (1996). Die Einheit der Definition und die Einheit der Substanz. Zum Verhältnis von *Met.* Z 12 und H 6. In: Rapp, ed., pp. 209–28.