



Instantiation

RESEARCH

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ABSTRACT

What is it, metaphysically, for a universal to be instantiated in a concrete particular? Philosophical controversy has been ongoing since the beginning of philosophy itself. I here contribute a novel account of instantiation developed on the basis of Aristotelian premises (but departing from the mainstream interpretation according to which Aristotelian universals are instantiated by ‘combining’ hylomorphically with matter). The key stance is that for Aristotle each substance is one, i.e. single (in addition to also being a non-recurrent particular). I show that for Aristotle, the oneness of substances is primitively assumed, and, importantly, cannot be derived from composition of parts, not even holistic composition. Parts undermine oneness. It follows that instantiated properties are *not parts* of substances. However, if not parts of the substances they are in, what are they? Aristotle shows they are *qualifications* of the substances they are in. Don’t qualifications undermine the singleness of a substance? I show that Aristotle makes sure they do not. The way he does it is new, then and now. Instantiated properties are ‘hybrid’ entities: they sacrifice their own discreteness *qua* properties, while adopting the discreteness of the metaphysical subject they qualify, i.e. the substance. But then, how can a universal quality recur in many substances, if, when instantiated, it assimilates the discreteness of each of these substances? This is a key Aristotelian stance: *the quality recurs, not its qualifications*. Qualities are abstracted from their instances in similar objects, e.g. ‘wisdom’ is abstracted from many ‘wise’ people; ‘wisdom’ is individuated bottom-up from its instances, by abstraction.

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1. THE PROBLEM(S)

Try to conceptualize two objects that resemble one another with respect to e.g. shape, but share nothing in common. How do they differ from two objects that *do not* resemble each other shape-wise? The thus far insurmountable difficulty of providing an answer to this question indicates that either qualitative resemblance is to be treated as a brute fact, without explanation, which is unsatisfactory, or something has to be added to the ontology that resembling objects share.

Metaphysicians who endeavor to account for resemblance ontologically appeal to a *sui generis* type of entity to explain it: properties, which recur ‘in’ resembling objects. *One and the same universal* property, e.g. roundness, recurs in resembling objects and accounts for their resemblance, *qua* being round. It was Aristotle who argued for this account of qualitative resemblance, although it was Plato who first conceptualized recurring universals, which however he did not reify in his ontology.¹

If, however, qualitative resemblance among objects is explained by the recurrence of one and the same universal property in them, now it is recurrence that needs to be explained. We know how objects are in the world: non-recurrently, i.e. each occupying a distinct spatiotemporal location; but how are properties in the world? The mainstream stance among philosophers, of antiquity and of our time, is that properties are in the world on account of the objects of which they are properties. But then, how is a property, which is of many object(s) simultaneously, in the world? I call this the *Recurrence Problem*.

This is not, however, the only problem that arises for those who posit universals and want to explain how they are ‘in’ the world. There is also a different problem to be addressed, which I call the *Pluralizing Problem*. The first concerns how one universal recurs in many objects. The second concerns how each of the objects remains numerically one, despite having many universals ‘in’ them. Addressing the problem of instantiation requires, in short, addressing both the *Recurrence* and the *Pluralizing Problems*.

2. A TIMELESS CHALLENGE

If concrete particulars are qualified in certain ways and resemble each other qualitatively in certain respects *because* there are universal properties that are in some sense ‘in’ them, the crux is how to understand what being ‘instantiated’ in concrete particulars amounts to, metaphysically. This was a major challenge for Aristotle and has continued to be a challenge for all philosophers who endorse a metaphysics of properties that is broadly Aristotelian.²

According to the mainstream interpretation, Aristotelian universals are instantiated by somehow ‘combining’ hylomorphically with matter. There are several issues with this interpretation of Aristotle that fly in the face of modern metaphysics and make Aristotle’s account thus understood unappealing and objectionable. To mention some of such issues: Aristotelian matter is seen as an obscure, if not suspicious entity, even by today’s neo-Aristotelians.³ Further, if matter is understood to be a primitive bare particular, the issue is that primitive bare particulars are generally considered, for good reasons, an unwelcome addition to the ontology. Additionally, conceiving of instantiation in terms of a universal ‘combining’ with matter, as if the underlying matter was some type of

1 Plato considered, but rejected, I contend, the recurrence of Forms. I return to this topic in section 3.

2 In what follows I will use the terms ‘properties’, ‘recurring universals’, and ‘instantiation’ to discuss the metaphysical issues that this paper is about. The reader might object that this is *our* terminology, and not the ancients’. My stance is that *qua* philosophers, we cannot but approach the thought of the philosophers who preceded us from the standpoint of today’s concepts; to understand the past we can build only on what we possess, with respect to terminology, too. I articulate and defend this methodological approach in Marmodoro (2021, forthcoming).

3 See, e.g., E. J. Lowe’s comment “I have no serious need for the hylemorphist’s category of *matter*. [...] In fact, I would prefer to abandon the term ‘matter’ altogether, as modern physics has done at least as fundamental theoretical term” (2012: 237). What is significant about the fact that neo-Aristotelians take a critical stance in relation to Aristotelian matter is that they are *positively* engaged in the project of ‘reconditioning’ Aristotle’s hylomorphism (see e.g. Rea (2011), Koons (2014 and 2020), Koslicki (2008) and (2018) as some representatives, among others) and of applying it to a variety of long-standing problems in philosophy, to yield satisfactory solutions by today’s philosophical standards (see e.g. Jaworski (2016) and Koons (2018), in very different domains).

individual entity, suggests that instantiation is a relation between matter and the universals instantiated in it; and while there are many positions on the table as to which kind of relation that might be, the very hypothesis that instantiation is a relation has attracted much criticism.⁴ On account of such issues, many think that Aristotle's theory of recurrent universals and their instantiation in objects isn't philosophically sound. I will argue in this paper that it is.

The difficulty of the challenge has rendered it in a sense timeless, as shown by its ongoing discussion in present day metaphysics. I will here give only some representative points of reference in relation to the current debate, to illustrate how lively it is, but also to indicate that there seems to be a common pattern in how the challenge is addressed by contemporary metaphysicians. E. J. Lowe attempts to explicate what it is for a universal property to be 'in' concrete particulars, thus: "The immanentist sees the properties of concrete objects as being *ingredients* of those very objects" (2012: 230, my emphasis).⁵ This description of immanent universals as 'ingredients' of the particulars they qualify is, however, ambiguous between two possible ways of understanding what an 'ingredient' is, in this context. I take D. Lewis and D. Armstrong's accounts of what it is for a universal to be instantiated to illustrate the two different senses in which one might think of immanent universals as 'ingredients' of the particulars they qualify. Lewis would say that immanent universals are *non-spatiotemporal parts* of the particulars in which they are instantiated (1986: 64); and Armstrong, that universals are in particulars as their *constituents, but not as their parts* (1989: 40–43, 52). Neither of the two accounts gives us clarity as to what instantiation is, metaphysically, and both have been extensively developed but also criticized in the literature. Leaving aside, for present purposes, a discussion of Lewis' and Armstrong's positions as such, what is most relevant to us here is that Armstrong's position is presented as Aristotelian – not as an interpretation of Aristotle, but as a position developed from Aristotle's tenets. In which way? Very briefly, and borrowing here T. Sider's words, "Armstrong might give 'constituency' an Aristotelian reading, and claim that while universals are not parts of their instances, they are 'in' them in a sense of *ontological dependence*: were there no instances, the universal would not exist" (1995: 18, my emphasis). But, Sider adds: "I find constituency obscure. We are never given a positive account of what constituency amounts to" (1995: 18). I share, with many others, Sider's dissatisfaction with this understanding of instantiated properties as constituents, when constituency is explained only in terms of the broad notion of ontological dependence.

Thus, it seems that both Aristotle's approach as traditionally understood, and the existing modern developments of it, are unsatisfactory in explaining the instantiation of universals. Generally speaking, what appears problematic in the 'original' Aristotelian account, under the hylomorphic interpretation, is the appeal to matter; while what emerges as problematic in today's discussions is what I label here the 'ingredients approach', and what is wanting is an understanding of what type of part a universal is supposed to be in a concrete particular.

My goal here is to develop a solution to the problem of instantiation, building on Aristotle's theory, under an interpretation of it that is novel and different from the mainstream one in the scholarly literature, and also different from contemporary neo-Aristotelian developments such as Armstrong's and others'. I will argue for an account of instantiation that is not only philosophically sound, given certain Aristotelian background assumptions, but also a viable alternative for those modern philosophers who are committed to realism about universals and who are searching for a philosophically satisfactory account of how universals are in concrete particulars and what metaphysical role they play in them.

4 See, e.g., Costa (2019) for a recent interpretation of instantiation as a relation: 'Thus, the Aristotelian holds that an existential fact—the fact that a given universal exists—is grounded in a relational fact of a certain sort—the fact that something exemplifies that universal. But when this aspect of the view is properly spelled out, it becomes clear that the view is open to objection.' Costa's paper surveys also a number of versions of the interpretation that instantiation is a relation and their respective weaknesses.

5 This is not Lowe's own position, but what matters for present purposes is the understanding he offers of the instantiation of Aristotelian universals.

To understand Aristotle's account of instantiation, we need, I submit, to examine its 'roots' in Plato's metaphysics – but not where the reader might expect it, namely, in the *Timaeus* (where Plato introduced a 'receptacle' of properties that some take to anticipate Aristotle's matter); but rather, in the *Republic*. It is from there that I will start.

It is an open and controversial question whether Plato's Forms are universals. The mainstream view is that they are; I argued elsewhere that they aren't.⁶ For present purposes, the question does not need to be settled; what is relevant to us here is that Plato puts forward in *Republic X* what we would call a thought experiment wherein, per hypothesis, a Form is qualitatively identical to two instances of it.⁷ Plato explains that each of the instances possesses *the form of that Form*, which, of course, the Form possesses, too. I contend that through this thought experiment, Plato was the first to identify the *recurrent universals*, without, however, reifying them into his own ontology. Elsewhere, I called the thought experiment in question the *Third Bed Argument* – TBA for brevity.⁸ The TBA runs as follows:

[...] if he [god] made only two [Forms of Bed, say, F1 and F2], then again one [Form of Bed, F3] would come to light whose form [f3] they in turn would both possess, and that [F3] would be the one which is what 'bed' really is, and not the other two [F1 and F2]. (597c7–9)

In brief, this is an argument for the uniqueness of each Form, in Plato's ontology – a proof for what is known as the *One over Many Principle*. The thrust of the argument is this: suppose there is a Form F, e.g. the Form of Bed – the property of 'being what bed really is' – in virtue of which *f*-similar things, namely material beds, are similar, *qua* likenesses of the Form. Then this Form must be unique. For if, per hypothesis, there were *two* Forms standing for the same type of property, e.g. 'being what bed really is', namely, Forms F1 and F2, they would be, per hypothesis, qualitatively identical to one another, but also numerically different from each other, since, per hypothesis, they would be two.⁹ But if F1 and F2 were qualitatively identical but numerically different, they would owe their *resemblance* to a further single Form F3, *qua* likenesses of it. F1 and F2 would both be, in our terminology, *instances* of F3. The explanatory principle in play, in Plato's theory of Forms, is that qualitative *sameness* is accounted for by the *oneness* of the source (F3) of their qualitative condition. So, Plato's argument continues, it is F3 that would be *the Form of f-ness* – *the Form Bed*, i.e. 'being what bed really is' – whilst the originally hypothesized two Forms of Bed, F1 and F2, would be only similar to F3, as its instances.¹⁰ As such, according to Plato, crucially, F1 and F2 would fail to be Forms of *f-ness*, i.e. of 'being what bed really is'. Plato writes "that [i.e. the Form that would come to light, F3] would be the one which is 'being what bed really is', and *not* the other two". Accordingly, his conclusion is that, even if we hypothesize that there are two Forms F, we find that there can be only one Form of *f-ness*, in virtue of which other items, whether other Forms or material objects, can be *f*; this is the *One over Many Principle*, which the TBA establishes. The question we need to investigate is *why* the hypothesized Forms F, i.e. F1 and F2, *fail* to be Forms F.

Plato does not give explicitly an answer to this question, but we can derive it from the text. My contention is that by working out the answer, we learn that, with the TBA, Plato is the first to discover universal – recurrent – properties; what it is for a universal to be instantiated; and finally, that instantiation has a 'metaphysical cost' for the property in question. If Forms F1 and F2 are

6 Harte for instance writes: "On balance, there seems to me reason to favor the view that Forms are universal in character. This is, in part, because Forms appear to perform the central function that is typically adduced as the reason for introducing a universal, the performance of which has some claim to be constitutive of being a universal; Forms underlie genuine similarities in the character of things by being (in some way) common to them" (2008: 208–9). In Marmodoro (2022 forthcoming) I argued that for Plato, participation of objects in a Form *distributes* the Form across many particulars (and accounts for their resemblance), but this does not require the Form to be a universal, nor does it render the Form a universal.

7 The instances are posited to be Forms precisely of the same kind as this one.

8 For a detailed analysis of the TBA and the relevant scholarly literature, see Marmodoro (2008).

9 I use expressions in single-quotes, such as 'being what bed really is', 'wisdom' etc, throughout to stand for properties.

10 This is because, by the *One over Many Principle*, the source of a qualitative state is different from all the 'instances' whose resemblance it explains.

different from one another, they are also different from F3, and hence, F3 cannot be identical to either F1 or F2. Plato explains the hypothesized similarity between F1 and F2 by each of F1, F2, and F3 possessing *the form (f3) of F3*. But F1 and F2 are, also by hypothesis, two; so we need to further assume that whatever it is that makes F1 and F2 numerically different from each other is constitutionally additional to f3 in each of them. This *constitutional addition* – which needs to be assumed in order to account for the hypothesized numerical difference between F1 and F2 – makes the ‘instances’ F1 and F2 of Form F3 ontologically *different types of entity* from F3.¹¹ It follows that the constitutional addition that makes F1 and F2 numerically different between them ‘compromises’ the natures of F1 and F2 as hypothesized Forms of Bed. This is why, even if they are by initial hypothesis two Forms of Bed, Plato says that they both fail to be Forms of Bed, but are only instances of F3, which is *the Form of Bed*. Both F1 and F2 are *instances* of F3, because they each possess F3’s own form f3. It follows that the metaphysical cost of the instantiation of F3 is that its own form f3 is *ontologically coupled* with a numerical-difference-maker in each instance of F3, where f3 recurs.¹² It further follows, directly on the basis of what Plato writes,¹³ and importantly for my own argument, that f3 is *a universal form* that is shared between F1, F2, and F3, *recurring* in each of them.¹⁴

The idea of a ‘form of a form’, which f3 is of F3, is not immediately obvious to us, who have a more Aristotelian conception of forms as universals. But it would be a natural conception for Plato, whose Forms are governed by Self-Predication.¹⁵ More generally, Plato’s Forms are substances in his ontology,¹⁶ which, by Self-Predication, possess the property each stands for as their respective ‘essences’ (to borrow an Aristotelian term). However, for Plato the ‘essence’ of each Form is particular to that Form; e.g., in the *Third Man Argument* (TMA) the ‘essence’ of the Form of Largeness, does not belong to any other Form than it. The recurrence of the TBA’s form of a Form, f3, in more Forms than F3, is unique in Plato’s work.

My contention is that the TBA sets a milestone in the history of metaphysics, in that it shows that Plato was the first to understand the metaphysical significance of the instantiation of a universal as recurring in its different instances at a time, even if Plato does not adopt recurrence in his own metaphysics.¹⁷

11 Plato writes that F3 possesses f3, namely the form of ‘being what bed really is’; but this entails that F3 is constitutionally ‘more’ than its own form, f3. So, a question might arise in the reader’s mind: is F3 constitutionally just like F1 and F2? If this were the case, it would be worrisome for my interpretation, because I claimed above that F1 and F2 are constitutionally ‘compromised’, which explains why they are not Forms. However, if F3 were the form f3 possessed by something constitutionally additional to f3, making up F3, then F1 and F2 would be just like F3, and not constitutionally ‘compromised’ by comparison to it. However, F1 and F2 are constitutionally ‘compromised’, because they are numerically different from each other; and what makes them different from each other cannot be qualitative, since by hypothesis they are qualitatively identical to each other. There is nothing in the argument that requires F3 to differ from F1 and F2 *in the same way* that F1 differs from F2. F3 is indeed different from F1 and F2, but it is different not because it is constitutionally ‘compromised’, while they are. In the case of F3, the form f3 belongs to a *subject* in F3 that possesses it.

12 The reason why ‘something additional’ is needed to establish the difference between F1 and F2 is that, by hypothesis, they are qualitatively identical to one another, because they are both ‘created’ as Forms of ‘being what bed really is’, each possessing the form f3 of the Form of Bed. But they are by hypothesis two, and therefore numerically different from one another. Since they are qualitatively identical, their numerical difference, which makes them two, must be introduced by an ‘additional’ element in their respective qualitative constitutions. If we were to search for an example of what this additional element in F1 and F2 might be, which Plato does not specify, we could think, without attributing this view to Plato, that f3 may be possessed by a characterless particular in F1, and respectively in F2.

13 F1 and F2 would each possess the *form f3 of F3*: ἤζ [F3] ἐκεῖναι [F1, F2] ἂν αὖ ἀμφοτέραι τὸ εἶδος [f3] ἔχοιεν.

14 One of the anonymous referees wondered whether Plato means here that it is Form F3 itself that F1 and F2 both possess, not f3. I argue that this is not the case, for the following reasons. The first is that Plato says explicitly – in the genitive of possession – that F1 and F2 would each possess the *form of F3* (ἤζ ἐκεῖναι ἂν αὖ ἀμφοτέραι τὸ εἶδος ἔχοιεν). My second reason is that Plato would have had the language, had he wanted to express this, to say that F1 and F2 would each possess *F3 itself* (in the accusative – ἦν ἐκεῖναι ἂν αὖ ἀμφοτέραι ἔχοιεν); but he does not say so. Thirdly, and importantly, even if Plato had thought that F3 itself is in F1 and F2, rather than the form f3 of Form F3, then F3 *itself* would have been the first recurring universal in the history of metaphysics. On account of these considerations, I conclude that Plato is introducing in the *Republic* the thought that the *form f3 of Form F3* is common to F1 and F2, recurring as a *universal* in them.

15 We see this in the *Parmenides*, in particular in the TMA, where Plato shows how his Forms entail regresses of participation. The issue is complex, but suffice here for our purposes to refer to e.g. 132a5–8 where the Form of Largeness is shown to be large in virtue of partaking of another Form of Largeness.

16 As argued e.g. by G. Fine (1983).

17 I give arguments in support of this claim in Marmodoro (2022, forthcoming).

Before beginning my investigation and development of Aristotle's account of the instantiation of universal properties, let me restate that there are two problems to be addressed: the *Recurrence* and the *Pluralizing Problems*. The first is the problem of how *a universal* is *one*, despite multiple occurrences of it in different objects at a time; the second is the problem of how *an object* is *one*, despite the multiple occurrences of different properties in it at a time. Aristotle does not tease the two problems apart explicitly but he addresses both. I will start from the latter problem and come to the former one in section 7.

Aristotle, like Plato, realizes the necessity of the ontological 'deformation' of instantiated properties. I argue that he introduces a type of 'deformation' and accordingly, of instantiation, which has yet to be appreciated as a contribution to the history of metaphysics. To understand it, let us start by addressing the question of what ontological status Aristotelian universals have when instantiated in substances.

Aristotle raises himself the issue of whether properties are in objects as *parts* of them, and takes a clear position on this, as early as in what we may consider his first work on the metaphysics of properties, the *Categories*. He states explicitly that "By 'in a subject' I mean what is in something [e.g. paleness in Socrates], *not as a part*" (1a24–25, my emphasis);¹⁸ and again: "For when we spoke of things [i.e. properties] *in a subject* [i.e. in an object] we did not mean things belonging in something as *parts*" (3a32–33, emphasis in the original). Aristotle does not explicate the reasons why instantiated properties are *not* parts of the object they are instantiated in. We will explore and reconstruct such reasons in section 8 below.

In addition to denying that properties are parts of objects in the *Categories*, Aristotle also makes the affirmative and crucial claim that properties are 'within' the substances they qualify; and he distinguishes between two ways in which they are in them: properties 'said of' or 'are in' substances.¹⁹ The point of paramount importance for our purposes here is that for Aristotle all properties, those 'said of' and those 'in' a substance, are said of it and are in it *as their subject*. Before unpacking the significance of this statement in relation to Aristotle's account of instantiation, I want to highlight that Aristotle makes this a *condition* for the existence of properties in the world, namely, that they are either said of or in *a subject*. He writes: "Thus all the things [properties] are either said of the primary substances [e.g. Socrates] as subjects or in them as subjects. So if the primary substances did not exist, it would be impossible for any of the other things [properties in the categorial scheme, e.g. being pale] to exist" (2b4–6). This is the empiricist stance that serves as keystone, I contend, of Aristotle's account of the instantiation of universals: properties exist 'in' the world only as instantiated, as qualifications of substances, which are their metaphysical *subjects*.

How are we then to understand the ontological difference between an uninstantiated and an instantiated property, in the context of Aristotle's metaphysics?²⁰ What's the metaphysical significance of instantiated properties being *qualifications* of substances? Aristotle tells us, as early as in the *Categories*, that the definition of, e.g., 'wisdom', which is predicated truly of the property 'wisdom' in the categorial scheme, is *not* predicated of the subject that wisdom qualifies – what is wise is not wisdom. He writes:

It is clear from what has been said that if something *is said of a subject* both its *name* and its *definition* are necessarily predicated of the subject. For example, man is said of a subject – the individual man – and the name is of course predicated (since you will be predicating man of the individual man), and also the definition of man will be predicated

18 All translations of Aristotle's texts are from Barnes (1984).

19 Aristotle distinguishes between the way essences are predicated of substances and the way accidents are predicated of them in terms of two forms of predication: essences are 'said of' substances, while accidents are 'in' substances. This is to say that essences are in substances in a different way than accidents are in them. In the *Categories* Aristotle does not explain this ontological difference, for which we will need to wait until the *Metaphysics*. This difference is not of concern to us here for our present purposes but I will simply say that Aristotle is striving to establish metaphysically that substances are *what they are, per se (kath' auto)*.

20 We will come back to what uninstantiated properties are for Aristotle in section 7.

of the individual man (since the individual man is also a man). Thus both the *name* and the *definition* will be predicated of the subject. But as for things which are *in a subject*, in most cases *neither the name nor the definition is predicated of the subject*. (2a19 ff., my emphasis)

Aristotle claims here, in my reading, that the instantiation of a universal is not the presence of the universal in the substance: e.g., the instantiation of ‘wisdom’ in Socrates is not the presence of ‘wisdom’ in Socrates; it is, rather, Socrates being wise. I thus understand Aristotle’s position as follows: a property’s instantiation in a substance is a type of metaphysical ‘transformation’, which of course one cannot perceive, but only conceive. It is a transformation of the property, *from being an abstract entity*, as the property is defined, e.g. as ‘wisdom’, *to being the qualification of a particular concrete subject*, e.g. a wise Socrates. I will refer to the property *qua* abstract entity as a property-abstractum.²¹ In our example: although Socrates *is* a man, he *is not* wisdom; he is ‘wise’. The instantiation of ‘wisdom’ in Socrates results in a ‘wise person’. A ‘wise person’ is not a ‘person + the property-abstractum wisdom’, but is a person that is qualified as ‘wise’. Generalizing, substances for Aristotle are composed of their properties, but are not just compresence or aggregates of their properties; he argues for this position in *Metaphysics* VII.17, but I will show that he does so, too, in *Metaphysics* VII.3, to which we turn next.

5. MATTER DOESN’T MATTER

In *Metaphysics* VII.3, Aristotle introduces what we would call a thought experiment to show that a substance is ‘over and above’ the property-components that constitute it.²² There is ‘more’ to a substance than its properties, but not by a further item in the ontology. This ‘more’ is on my interpretation a *metaphysical function: subjecthood*. Without this function, a substance would be all and only its property-components; but it is not.

Before articulating my interpretation of Aristotle’s stance in *Metaphysics* VII.3, it will be helpful to state the role it plays within my overall argument regarding property instantiation. We saw in section 2 that the mainstream view in the scholarly literature and even in ongoing discussions of Aristotle’s theory in current metaphysics is that Aristotle conceives of the instantiation of a universal property as its hylomorphic ‘combination’ with some sort of ‘particularizer’, namely matter, or even ‘prime’ matter, according to some.²³ On my interpretation, instead, the introduction of matter in the *Physics*, *De Anima*, *Metaphysics*, etc., is not a turning point in Aristotle’s account of instantiation.²⁴ I will argue instead that Aristotle’s stance in *Metaphysics* VII.3 complements what we have learned from the *Categories* so far: Aristotle writes in the *Categories* that the instantiation of any property-abstractum can happen only in the mode of

21 By property-abstracta, I mean the entities that are individuated when we abstract what is common between several similar things. Consider, for example, tall trees; what is abstracted from them is the property-abstractum ‘tallness’; however, each tree is tall, not tallness. This is the ‘deformation’ of instantiation for Aristotle: from ‘tallness’ to (this tree’s) ‘being tall’. We will return to this topic in section 7.

22 A caveat before entering the discussion of *Metaphysics* VII.3: this is a text of which countless diverging interpretations exist; here I will not be able to engage with the secondary literature and show how my interpretation differs from others, because pursuing that task would take us astray from my main goal here, which is to argue for how Aristotle provides a philosophically sound account of the instantiation of universal properties that is not prey to the criticisms that have moved against it in the history of metaphysics.

23 See, e.g., Loux as a representative among many of this view; he writes that “the notion of a *matter that is essentially no kind of thing at all* is one Aristotle almost certainly endorsed [...] I contend as well that revisionist readings denying that Aristotle endorses a doctrine of prime matter fail to provide much help, since they succeed in eliminating the appeal to prime matter only at the expense of denying claims central to the rest of the theory of *ousia* developed in Z and H” (1991:11). According to Loux’ interpretation of Aristotle, “*particular parcels of matters are subjects for form-predications*” (1991: 135, my emphasis). I show on the contrary that we can make best sense of the central claims in books Z and H of Aristotle’s *Metaphysics* precisely by denying that Aristotle endorses ‘prime matter’.

24 A representative of a contrary view is once again Loux (1991) who believes the “discovery” of matter “wreaks havoc”, his words, for Aristotle’s account in the *Categories*. Loux holds that in the *Categories* for Aristotle “the relation between the universals that mark out the basic subjects as what they are and the basic subjects they so mark out must be primitive, unanalyzable, or irreducible [Loux calls this the *Unanalyzability Thesis*] [...] In texts written later than the *Categories* [...] he [Aristotle] construes the relation between the matter and the form making up the basic subjects of the early theory as that between a subject and a universal predicated of it [...] His contention is that, because familiar particulars are matter-form composites, the *Unanalyzability Thesis* is falsified in their case” (1991: 4–6).

being a qualification of a subject. On my reading, in *Metaphysics* VII.3 Aristotle returns to the question of what a metaphysical subject is.

He starts his thought experiment with a substance and all its qualifications, and proceeds to abstract them from it. By abstraction, he *individuates* the substance's qualifications as property-abstracta. These property-abstracta are the properties/forms/types of being that Aristotle has classified in his categorial scheme. What has been exercising all readers of *Metaphysics* VII.3 is that at the end of his thought experiment, after abstracting away all the qualifications of a substance, Aristotle finds that 'something' of the substance is still 'left behind': he calls this something 'matter' (ὕλη, 1029a10). As we would expect, this is a *sui generis* 'matter', because it remains even after the process of abstraction of the various properties which qualify the substance has already been completed. It follows that at that point, there is not even a 'trace of being' of the substance left to be abstracted away; what remains is called 'matter' but has no being of any kind in the categories, or even any kind of being from their negations. What follows is Aristotle's *prima facie* baffling description of his finding:

For there is something of which each of these [forms of being/properties] is predicated, so that its being is different from that of each of the [categorial] predicates; for the predicates other than substance are predicated of substance, while substance is predicated of matter. Therefore the *ultimate subject* [*hupokeimenon*] is of itself *neither a particular thing, nor of a particular quantity, nor otherwise positively characterized; nor yet negatively*, for negations also will belong to it only by accident. (1029a24–26, translation slightly modified and my emphasis)²⁵

What then is this mysterious *hupokeimenon* that is revealed by stripping away all qualifications from a given substance? It is 'ultimate', or I would say, 'prime', because, Aristotle tells us, it is "something of which each of these [substantial and non-substantial forms of being] is predicated" (1029a21). I contend that what Aristotle discovers here is what he had already discovered in the *Categories* where he writes, as we saw, that "all the other things are either said of the primary substances *as subjects* or in them *as subjects*" (2b5–6). His stance is that substances are not the aggregates of their compresent properties, but are *the metaphysical subjects* of their properties, which are 'in' them as their qualifications. Subjecthood is a crucial metaphysical function that renders instantiated properties into qualifications of substances; and subjecthood is precisely what is 'left behind' in the thought experiment of *Metaphysics* VII.3.

I read Aristotle's thought experiment in *Metaphysics* VII.3 as the same type of argument as what is known as the *Syllable Argument* in *Metaphysics* VII.17 (1041b11–27, where the example is a syllable and the letters that compose it). I submit that, notwithstanding the different terminology, the two arguments in VII.3 and VII.17 reach the same conclusion. Here is the structure of the argument in VII.3, recast in a way that brings out its structural analogy to that in VII.17: If we decompose a substance by abstraction into all its property-components, while the property-components persist, the substance does not persist. The substance is therefore not only its property-components but also 'something' more. If this 'something' were a further property-component, then it, too, could be removed by abstraction, and the argument would then apply again, ultimately, *ad infinitum*. Therefore, this 'something' cannot be a property-component of the substance; rather, it is that in virtue of which the property-components are a substance. Aristotle calls this further 'something' *hupokeimenon* in VII.3, and *archē* in VII.17 (1041b31). In VII.3, he discovers that a substance is 'more' than its constituent elements, i.e. its property-components, 'by subjecthood', which is not a further component of the substance, but a *metaphysical function*.

²⁵ In *Metaphysics* VII.3, Aristotle speaks 'schematically' about subjecthood and predication. By that I mean that he uses the schematic expression "the predicates other than substance are predicated of substance, while substance is predicated of matter" (1029a24–25), without explaining what he means by 'predicable substance as subject', which of course, is unacceptable in his own metaphysical system – and even if it were acceptable, the predication of properties of substance would not be metaphysically comparable to the predication of substance of matter. Such issues are not a problem within the specific context of VII.3, because, I submit, there we are to think 'schematically' of everything else but the main topic under discussion which is that a substance cannot be reduced to its property-components, because it is 'over and above' them as the subject which they qualify.

In VII.17 he finds a more accurate term for this ‘more’, naming it ‘a principle’, which unifies all the elements into the substance.

To conclude this section, on my reading what Aristotle argues for *Metaphysics* VII.3 is not that properties are instantiated in matter, but they are instantiated as qualifications of a subject, thus developing further the view he had already put forward in the *Categories*.

6. QUALITATIVE ONENESS

Aristotle writes, as early as in the *Categories*, about substances, such as Socrates:

As regards the primary substances, it is indisputably true that each of them signifies a certain ‘this’; for the thing revealed is individual and numerically one. (3b10–12)

This passage gives us an important insight into what Aristotle thinks with respect to the oneness of substances, which, I will show, is relevant to our primary question here, namely how Aristotelian universals are instantiated. We continue here our investigation of the *Pluralizing Problem*. The same stance about primary substances being one is assumed by Aristotle also in the *Metaphysics*, where he writes:

[...] the differentiae present in man are many; e.g. endowed with feet, two-footed, feather- less. Why are these one and not many? Not because they are present within [one genus ...] But surely all the *attributes* in the definition *must be* one; for the definition is a single [εἷς] formula and a formula *of substance*, so that it *must be* a formula of some *one thing*; for substance means a ‘one’ and a ‘this’, as we maintain. (1037b22–28, emphasis in the original; translation slightly modified)

It is clear from these representative passages that Aristotle *assumes* a substance, such as Socrates, to be both non-recurrent and single.²⁶ It is noteworthy that he does *not derive* either the non-recurrence or the singularity of substances from anything ontologically more primitive, e.g. from a primitively given bare substratum, either in the *Categories* or in the *Metaphysics*.

But why and how is each substance one, given that Aristotle’s own categorial scheme and the thought experiment in *Metaphysics* VII.3, by which Aristotle populates the scheme, shows that each individual substance is analysable into the property-components that make it up, namely, its essence and its accidents? Don’t these property-components make each substance many? Aristotle himself raises this very question, or, in my terminology, the *Pluralizing Problem*, and treats it as one of the fundamental challenges in his metaphysical work:

wherein consists the unity of that, the formula of which we call a definition, as for instance in the case of man, two-footed animal; for let us take this as the formula of man. Why, then, is this one, and not many, viz. animal *and* two-footed? (*Metaphysics* 1037b11–14, emphasis in the original)

That is to say, why is Socrates one, if Aristotle’s categorial scheme shows that Socrates is composed of all the properties/forms/types of being that are truly predicated of him, whether they are ‘said of him’, e.g. being an animal, or ‘are in him’, e.g. being pale? Don’t all these property-components of Socrates make Socrates many – for the same reason that Aristotle himself wonders, in the quotation above, whether ‘animal’ and ‘two-footed’ make the definition of a person, and hence a person, many? Aristotle answers this question in the negative; a substance, even as a subject of many qualifications, is one. Why does he hold this?

As a first step towards investigating the issue, let us tease apart the two senses of oneness that Aristotle runs together when claiming that each substance is one: substances are one in the sense that they are *non-recurrent* and in the sense that each is unified into a *single* thing. Aristotle states the non-recurrence (i.e. particularity) of substances already in the *Categories* by way of saying

²⁶ Something could be non-recurrent and plural, e.g. a team; or recurrent and plural, e.g. being a team; or recurrent and single, e.g. being a tiger.

that substances are not predicated of anything else as their subject: differently from recurrent properties, substances do not recur in other subjects:

Some [things, here: substances] are neither in a subject, nor said of a subject, for example, the individual man or the individual horse – for nothing of this sort is either in a subject or said of a subject. (1b7–8)

The second sense in which substances are one, namely single, is more of a challenge for Aristotle to explain and for us to understand, and it is key to the problem of instantiation. What we need to understand is why and how a complex, multi-qualified subject is single and not plural. Aristotle does not provide an explicit explanation, and we, the readers, can only develop interpretative hypotheses, whose plausibility can be measured only in terms of their theoretical fit within Aristotle's system of thought, rather than on the basis of textual evidence.

We saw that right from the start, in the *Categories*, Aristotle assumes that substances do not *recur*, nor are their properties *parts* of them. There are two questions that arise for us:

- a) If the instantiated properties are qualifications of the substance, don't they undermine its oneness, namely, its singleness?
- b) If the properties instantiated in a substance were its parts, would they have undermined the substance's oneness, its singleness?

Briefly put, on my interpretation of Aristotle's thinking, the answer to question (a) is "No", and to question (b), "Yes". I will address question (a) here, and return to question (b) in section 8.

With respect to (a), the qualifications of a substance do not affect its number, which can be either single or plural, because the token of a property, e.g. being good at singing, may qualify a single entity or a plurality. There is no qualification of a subject that necessitates its singleness. This is a general metaphysical point, which, in relation to Aristotle's theory, means that the instantiation of properties as qualifications of subjects does not determine the number of the subject they qualify. So, if not its qualifications, what *does* determine the number of a subject?

The view I contend Aristotle holds, is that the singleness of a substance is primitive – that is to say, there is nothing in the ontology more primitive than it that can explain it;²⁷ but it is grounded on scientific or pragmatic considerations concerning its explanatory value. The way I propose to understand Aristotle's position, as the most philosophically coherent and cogent reconstruction of his thought, is the following: starting from what there is in nature, in an effort to classify it, Aristotle posits types of being/forms/properties, which populate his categorial scheme and which serve in his metaphysics as the *ultimate explanatory units* of reality. He chooses such types, instead of others, because of the utility he sees them having in scientific explanations and classifications, and for that purpose he treats them as explanatory *units*. To illustrate: for Aristotle, a type/form/property such as 'being human' is single, notwithstanding its complexity, e.g. 'being an animal' and 'being rational', because it is explanatorily expedient that a human be one,²⁸ and hence, that 'what that human is', as expressed in the substance's definition, is one too. The general point I

27 An alternative explanation that could be put forward (but which I reject) is that the number of the substantial subject is one in virtue of the *holistic interdependence* of its constituents. I take the opportunity here, following an anonymous referee's suggestion, to differentiate my approach from Scaltsas' (1994a and 1994b), to which I am however in many ways indebted. One of the influential contributions made by Scaltsas to Aristotelian scholarship is to argue that an Aristotelian substance is one because it has no (actual) parts: the parts that together make it up are no longer parts in it, because upon composing the substance, they are holistically re-identified by its substantial form according to the functional role they are 'allotted' by the form. This offers an account of *functional unity* of a substance; but I argue that holistic interdependence does not entail the *oneness* (singleness) of the substantial whole. On my understanding, Aristotelian substances are primitively one, but not because their components are holistically unified. Even if the essence of a substance unifies holistically the components of the substance into a functional whole, this does not determine the *number* of the whole. Although functional unification renders what is unified *interdependent*, functional unification does not 'one' make; for example, 'a soccer team' is unbeatable, because they *are* skillful in playing soccer. Even if functional unification is achieved, it is a further pragmatic issue whether the unified is one or many.

28 So, for Aristotle, Socrates is one because he is a human being, i.e. he is the type of oneness that human beings are. Could a human being be thought a plurality, instead? Yes, for Aristotle. Socrates would have been many if that had been more useful for certain scientific or pragmatic purposes than thinking of him as one.

want to make is that, for Aristotle, *oneness follows being* – ‘being’ as scientifically organized and classified in his categorial scheme. When something is one, its being one is an ‘amalgam with’ being the type of being it is; e.g. if *x* is a tiger, *x* is one. (But a tiger’s oneness is different from the oneness of other types of entity, e.g. the oneness of elm trees.) My proposed interpretation fits well, I submit, with what Aristotle writes concerning the type of being that substance is, in the *Categories* as we saw, and more explicitly in the *Metaphysics*, e.g., here:

But surely all the *attributes* in the definition *must be* one; for the definition is a single [εἷς] formula and a formula *of substance*, so that it *must be* a formula of some *one thing*; for substance means a ‘one’ and a ‘this’ [ἐν τῷ καὶ τὸδε τῷ], as we maintain. (1037b22–28)

Thus it follows that for Aristotle *just as there are types of being, so there are types of oneness*. This is a stance that we need to recognize as significant in itself, and with important metaphysical consequences, too. The most interesting and unfamiliar to us consequence is that *oneness varies qualitatively*, for Aristotle.²⁹ Neither the ‘one’, nor the ‘good’ are genera in Aristotle’s categorial scheme, by contrast to e.g., Plato’s ontology of Forms; rather, the ‘one’, and the ‘good’ are like ‘being’: it takes the entire categorial scheme to individuate the different forms of ‘being’, and so with the ‘one’ and the ‘good’. Aristotle does develop an argument, why the ‘good’ is not a genus in the categorial scheme, for reasons that he judges also apply to ‘being’ and which, I suggest, apply to the ‘one’ as well. The core idea is that ‘being’ is not a single *genus* in the categories, or even a single *category* by itself, because *every type* in the categorial scheme is a type of being; therefore, ‘being’ is true *across* the categories, of all of them. So it is with the ‘good’, too, as Aristotle tells us; and I suggest, so it is with the ‘one’, as well. ‘Being good’ and ‘being one’ are individuated variously throughout the entire categorial scheme and are, therefore, themselves neither genera nor individual categories. Aristotle’s argument concerning the ‘good’ is this:

[...] since things are said *to be good* in as many ways as they are said *to be* (for things are called good both in the category of substance [...] and in quality [...] and in quantity [...] and in relation [...] and in time [...] and in place [...] and the like), clearly the good cannot be something universally present in all cases and single; for then it could not have been predicated in all the categories but in one only. (*Nicomachean Ethics*, 1096a23–29, my emphasis)

Aristotle’s point is that if ‘being good’ were the same when it is truly predicated of items in all the categories, then it would have been a single genus of ‘oneness’ in one of the categories, e.g., just as ‘being red’ is the same for all types of red thing in nature. But it is not the same. Then, importantly, it follows that, just as there are different kinds of ‘being good’ and ‘being’, there are also different kinds of ‘one’.

I conclude that accordingly, when Aristotle writes in the passage quoted above from the *Metaphysics* that “[...] for substance means a ‘one’ and a ‘this’ [...]” (1037b28), he is telling us that substance is particular and single: a substance does not recur, and a substance is not plural. Particularity means that a substance does not belong to anything as its subject; and singleness means that it is of a kind, where kinds are single in the sense explained above, as explanatory units.³⁰

So, returning to the question that has driven our thinking in this section: when multiple universal properties are instantiated in a substance, why do they *not* undermine the singleness of the substance? This is our *Pluralizing Problem*. The answer I put forward is that for Aristotle the instantiated properties that qualify a substance ‘submit’ or ‘sacrifice’ their individual oneness and qualitative distinctness, *qua* property-abstracta, to the subject they qualify, which is primitively one. A property-abstractum that is instantiated in a substance as its qualification acquires the type of oneness its subject is, which is due to the type of being the substance is. To illustrate: white snow and white bear share the property-abstractum ‘whiteness’ between them; but snow

29 The implications of ‘oneness’ *not* being a type which is common to all things that are one, and of there being no single concept of ‘oneness’, are far reaching but I cannot explore them here.

30 Particularity and singleness make up the count principle of a sortal concept.

and bears possess ‘whiteness’ differently, namely, in ontologically different ways, *because they are different kinds of ‘one’*. It thereby follows that the instantiation of a universal property in a particular object is a far more complex metaphysical phenomenon than the mere presence of the universal in the object. But if snow and bears possess ‘whiteness’ differently, in what sense are they similar? To answer this question, we need to return to the *Recurrence Problem*.

7. ABSTRACTION AS THE METAPHYSICAL CONVERSE OF INSTANTIATION

With respect to the *Recurrence Problem*, I contend that Aristotle solves it in an empiricist fashion. He holds that only instances of universal properties are ‘in’ the world/in concrete objects. To explain qualitative resemblance among objects he follows a bottom-up approach: from these instances, we can abstract the universal properties and classify them as per his categorial scheme in the *Categories*.

He explains the similarity of different objects, not by the *presence* of the same entity in them, but by *abstracting* the same property from them. That is to say, a universal property recurs in so far as it can be abstracted from any number of similar objects in which the property is instantiated. A white polar bear, a white wall, white snow, etc., are similar with respect to color, not because ‘whiteness’ is present in them, but because ‘whiteness’ can be abstracted from them. So, for Aristotle, universals exist uninstantiated only as abstract entities, which serve explanatory purposes – e.g. to explain constitution, resemblance, causation, etc.

Abstraction is as complex as instantiation. As I read Aristotle, *abstraction* is the converse of *instantiation*. Instantiation involves a definable property-abstractum turning into a qualification of a subject, whose kind and number determine how it can bear the property ontologically. Abstraction reverses this process, conceptually.³¹

8. COMPOSITION DOES NOT YIELD ONENESS

We saw in section 4 that Aristotle denies that properties are instantiated in substances as their parts. He does not, however, explain why. I raised in section 6 the question of whether the oneness – singleness – of a substance would have been undermined if properties were instantiated in it as its parts; I submit that, for Aristotle, it would. I will here develop an interpretative hypothesis to explain why. To understand why, we need to trace the origins of Aristotle’s position in Plato’s work. In the *Theaetetus* Plato introduces what is known as the *Dilemma of Composition*, in the context of discussing an epistemological problem (201d–210a), namely whether a composite and its elements are equally knowable or not. He addresses the problem by examining the ontology of a complex entity and its elements. He argues that a complex entity and its elements are equally knowable, namely, either they are both knowable, or neither is (205d–e). To show this, Plato examines whether the elements that make up a complex entity are one, *qua* composed, or are still many, and accordingly, he considers how the entity would relate to the elements that make it up. Thus, the *Dilemma of Composition* is a metaphysical argument, whose conclusions Plato uses to address an epistemological problem. We are not interested here in the epistemological problem but only in what the *Dilemma* shows us about Plato’s understanding of composition of complex entities, which is relevant to Aristotle’s stance, from the *Categories* onwards, that instantiated properties are not parts of substances.

The central question driving the argument in Plato’s *Dilemma of Composition* concerns which metaphysical relations hold between the following items: (i) *all the elements* that make up the entity (ἅπαντα); (ii) the *totality* (πᾶν) of the elements; (iii) and the *whole* the elements make up (ὅλον). Of the three accounts Plato considers, the one relevant to us is that according to which the *whole* of a complex thing (ὅλον) = the *totality* of the thing (πᾶν) = *all* its component parts (ἅπαντα,

³¹ Of course, neither instantiation nor abstraction are processes in time; they are not types of becoming. They are, as it were, two manners of conceptualizing the property: as it is, instantiated in objects as its qualification, and as a property-abstractum.

205a7–9). That is to say, if a substance has parts, then the substance *is* its parts, i.e. is identical to its many parts. I see this claim as a fundamental metaphysical truth that Plato states, for all time, namely, that oneness (namely singleness), is not compatible with mereological complexity.³² Plato's claim is that if a complex whole is one, it does not have its components as parts.³³ Its contrapositive is also true, I submit: if a substance has parts, it is not one, but many. I call this – the claim and its contrapositive – Plato's *Rule of Oneness*, for which, however, he gives no argument. I submit that Aristotle agrees with Plato's *Rule of Oneness*, although he did not state so in his texts; further, I take this *Rule* and its familiarity to Aristotle to be the reason why he simply states in the *Categories* that properties are not parts of the substances they qualify; according to the *Rule*, if they were parts of their substances, they would undermine the oneness – singleness – of the substances, which Aristotle presupposes about substances.

A final reflection on this issue: I believe Aristotle holds that composition of parts into a whole does not one make, even if he did not ever state it. My reason for attributing this unstated position to Aristotle is the following. We saw that, even after he denies that instantiated properties are parts of substances, he still does not think that this suffices for the oneness – singleness – of the substances, but he *primitively* assumes that substances, composed of qualifications, are one – single. So, I submit, for Aristotle, partlessness does not suffice for oneness, nor does *any type of composition* of a substance's components. I gave elsewhere my own arguments in Marmodoro (2018) for the general stance that no complex becomes one (namely, single) by metaphysical composition.³⁴ Parts can undermine oneness – singleness – because they are discrete; but partlessness does not yield oneness; it yields only continuity. Oneness – singleness – can be undermined by discreteness; and by separateness; but it can also be undermined by mere *difference*. I believe I can call Plato to my support, who holds that a simple element cannot even be described at all, without attributing complexity to it.³⁵ Any type of difference in a complex can ground multiplicity; only *simplicity* entails oneness – singleness – and composition can at best deliver continuity, not simplicity.

9. CONCLUSION

Instantiation is a very complex metaphysical phenomenon. When multiple universals are instantiated 'in' substances, which remain both particular and single, it is fair to wonder how can this happen. Aristotle shows us how. I have tried here to reconstruct his account. I argued that for Aristotle, the oneness of substances is primitively assumed, both for their particularity (non-recurrence) and for their singleness. It follows that the ontology of all components of a substance will have to comply by his starting point. The singleness of a substance would be called into question if the instantiated universals in it were parts of it. In fact, we saw that Aristotle does pose this question himself,³⁶ and, importantly, his answer is that the universals instantiated in a substance must be single, together, because substances are one – single. It is important to realize that Aristotle does not go from a complex substance to its oneness – singleness – by composition, but rather the other way around, from the primitive singleness of a substance to the ontological

32 He writes: 'if there are parts of anything, the whole must inevitably be all the parts' (204a7).

33 205a10– b2. It can still be *divided* into parts, but these parts do not make up the (single) whole that was divided, as Aristotle shows with his *Homonymy Principle*.

34 For example, if several items are put together into a structure, e.g. grains of sand into a lump, or plunks of wood into a table, etc., *the resulting structure does not one make*; the structure, whatever it is, can be deemed to be one or many, on explanatory or pragmatic reasons. Plato thinks, as I read his *Dilemma of Composition*, that a structured whole of parts is many, *unless* it is conceived of as one – single – *under a single form* (204a). This is not composition; Plato does not explain how the many would become one, but treats their oneness as a primitive conceptual act. Plato was thus the first to state that a whole of parts, which he considers many, could alternatively be conceived of as a partless one – single.

35 In the *Theaetetus* he writes: "[...] the primary elements ... have no account. Each of them, in itself, can only be named; it is not possible to say anything else of it, either that it is or that it is not. That would mean that we were adding being or not-being to it; whereas we must not attach anything to it, if we are to speak of that itself alone. Indeed, we ought not to apply to it even such words as 'itself', or 'that', or 'each', or 'alone', or 'this' or any other of the many words of this kind, for these go the round and are applied to all things alike, being other than the things to which they are added [...]" (201e–202a, translation from Cooper (1997)).

36 Recall *Met.* 1037b22–23 quoted above.

status of the instantiated universals in it. In other words, Aristotle does not unify a substance by composition, but rather he ensures that the components of the substance do not undermine³⁷ its oneness – singleness. Accordingly, right from his earliest work, the universals in substances are deemed by Aristotle *not to be parts* of their substances.³⁸ I take this position, expressed without supporting argument in Aristotle's earliest metaphysical work, the *Categories*, to be a direct influence of Plato's statement in the *Dilemma of Composition*: his *Rule of Oneness*, that single entities do not have parts. Aristotle's positive metaphysical move was to treat instantiated properties in substances as their qualifications, rather than as parts of the substances.

This is a positive metaphysical move, namely, to show that qualifications are not a threat to a substance's singleness, because in Aristotle's ontology, qualifications – i.e. instantiated universals – give up their own distinctness and assume the distinctness of the subject they qualify. But even giving up the discreteness of the qualifications and assuming the subject's number does not make the substance single, but only *as many as* the subject is: single or plural. However, since Aristotle assumes the primitive singleness of substances, the 'substantial subject' is always single. In short, instantiated universals are 'hybrid entities', offering their kinds to their subjects but borrowing the number of their subjects; so, e.g., 'wisdom' is instantiated in *x* as '*x* is wise'. I showed that the roots of this novel metaphysical position can be found in Plato. What Aristotle inherited from Plato is that instantiation comes with a constitutional cost for the instantiated universal, and that singleness is partless; Aristotle added that neither partlessness nor subjecthood (which I consider to be the two main methods of metaphysical composition) deliver oneness.

My overall goal here has been to show that instantiation of universals is a complex but intelligible metaphysical phenomenon; and an account of it developed on the basis of Aristotelian premises is philosophically viable.

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³⁷ I claim that *parts* would undermine the singleness of a substance because parts are *discrete*. As we shall see below, it does not follow that what is partless is single. I note that it is not clear that Plato saw this in his *Dilemma of Composition* (see in particular 204a).

³⁸ Recall *Cat.* 3a32–33 quoted above.

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