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Compound powerful qualities: properties as compounds of distinct powers and qualities

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Abstract

This paper develops and defends a compound powerful qualities view of properties. According to this view, properties are essentially composed of distinct powerful and qualitative elements. First, I outline an argument for the compound powerful qualities view, based on the claim that it has the explanatory power of other views, without incurring their costs. Second, I argue that the view has the resources to explain how properties are individuated, by claiming that properties are partially individuated by their qualitative elements, and partially by their powerful elements. Third, I distinguish two versions of the view, one of which says that the qualitative and powerful are *parts* of properties, the other of which says that they are *aspects* of properties. I argue that the parthood view is the more parsimonious because it can avoid postulating a novel metaphysical relation. Fourth, I argue that the relation between the powerful and qualitative elements of a property is necessary, and lay out various viable options concerning what the relation might be, including grounding and primitivism.

Keywords Powers · Properties · Powerful qualities · Compound view

1 Introduction

The metaphysics of properties is dominated by two positions. Pure powers theories claim that properties are essentially entirely dispositional (Bird, 2007). Categoricalists claim that properties are essentially ‘qualitative’, or ‘categorical’ (Lewis, 2009; Smith, 2016). These positions are so dominant that it’s easy to miss how extreme they are. Both of them make a claim about all properties (or all *fundamental* properties) and both of them make an exclusive claim about the whole essence of a property: that it is entirely dispositional and non-categorical, or that it is entirely categorical and

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non-dispositional. Once we realise how extreme the views are, it is natural to think that there may be a middle path. The idea would be to take the best bits from the pure powers theory and from categoricism, and mix them together to generate a new view. Ideally, this new ‘hybrid’ view would have more theoretical power than either the pure powers view or categoricism, whilst incurring fewer of their costs. This paper will examine a much-overlooked position of this type: that properties are composed of distinct powerful and qualitative elements, each of which is essential to the property. I call this the ‘compound powerful qualities view’, hereafter ‘CPQ’.

This paper is intended in the spirit of exploration. I do not aim to convince readers that CPQ is true. Rather, the paper has two aims. First, to develop CPQ, as well as distinguishing and elaborating on different versions of the view. Second, to demonstrate that CPQ is a respectable position, worthy of serious consideration in the metaphysics of properties. In the remainder of this section, I unpack the notions of essence, powerfulness, and qualitativity, and outline the other positions that we will need to understand the view. In Sect. 2 I present an argument for CPQ: that it can provide the same explanatory resources as more mainstream views, without incurring their costs. In Sect. 3 I show how CPQ explains property individuation. Section 4 explores whether the ‘elements’ of a property should be thought of as *parts* of the property or *aspects* of the property. I argue (on parsimony grounds) that there is some reason to prefer the parthood view, though there are complications to this argument which I will explain in due course. Section 5 considers the main challenge facing the view: explaining the relation between the qualitative and powerful elements of the property. I distinguish between contingentist and necessitarian versions of CPQ, and also between grounding and primitivist versions. Section 6 gives replies to three objections to the arguments of the paper.

We can’t understand CPQ without understanding its rivals. Start with pure powers:

Pure powers: All (fundamental) properties have entirely dispositional essences.

I place ‘fundamental’ in parentheses, as theorists differ on the scope of application of the theory (Bird, 2016; Mumford, 2021). This difference will not matter for my arguments. For a property to have a dispositional essence means that it is essential to that property that it confers a certain dispositional profile on the objects that instantiate it. I use ‘power’ for any property that is essentially dispositional, and ‘*pure power*’ for any property, the essence of which is *entirely* dispositional. That is, a pure power is a property such that there is nothing more to its essence than the dispositional contribution it makes to objects that instantiate it (Bird, 2007; Mumford, 2004). Powers hold relations to stimuli and manifestation properties. A manifestation is the property that the power is ‘directed toward’ and the stimulus is the property that triggers this manifestation. The property of fragility has smashing as its manifestation, and the exertion of force as its stimulus. Some claim that powers are individuated by their manifestations alone (Vetter, 2015), others claim that they are individuated by stimuli *and* manifestations (Bird, 2007). I will assume the ‘stimuli and manifestation’ view here, but nothing turns on this.

I understand essence as identity-fixing (Fine, 1994; Lowe, 2012). That is, the essence of some property P is that in virtue of which P is the very thing that it is. In this sense, the essence of P *individuates* it. Some powers theories cash the theory

out purely in terms of identity, rather than essence (Mumford, 2004, 2006). The arguments of this paper can be converted to apply to this version of powers theory, but I leave that implicit in what follows.

Turn now to categoricism:

Categoricism: All (fundamental) properties have entirely non-dispositional essences. Properties are self-individuating.

Categoricism is consistent with the claim that properties confer dispositions on the objects that instantiate them. For example, on one version, properties imbue objects with dispositions when combined with contingent laws of nature (Armstrong, 1983, 1997). Categoricism just claims that properties aren't *essentially* dispositional. Typically, categoricists claim that a property is self-individuating. On this view, a property is 'self-contained': not reliant on any other property for its identity.¹ In this paper, I follow this standard characterisation of categoricism. Categoricism is sometimes construed as the view that a property is a primitive 'thisness', or 'quiddity', or 'mere numerical identity' (Lewis, 2009). This is not implied by categoricism. Categoricists can claim that properties have a rich and substantial nature (Jacobs, 2011; Locke, 2012; Smith, 2016; Tugby, 2012, 2022). So long as properties' essences are not dispositional, and self-individuating, then the view is categoricism, as I use the term.

A third position is the identity theory (paraphrased from Heil, 2003, p. 111):

Identity theory: All (fundamental) properties are essentially both qualitative and powerful. The qualitative and powerful are identical with each other and with the property itself.

Identity theory says that there is a single unitary, non-complex property, which is identical with both the power and the quality. On this view, the 'powerful' and the 'qualitative' are conceptual distinctions, rather than ontological ones. The view is primarily associated with Martin (2008) and John Heil (2003, 2012), but has recently undergone a surge of popularity (Coates, 2020; Engelhard, 2010; Mørch, 2017; Taylor, 2017).

None of these views hold that a property's essence is complex. There is therefore another position:

Compound Powerful Qualities (CPQ): All (fundamental) properties are essentially composed of both powerful and qualitative elements. The qualitative and the powerful are ontologically distinct elements of the property.

Readers may wonder what an 'element' is. I explore this in Sect. 4. Until then, I use the term as a placeholder. 'Ontologically distinct' is intended to distinguish the position from views (like the identity theory), on which the powerful and qualitative are merely *conceptually* distinct elements of a property. CPQ claims that, for every property P, P is complex, or a compound, composed of two distinct elements, and that both of these elements are essential to P. It is essential to P that it confers certain dispositional

¹ There is a possible view on which properties are self-individuating, *and* essentially dispositional (cf. Coates, 2020). However, this would not be a form of categoricism, as I use the term.

features on objects that instantiate it, and it confers these features in virtue of its powerful element. However, unlike a pure power, the essence of P is not *exhausted* by its dispositional characteristics. It is also essential to P that it is composed of a qualitative element, which I define as being non-dispositional (it doesn't contribute to the dispositional characteristics of objects that instantiate it) and self-individuating.² On this view, both of these elements are essential to the property P. So, P's identity is fixed by its powerful characteristics *as well as* its qualitative characteristics. CPQ must be distinguished from mixed views, on which some properties are entirely qualitative, and some are pure powers (Molnar, 2003). It must also be distinguished from the view that properties are qualities that *ground* powers (Coates, 2023; Tugby, 2012, 2021, 2022). Discussion of the mixed view and the grounding view is beyond the scope of this paper.

The compound view has been almost entirely overlooked in the contemporary debate. Neil Williams has argued that properties have powerful and qualitative 'aspects', which are distinct. His view is very different from the one advocated in this paper, as he claims that qualitative aspects are required to explain how the world has 'qualitative character' (2019, p. 99). The notion of *qualitative character* is different from the notion of qualitativity that the position in this paper employs.³ Williams' claim that qualities and powers are *aspects* of properties will be addressed in Sect. 4. In previous work I very briefly suggested that properties might have powerful and qualitative parts (Taylor, 2018, pp. 1438–1439). I motivated this claim based on the worry that identity theory has proven difficult to distinguish from the pure powers view, but I did not develop the position or offer a defence of it.⁴

I remain neutral on wider issues concerning powers. For example, on whether they are tropes or universals (Bird, 2007; Heil, 2003); single track or multi-track (Marmodoro & Grasso, 2020, Vetter, 2013); Aristotelian (concrete) or Platonic (abstract) (Tugby, 2013). None of the issues I will discuss turn on these questions, so I do not discuss them.

2 An argument for the compound powerful qualities view

The argument for CPQ claims that the view provides the best overall balance of theoretical power, without engendering implausible consequences. I do not claim that the below argument is the *only* possible argument for CPQ, just that it is one worth taking seriously. Start by distinguishing two issues: the motivation to think that the powerful elements of a property are essential to it, and the motivation to think that the

² CPQ doesn't claim that property P is self-individuating, the claim is that the *qualitative element* of which property P is partially composed is itself self-individuating. On this view, the property P is individuated by *both* elements.

³ For more on this, see Williams (2019, Chap. 6) and Marmodoro (2020).

⁴ Joaquim Giannotti (2021) has suggested (without endorsing) the view that properties have powerful and qualitative aspects. However, his view is not a version of CPQ, in the sense that I am concerned with for this paper, as he takes an 'ontologically lightweight' view of aspects, on which properties can have aspects without being complex, structured entities (2021, p. 612). He also claims that this view is a version of the identity theory, so it is very different from CPQ as I am concerned with it. We can set Giannotti's view aside here (for more discussion, see Taylor, 2022).

qualitative elements are essential to it. In order to find motivation for the former, we should defer to the motivations for standard powers views. The three core claims that motivate the pure powers theory are that it can provide a plausible, robustly realist account of laws of nature (Bird, 2007), causation (Mumford & Anjum, 2013), and metaphysical modality (Vetter, 2015). This delivers the first premise of the argument:

(RC) The rejection of categoricism We should accept that the powerful elements of a property are essential to it because that provides us with the resources to account for laws of nature, causation, and/or metaphysical modality.

(RC) gives us no reason to prefer the compound view over pure powers views, so we need a reason to reject a pure powers view. One of these is the regress argument. According to the pure powers position, properties are individuated by their relations to stimuli and manifestation properties. But those stimuli and manifestations are themselves nothing but pure powers, which are individuated by their relations to stimuli and manifestations, and so on. The result (it is claimed) is either a vicious regress or a vicious circle, meaning that no property can get its identity fixed (Lowe, 2006, p. 138).⁵ We can represent this step as:

(RP) Rejection of pure powers We should accept that the qualitative elements of a property are essential to it because this avoids a problematic regress.

We will return to the regress argument in Sect. 3 when I discuss how CPQ explains property individuation. First, we need good reason to reject identity theory. Many have claimed that the identity theory is incoherent, especially if ‘quality’ and ‘power’ are defined in opposition to one another (Barker, 2013, p. 649; Williams, 2019, pp. 115–116). In previous work, I have rejected the claim that the identity theory is incoherent, but have argued that the view collapses into the pure powers view, and also faces the regress objection (Taylor, 2018, 2022).⁶ We need not take a stand on which of these objections to identity theory is correct here, but we need one of them to avoid the identity theory. These considerations lead us to:

(RI) Rejection of the identity theory The identity theory should be rejected, either because it is incoherent, or because it collapses into the pure powers view. Therefore, we should conclude that the qualitative element of the property is distinct from the powerful element.

Since the compound view claims that properties’ essences are complex, we require additional theoretical reason to move us to accept the compound view over a simpler view like the identity theory. That is what premise (RI) provides. From these premises, we get:

(CPQ) Compound powerful qualities view The powerful and qualitative elements of a property are both essential to it, and they are distinct from each other.

Note that the argument relies on background arguments in the metaphysics of properties, like the regress argument and the argument against the identity theory (I

⁵ For more on the regress argument, see Bird (2007), Barker (2009), Ingthorsson (2015), Taylor (2021) and Coates (2022).

⁶ See Coates (2020) and Giannotti (2021) for discussion.

will return to this point in Sect. 6). The argument claims that there are good reasons to prefer CPQ over pure powers, categoricalist, and identity theory views. I do not have space to consider how the view compares to mixed views (Molnar, 2003) or grounding powers views (Coates, 2023; Tugby, 2022). For this reason, the ‘official’ conclusion of the argument is that there are good reasons to prefer the view to categoricism, pure powers theory, and identity theory. Given that these are the dominant positions in the debate, this is a very substantial result. Comparison of the compound view with other positions must wait for future work.

3 Property individuation and regress

CPQ says that a property is individuated both by its powerful element and its qualitative element. To see how this works in more detail, it will be helpful to consider a potential objection to CPQ. The objection accepts that properties are individuated both by their powerful and qualitative elements, but asks how the *powerful elements* of the property are individuated. As they are powerful elements (the objection goes) presumably they are individuated by the property’s stimuli and manifestation relations. However, this will cause another infinite regress, similar to the one that is problematic for the pure powers view.⁷ Or so the objection goes. More strictly:

3.1 The regress argument against CPQ

- (1) According to CPQ, the identity of a property is partially fixed by its powerful element, and partially by its qualitative element.
- (2) The identity of the powerful element is fixed by the property’s relation to stimuli and manifestations.
- (3) Those stimuli and manifestations are themselves merely more powerful elements.
- (4) *Those* powerful elements are reliant on their properties’ relations to stimuli and manifestations...
- (5) This leads to a circularity or infinite regress, with the result that the powerful elements of properties can never get their identities fixed.
- (6) If the powerful element of a property never gets its identity fixed, then the identity of the property of which it is an element remains partially unfixed.
- (7) (Therefore) the identity of properties is partially unfixed.

Note that this argument does not deny that the qualitative element of the property would have a fixed identity. The argument targets the *powerful* elements of properties. There are a variety of ways that the advocate of CPQ to this argument. Here I outline two options.

⁷ Thanks to an anonymous referee for pressing me on this.

3.2 Reply one: graph theory

The graph theory reply to this worry accepts (1–4) but claims that CPQ has unique resources to resist the problematic consequences of these premises, and thereby denies that (5) follows from (1–4). Note that the advocate of CPQ must claim that the view has *better* resources to handle the regress argument than the pure powers view has to respond to its own regress argument, otherwise we will not have good reason to prefer CPQ over the pure powers view.

We need to explain Bird's graph theoretic response to the regress issue that besets the pure powers view, in order to see how CPQ might be an improvement. On Bird's approach, properties are modelled as nodes (or vertices) in a graph, with arcs (or edges) between them representing stimuli and manifestation relations. The identity of each node supervenes on the structure of the graph itself, which models the way that each property (according to the pure powers view) depends on the network of stimuli and manifestation relations (Bird, 2007, p. 139). However, the pure powers view encounters a problem because the graph must be asymmetric.⁸ If the graph was symmetric, then there will be at least two nodes, such that the structure of the graph does not distinguish between them (Bird, 2007, pp. 140–141). However, since the nodes (which are modelling properties) are dependent on the structure of the graph for their identity, such a scenario would imply that there is no difference in the identity of the properties that are represented by these two nodes (Bird, 2007, p. 140). For this reason, the graph must be asymmetric. An odd consequence of this is that, in order for pure powers to have determinate identities, there must be enough of them such that they can be modelled as nodes in an asymmetric graph.⁹ This is an ad hoc commitment of the pure powers view.

The advocate of CPQ can avoid this consequence, as the qualitative elements of properties enter into the individuation of properties. Therefore (since we are modelling properties as nodes in a graph), qualitative elements can enter into the individuation of those nodes, and distinguish them one from another, even if the graph's structure is symmetric. Therefore, there is no requirement to have enough nodes to generate an asymmetric graph, and no requirement that there has to be enough powers to be modelled in an asymmetric graph. This would provide CPQ with an advantage over the pure powers view, even if both use graph theory to respond to their respective regress objections.

3.3 Reply two: reject (3)

The advocate of CPQ can also reject (3), for the following reasons. Stimuli and manifestations are properties, but according to CPQ, properties are *not* mere powerful elements. Properties are compounds of powerful *and* qualitative elements, so (3) is false. More strictly, take a property P, composed of powerful and qualitative elements

⁸ The graph must have no non-trivial automorphisms: the structure of the graph must uniquely determine the identity of all of its nodes (Bird, 2007, p. 140).

⁹ I'm very grateful to an anonymous referee for suggesting this point, and outlining how CPQ may be an improvement over it.

d_1 and q_1 . The powerful element (d_1) of P has its identity fixed by P 's relations to a stimulus (S) property and a manifestation (M) property. According to CPQ, M is a compound of a qualitative element (q_2) and a powerful element (d_2), and S is composed of qualitative element (q_3) and powerful element (d_3). As a result, q_2 and q_3 (the qualitative elements of M and S) also feature in the individuation of d_1 . q_2 and q_3 are qualitative elements, and hence self-individuating, and (3) is false. So (3) should be replaced with (3*):

3*) Stimuli and manifestations are properties, which are composed of qualitative and powerful elements.¹⁰

But plausibly, (3*) is not problematic. At its core, the regress argument against CPQ claims that powerful elements rely on a network of other powerful elements to get their identities fixed. Therefore (the regress argument against CPQ goes) CPQ fares no better than the pure powers view. The reason (the opponent of CPQ claims) is that the pure powers view similarly has only a network of properties to explain how properties' identities are fixed. Replacing (3) with (3*) avoids this objection. By allowing that qualitative elements can also enter into the individuation of properties' powerful elements (premise (3*)) it is no longer the case that powerful elements are *only* dependent on their position in a network. Therefore, it is no longer true that CPQ is in a similar position to the pure powers view. Rather, CPQ has resources that the pure powers view does not have: qualitative elements.

Here it is important to avoid a potential confusion. CPQ implies that the qualitative elements of properties have some role to play in individuating the powerful elements of properties, as just explained. However, the view is *not* that a property's qualitative element individuates the powerful element that partially composes the very same property that the qualitative element partially composes. For example, take property P , and suppose it is composed of d_1 (powerful element) and q_1 (qualitative element). According to CPQ, the qualitative element (q_1) does not individuate d_1 . Rather, d_1 is individuated by the property's relations to manifestation and stimuli properties, M and S . These properties will be partially composed of further qualitative elements, q_2 and q_3 and these elements will therefore partially individuate d_1 . d_1 is not individuated by the qualitative element (q_1) that also composes the very same property (P) as d_1 . Rather, the qualitative elements that enter into the individuation of d_1 are the qualitative elements of *other* properties (the manifestation and stimuli properties, M and S).¹¹

To test this response to the regress, it must be shown that the view can distinguish two distinct powerful elements in a system. Take property P , composed of q_1 and

¹⁰ As a result, (4) will also be false, and will need to be replaced with (4*):

4*) All powerful elements are themselves reliant on the relations that their properties hold to further stimuli and manifestation properties, each of which are themselves composed of qualitative and powerful elements.

¹¹ Note that d_1 does not individuate q_1 . As noted in Sect. 1, q_1 is qualitative, and therefore self-individuating. An anonymous referee has suggested a hypothetical view on which the qualitative element of the property fixes the property's identity, and the powerful element fixes its dispositional/nomic role, and that the powerful element also contributes to the identity of the qualitative element. However, given that on the current view, the powerful element does not fix the identity of the qualitative element, this view is different from CPQ as I understand it.

d_1 , bearing the stimulus relation to M (q_2 and d_2) and S (q_3 and d_3). Take another property P^* , composed of q_4 and d_4 , with a manifestation relation to M^* (q_5 and d_5) and S^* (q_6 and d_6). The question is how the powerful elements of P (d_1) and P^* (d_4) are individuated. The answer is straightforward: d_1 is individuated by its relation to stimuli and manifestation properties M and S , which contain q_2 and q_3 . So those qualitative elements enter into the individuation of d_1 . Conversely, P^* 's powerful element (d_4) is individuated by its relations to M^* and S^* , and hence partially by q_5 and q_6 . So, there are here resources to distinguish d_1 and d_4 . Even this very simple structure provides enough resources to distinguish the two powerful elements, which is what we wanted.

Some readers might be uncomfortable with this reply, for the following reason. Properties P and P^* each depend on the qualitative elements of their stimulus and manifestation properties for their individuation, but they also rely on the powerful elements of those properties for their individuation, and *those* powerful elements rely on *their* relations to further properties, which are partially reliant on other powerful elements... and so on.¹² So it is still the case that a network of relations to other stimuli and manifestations is relevant to those powerful elements' individuation. The advocate of CPQ must be open about this commitment: powerful elements are *partially* reliant on other powerful elements for their individuation. We can see that this is not problematic by distinguishing two issues. The first is whether the powerful elements are partially reliant on a network of other properties, to which the answer is 'yes' (according to CPQ). The second issue is whether the resources provided by the view are sufficient to distinguish the different powerful elements within the system. The supposed regress is only problematic because it throws the second of these into doubt, and so by answering this issue, CPQ avoids the regress. As the above example of (d_1) and (d_4) shows, the view can provide sufficient resources to distinguish the powerful elements in the system, by invoking the qualitative elements of properties.

4 Parts or aspects?

Until now I have been using 'element' as a placeholder. What does it mean to be an 'element' of a property? This section will expand on this idea. Qualities and powers are not themselves properties.¹³ If we claim that each property is composed of two *properties* then we would collapse into a 'mixed' view, on which some properties are qualities and others are pure powers (Molnar, 2003). To explicate 'element', the advocate of CPQ has two options. First, she could postulate a novel metaphysical relation to explain what it means to be an 'element' of a property. For example, Neil Williams postulates the relation of *aspecthood*, claiming that the powerful and the qualitative are *aspects* of properties (2019).¹⁴ Second, she could invoke an existing

¹² This is structurally similar to a point made by Coates (2022) against me (Taylor, 2021) (though that exchange is about the pure powers view, not CPQ).

¹³ Thanks to Anna Marmodoro for pressing me on this.

¹⁴ Though as I pointed out in section 1, Williams' view is significantly different from CPQ, as he understands 'quality' very differently. His understanding of 'quality' is more akin to the notion of 'qualitative character' found in the literature on consciousness. For further discussion of Williams' view, see Marmodoro (2020)

metaphysical relation. For example, she could claim that an *element* of a property simply means a *part* of a property. Take each in turn.

4.1 Aspects

According to Williams, the powerful and the qualitative are different aspects of a property. Williams claims that aspecthood is a compositional relation, which is different from the way that molecules compose a table (2019, p. 113). He says that properties ‘live a double life’ (2019, p. 113), claiming that each aspect of a property is equally fundamental, and that no one of them is reducible to the other (2019, p. 113). He claims that aspects are not themselves properties, nor are they ‘higher-order’ properties (2019, pp. 113–115). Williams explicitly rejects the claim that the qualitative and the powerful are identical (2019, p. 116). Williams doesn’t claim to offer an *analysis* of aspecthood. Rather, aspecthood is intended as a new primitive in our ontology. In this way, the aspecthood view forces us to accept a new metaphysical primitive, and is thus unparsimonious. Indeed, it’s not just that there’s no analysis of aspecthood available, but the information we are given provides us with a relatively thin grip on the notion. As can be seen from these quotations, aspecthood is mainly characterised in terms of what it is not: powers and qualities are not like molecules in a desk, nor are they identical, nor are they higher-order properties of properties, and so on. But these negative characterisations fall short of telling us what aspecthood is. This is the main objection to the aspecthood strategy: that it is unparsimonious.¹⁵

The advocate of aspecthood will reply that we can accept new metaphysical primitives when we have good reason to do so. One way to make this case is to claim that CPQ *requires* the notion of aspecthood. For this reason, evaluation of the aspecthood version of CPQ requires an examination of what other candidate relations might be up to the job for CPQ. One candidate is parthood, to which I now turn. When we have this on the table (Sect. 4.2) we will return to the parsimony issue (Sect. 4.3).

4.2 Parthood

On the parthood strategy, CPQ would claim that properties are essentially composed of qualitative and powerful *parts*. The claim about parts must be taken literally. To say that it is only a metaphor would imply that we are not really invoking a well-known metaphysical relation like parthood, but that we are invoking a new relation and calling it by a familiar name. Readers may object that it is a category mistake to claim that properties have parts.¹⁶ After all, it is normally objects or events (not properties) that are thought to have parts.¹⁷ In order to reply to this objection, it will be helpful to

¹⁵ Williams claims that aspecthood is similar to the way that concrete particulars instantiate properties without themselves being properties (2019, p. 113). However, the relation between a particular and its properties is the relation of instantiation, which holds between objects and properties (Lowe, 2006). Since aspects are neither objects nor properties, the analogy with instantiation does not apply to them.

¹⁶ Thanks to Andrei Buckareff for pressing me on this.

¹⁷ Though the claim that properties have parts has been made before (McDaniel, 2009, p. 327; Ehring, 1997).

expand on the picture of properties that a parthood strategy delivers.¹⁸ With extra detail on the table, the intuition that properties cannot have parts is not forceful.

One way to do this is to show how the parthood strategy accords with plausible principles in mereology, which will allow us to build up a fuller picture of the parthood relation postulated by this version of CPQ. The first step is to see how a parthood version of CPQ accords with the principles of core mereology (Varzi, 1996). These principles state that parthood is reflexive [everything is an (improper) part of itself]; transitive (any part of any part of X is itself a part of X) and antisymmetric (no two distinct things can be part of each other). The parthood version of CPQ is consistent with all of these. Most relevantly for our discussion, CPQ claims that the qualitative and powerful are distinct from each other. So, the parthood strategy must claim (by the antisymmetry of parthood) that they are not parts of each other. This is what the parthood version of CPQ implies: qualities and powers are parts of *properties*, but not of each other. Being consistent with core mereology is a virtue of the parthood version of the CPQ view, because this consistency shows that the parthood version of CPQ does not intolerably strain our normal concept of parthood.

Widely accepted though these principles are, an opponent might ask about philosophers who disagree with these principles of core mereology (Cotnoir, 2010; Effingham, 2010). This is no problem. Such philosophers only claim that the principles of core mereology have some exceptions in exotic cases [e.g. Effingham (2010) invokes time travel]. They can accept the parthood version of CPQ, and accept that parts of properties obey the principles of core mereology, whilst still claiming that the principles should be rejected in more exotic cases.

Further mereological principles can be invoked to widen our understanding of the parthood version of CPQ. Take the distinction between proper parthood (the relation that a statue's foot bears to the statue) and improper parthood (the relation that everything bears to itself). Clearly, the parthood version of CPQ should claim that qualities and powers are *proper* parts of properties. For a property P and its powerful part d_1 and qualitative part q_1 , d_1 and q_1 would be *proper* parts of P. To claim that they are improper parts of properties would make the view too closely resemble the identity theory of properties, which I have already rejected.

If d_1 and q_1 are proper parts of property P, then they should obey the same supplementation principles that proper parts obey in mereology. The *weak* supplementation principle states that anything with at least one proper part must have at least one more proper part that does not overlap the first proper part (Simons, 1987, pp. 26–27, Sider, 2007, p. 60). In other words, if O has a proper part (call it α), then it must also have at least one other proper part (say β) which does not overlap α . The parthood version of CPQ fits with this supplementation principle. Suppose d_1 (the powerful part) is a proper part of property P. By the weak supplementation principle, it follows that P must have at least one other proper part. Of course the parthood version of CPQ implies this, because it claims that P has another proper part (q_1) which does not overlap d_1 . The same goes in the reverse direction for q_1 : it is a proper part of P, but not the only proper part of P (d_1 is a proper part too, which does not overlap q_1). Therefore, the parthood version of CPQ obeys the weak supplementation principle. The *strong*

¹⁸ Thanks to an anonymous referee for pressing me on this.

supplementation principle states that if α is not a part of β , then α must have a part that does not overlap β (Sider, 2007, p. 70). The parthood version of CPQ is consistent with the strong supplementation principle also: d_1 is not part of q_1 so d_1 must have a part that does not overlap q_1 . According to CPQ d_1 and q_1 are distinct so clearly the strong supplementation principle is obeyed.

A reader might ask about thinkers that doubt one or other of the supplementation principles (Lowe, 2013). This is no problem, because those who doubt them can still accept CPQ, since they do not claim that supplementation principles are *always* false, they only claim that in certain cases, they fail to hold. Such thinkers can accept CPQ, and accept that it obeys supplementation principles, whilst accepting that in some other cases, supplementation principles fail.

I have argued that the parthood version of CPQ is consistent with core mereology, and with both the strong and weak supplementation principles of classical mereology. There are more controversial matters that the advocate of this parthood strategy need not take a stand on. For example, the principle of mereological monism, which states that there is one single, fundamental, relation of parthood that applies to all things (Fine, 2010). The parthood version of CPQ is consistent with this thesis or its denial. The same goes for the principle of unrestricted composition: that for any two items, there is another item that is their sum (e.g. that in addition to my left foot and the Eifel Tower there is some further object, which is their aggregate). The parthood version of CPQ is consistent with this claim or its denial.¹⁹ Neutrality on mereological monism and unrestricted composition is an advantage of the parthood version of CPQ, as it does not force us to accept controversial mereological claims which may appear ad hoc in the context of a theory of powers.

There is one mereological position that the advocate of the parthood version of CPQ cannot accept, which is mereological nihilism: the view that no entities with proper parts exist (Sider, 2013; van Inwagen, 1990). Obviously, this is ruled out by the parthood version of CPQ, since it implies that, if d_1 and q_1 are proper parts of property P, then P does not exist. Marrying mereological nihilism with the parthood version of CPQ would lead us to eliminativism about properties. However, denying mereological nihilism is not a significant cost. Mereological nihilism is very much a minority view. In any case, CPQ is consistent with a view that is very similar to mereological nihilism: that no *objects* with proper parts exist. Since this version of mereological nihilism does not concern *properties*, it does not lead to eliminativism about properties. The advocate of CPQ can remain agnostic about the truth of this slightly modified principle.

This exploration into mereology provides us with a fuller picture of the parthood approach to CPQ, and gives us a better grasp on the idea that qualities and powers

¹⁹ It might appear as though the advocate of the parthood strategy needs to deny unrestricted composition, for the following reason. Suppose that the property *charge* is made up of qualitative part q_2 and powerful part d_2 , whilst *mass* is made up of qualitative part q_3 and powerful part d_3 . If the advocate of the parthood strategy accepts unrestricted composition, does that not force them to say that there is a third property, which is the aggregate of q_2 and d_3 ? Surely this would be to multiply properties too easily. The advocate of the parthood strategy can avoid this, by agreeing that the aggregate of q_2 and d_3 exists (thereby respecting unrestricted composition), whilst denying that it is a *property*.

are parts of properties. Specifically, the parthood version of CPQ is committed to the following three claims:

- (i) Every property has proper parts, a qualitative proper part and a powerful proper part.
- (ii) The qualitative and powerful proper parts do not overlap.
- (iii) These proper parts obey the principles of core mereology, and the mereological principles of weak and strong supplementation.

4.3 Aspect or part?

With this detail in place, we can return to the parsimony argument in favour of the parthood view, as follows. The aspecthood strategy cuts against parsimony by requiring us to accept a novel primitive metaphysical relation into our ontology. Conversely, invoking parts does not require a new metaphysical relation, since parthood is already widely accepted. Therefore, the parthood view should be preferred. This parsimony argument is reasonable but not decisive. Parsimony considerations only tell us that *all else equal*, we should accept the parthood version. But when weighing up two theories in terms of parsimony, we must look at all of the implications of the theories. If there were some other issue that forced the advocate of the parthood strategy to accept a novel metaphysical relation, then it would lose its parsimony advantage over the aspecthood approach. We will examine a potential example of this in the next section. So, final judgement about parsimony should wait until then.

In summary, I have explored the aspecthood and parthood versions of CPQ, and argued that we have some (non-decisive) reason to prefer the parthood version.

5 The relation between qualities and powers

Perhaps the biggest challenge to CPQ concerns the relation between the qualitative and the powerful parts (or aspects) of a property. What is the relation between these elements that ‘binds’ them together? What is it that ‘fuses’ together d_1 and q_1 to make property P ? This section will first consider whether the relation between the powerful and qualitative is contingent (the ‘contingentist’ version) or necessary (the ‘necessitarian’ version).²⁰ I argue that the necessitarian version of CPQ should be preferred, because the contingentist version carries with it some of the implausible commitments of quidditism (Sect. 5.1). Then I consider what the relation between the two elements of the property actually is (Sects. 5.2–5.3).

5.1 Necessitarianism or contingentism?

The relation between the *property* P and its elements d_1 and q_1 is certainly necessary. The elements are both essential to the property, so the property necessarily cannot

²⁰ These positions are distinct from how ‘contingentist’ and ‘necessitarian’ are used in debates about modal metaphysics (Kimpton-Nye, 2022).

occur without both of the elements. The relevant question for us is whether the relation *between* d_1 and q_1 is necessary or contingent. For some property P and its elements d_1 and q_1 , is it necessary that q_1 always co-occurs with d_1 , and vice versa? Or could d_1 be an element of some property P^* along with a distinct quality q_2 ? Could q_1 be part of some other property P^{**} along with some other power d_2 ?

In his brief discussion of a similar view, Molnar (2003, p. 150) rejects contingentism, on the grounds that this view implies that there is nothing in principle preventing the possibility of properties that are purely qualitative, and not powerful, and also nothing in principle preventing the possibility of properties that are pure powers (see Williams, 2019, p. 117 and Armstrong 2005, p. 314). This is a *non sequitur*. It could be that q_1 can occur without d_1 (thus making the relation between them contingent) but it doesn't follow that q_1 can occur without *any* powerful element. It could be that the relation between any particular qualitative element (like q_1) and any particular powerful element (like d_1) is contingent, but that all properties must be composed of at least one qualitative element and one powerful element.²¹

Even though this objection can be answered, there are still good reasons to prefer the necessitarian version of CPQ, on the grounds that the contingentist version of CPQ implies many of the implausible consequences associated with quidditism.²² Quidditism is the view that the identities of properties are fixed independently of their causal/nomological roles, and that properties are only contingently related to their causal roles (Lewis, 2009). The supposedly implausible consequences for quidditism concern 'quiddity swapping' scenarios. Suppose that in the actual world (w), property P fulfils causal/nomological role N . According to quidditism, in another possible world (w^*) P fulfils a distinct causal/nomological role N^* . The same applies, by the same reasoning, to all properties. This is problematic for various reasons (see Wang, 2016 and Smith, 2023 for surveys). The first issue is that the quidditist is committed to there being a difference between w and w^* , but it's very difficult to take this seriously (claims the opponent) since the worlds' causal/nomic structures are exactly the same (Black, 2000; Bird, 2007). Indeed, as far as scientific investigation and everyday observation is concerned, the two worlds would be indiscriminable. Underpinning this indiscriminability claim is the assumption that science and everyday observation can only encounter properties in virtue of their nomological profiles.²³ The second issue with quiddity swapping is that it arguably leads to a radical form of scepticism about the world. This second issue is the 'Ramseyan humility' thesis (Lewis, 2009). If we accept that science can only study properties in virtue of their causal/nomological profiles, then science would be in principle unable to tell the difference between w and w^* . Advocates of Ramseyan humility suggest that this implies that we are ignorant of the identities of properties in the actual world.²⁴

²¹ Something like this may be what Molnar means when he goes on to say that 'the relation between the two sides of a property is necessary at the determinable level and contingent on the determinate level' (2003, p. 151). Molnar does not expand on this claim, so it is difficult to be sure what he meant.

²² Thanks to two anonymous referees for pushing me on this. For further discussion of contingentist and necessitarian views, see Williams (2019, pp. 117–119).

²³ See Williams (2011) for more on this.

²⁴ Here are two other reasons that quidditism is supposedly problematic. Black's 'cardinality' argument claims that quidditism implies that there must be an arbitrary number of natural properties, which he takes

The purpose of this paper is not to assess these arguments, but rather to show that similar consequences follow from the contingentist version of CPQ. The contingentist version of CPQ is clearly different from quidditism, but it does imply a scenario that is similar to the quiddity permutation scenario, which we can call ‘*quality permutation*’. If property P is composed of q_1 and d_1 , and the relation between these elements is contingent in both directions, then it will be possible for d_1 to co-occur with another quality q_2 , making up a new property P^* . However, it is hard to see how we could discriminate between a world containing the property P (composed of q_1 and d_1) and the property P^* (composed of q_2 and d_1). After all, if all of the dispositional features of P and P^* are the same, how could we ever tell the difference between them? This leads to results that are very similar to the two implausible consequences that we encountered above for traditional quidditism. Given that science would be unable to discriminate between P and P^* , we might worry that the difference between them (switching q_1 for q_2) is a difference without a difference. Furthermore, a conclusion similar to the conclusion of Ramseyan humility will also follow, for similar reasons. If we are unable to discriminate P (composed of q_1 and d_1) from P^* (composed of q_2 and d_1), then scientific investigation is unable to tell us whether we live in a world made up of properties like P, or properties like P^* , which is the main problematic conclusion of Ramseyan humility.

Conversely, the necessitarian version of CPQ does not allow this kind of quality permutation, and so it entirely sidesteps these issues. For this reason, we have good reason to reject the contingentist version, and accept that the relation between powers and qualities is necessary. Are there any reasons to reject the necessitarian version of CPQ?²⁵ Armstrong (2005, p. 314) claims that a necessary connection between the two elements of a property would be a brute necessary connection, of the kind that should be avoided. In response, whether the connection turns out to be brute remains to be seen. It will come down to what account of the relation is given by the CPQ theorist. Furthermore, a brute necessary connection between d_1 and q_1 is no worse in principle than a brute contingent connection, so this argument does not favour contingentism over necessitarianism.²⁶

Footnote 24 continued

to be implausible (2000). See Smith (2023) and Baysan (2019) for discussion. Hawthorne (2001) argues that quidditism is unparsimonious, on the grounds that the quidditist must postulate both *properties* and also *quiddities*, the job of which it is to individuate the properties. However, Locke (2012) and Smith (2016) point out that the quidditist can identify the properties with the quiddities, thus avoiding this issue. For more on these anti-quidditistic arguments and Ramseyan humility, see Smith (2016, 2023), Dasgupta (2015), Schaffer (2005), Whittle (2006) and Langton (2004).

²⁵ Molnar claims that if the relation is necessary, then q_1 would necessitate d_1 . But if q_1 necessitates d_1 , and d_1 necessitates a certain manifestation (given a particular stimulus) then why not say that q_1 itself necessitates that manifestation, and lose any reason to invoke d_1 (2003, p. 150)? Molnar seems to be confusing necessary correlation with explanation. Just because q_1 is necessarily correlated with a particular manifestation (given a particular stimulus) doesn’t mean that it grounds or explains that manifestation. Rather, the powerful element of the property (d_1) explains the manifestation. Williams also expresses similar puzzlement at Molnar’s objection (2019, p. 116).

²⁶ Armstrong’s ‘brute connection’ objection could be interpreted more charitably, as follows (thanks to an anonymous referee). If we claim that the connection between d_1 and q_1 (which make up property P) is *necessary*, then there should be some explanation of why *this particular* powerful element (d_1) should be linked to *this particular* qualitative element (q_1). Here the advocate of CPQ has two options. The first is to accept that this question has no answer. The link between q_1 and d_1 is brute. It is somewhat unclear how

Armstrong's suspicion of necessary connections may be persuasive to a thinker who wishes to avoid necessary connections in their account of properties (cf. Wilson, 2010). Armstrong is one such theorist, as he holds a theory of properties on which the dispositional features of objects are contingently related to the identity of properties.²⁷ Conversely, thinkers attracted to a powers theory of properties are already committed to a necessary connection between a property and its dispositional role. Therefore, Armstrong's own reluctance about necessary connections will not carry dialectical weight against anyone attracted to a powers theory.

Of course, in arguing that the relation between the two elements of a property is necessary, we have not yet explained exactly what the relation *is*. This is the topic of the next two subsections.

5.2 Grounding

Could the relation between the powerful and the qualitative elements of a property be a grounding relation? Not just any grounding relation will do. If we claim that the qualitative element of the property grounds the powerful element but not vice versa, then we will be admitting that the qualitative is more fundamental than the powerful, making the view too closely resemble a version of categoricism (on the assumption that grounded entities are less fundamental than their grounds).²⁸ Similarly, if we claim that the powerful element grounds the qualitative element, but not vice versa, then we will be admitting that, at the fundamental level, there are only powers, making the view too closely resemble a pure powers theory. For these reasons, if the advocate of CPQ does wish to use grounding, they should claim that they ground each other.

Such a view is worth exploration. One advantage is that it invokes a familiar metaphysical relation. As argued in Sect. 4, it is more parsimonious to invoke familiar metaphysical relations than postulate new ones. However, the symmetric grounding view comes with significant costs. Embracing the view involves rejecting the consensus that grounding is asymmetric (see Dasgupta, 2014 and Trogdon, 2013 for the claim that grounding is asymmetric).²⁹ One difficulty with accepting that grounding can be symmetric in the context of CPQ is that grounding is supposed to be an explanatory relation. Grounds are supposed to provide (or back) a metaphysically satisfactory explanation of the grounded entities (Bennett, 2017). On the present suggestion, the two elements of the property ground one another. This explanatory circle is so tight that it seems unlikely to provide the kind of metaphysical explanation that it would require to qualify as an instance of grounding in the first place.

Footnote 26 continued

much of a problem this would be, and so I will set this issue aside to await future work. The second option is to postulate some explanatory relation between d_1 and q_1 which explains why they have to co-occur. A version of this strategy will be explored in Sect. 5.2.

²⁷ This stems from Armstrong's view that laws of nature are contingent (1983) and his acceptance of combinatorialism (1989).

²⁸ Such a view would be akin to Matthew Tugby's 'grounding powers theory' (2022). See also Coates (2023).

²⁹ Naomi Thompson (2016) defends the claim that grounding can be symmetric. Note that the grounding version of CPQ also involves rejecting the consensus view that grounded entities are less fundamental than their grounds.

The symmetric grounding view also leads to some very complicated and counter-intuitive consequences when we think about how grounding interacts with essential dependence. For an entity A to essentially depend on another entity B means that A relies upon B for its identity to be fixed. That is, A relies upon B to be the very thing that it is (Fine, 2015). As we saw in Sect. 3, the powerful part of a property has its identity fixed by the property's relations to stimuli and manifestation properties. In this way, the powerful part of a property essentially depends upon these relations. Conversely, the qualitative part of the property is self-individuating. With these claims about essential dependence in mind, recall that the current suggestion is that qualitative elements and powerful elements of properties each ground one another. Integrating this with the insights about essential dependence delivers a view on which the quality q_1 and the power d_1 are grounded in each other (q_1 grounds d_1 and vice versa), but each one essentially depends on something entirely separate from that which grounds it (q_1 is essentially dependent on itself, and d_1 is essentially dependent on its property's relations to stimuli and manifestation properties). This severs the relation of grounding from the notion of essential dependence very sharply, in a way that is without independent support. On this picture, entities can be grounded in one thing, whilst having their identities fixed by something entirely separate. The claim implies that parts of properties have two entirely separate dependence relations. There is nothing incoherent about this view, but it is very complicated, it's difficult to see independent support for it, and it is certainly against the consensus (Fine, 2015).

I will not discuss the grounding view further. Its challenges are clear: to explain how a symmetric grounding relation could hold between d_1 and q_1 , and to make sense of the way that the view separates grounding from essential dependence. These challenges at least provide us with good reason to examine other options.

5.3 Primitivism

On another view, the relation between q_1 and d_1 is one of our metaphysical primitives, and cannot be analysed further. This kind of primitivism involves accepting a new metaphysical relation, which holds between elements of properties. The introduction of a new primitive metaphysical relation is a heavy commitment of this version of CPQ.

There is an additional complication here. Suppose that we accept a primitive necessary relation between quality and power (call it *PRIMITIVE LINK*). The additional complexity introduced into the theory by accepting *PRIMITIVE LINK* will affect the way we evaluate different versions of the CPQ. Let me explain. The argument in favour of the *parthood* version of CPQ over the *aspecthood* version was a parsimony argument (Sect. 4.3). However, consider a version of CPQ that mixes the *parthood* view with an acceptance of *PRIMITIVE LINK*. Because *PRIMITIVE LINK* is an unparsimonious commitment of the theory, this will alter our parsimony evaluations.³⁰

To see the issues more clearly, I will lay out four possible versions of CPQ. First, we might accept an *aspecthood* version of CPQ, which also accepts *PRIMITIVE LINK*. This view would have two novel metaphysical primitives (*aspecthood* and *PRIMITIVE LINK*).

³⁰ Thanks to an anonymous referee for pointing this out.

Second, we might hold an aspecthood version of CPQ that does not accept PRIMITIVE LINK. This would have *one* novel primitive (aspecthood). Third, we might accept a parthood view, with PRIMITIVE LINK. This would have one novel primitive (PRIMITIVE LINK). Fourth, we might accept a parthood version of CPQ, without PRIMITIVE LINK, which has zero novel primitives. Clearly, the least parsimonious view is the first, on which we have to accept the existence of aspects, *and* a primitive relation between them, whilst the most parsimonious view is the fourth. A version of the fourth picture would be a parthood view that cashed out the relation between quality and power in terms of grounding. I have already explored the issues with a grounding version of CPQ, so I will not discuss the fourth view here.

The important difference for our discussion here comes between the second and third version of CPQ, as they each accept only one novel primitive. The second accepts aspecthood (but not PRIMITIVE LINK) and the third accepts PRIMITIVE LINK (but not aspecthood). They are tied for parsimony. The upshot is that, if there are good reasons to think that the aspecthood version of CPQ does not need to invoke PRIMITIVE LINK, but that the parthood version *does* need to accept PRIMITIVE LINK, then the second and third options listed above would both be live options, and neither of them would have a parsimony advantage over the other. In this case, parsimony considerations would no longer tell in favour of the *parthood* version over the *aspecthood* version. In other words, in such a case, the parsimony advantage that the parthood version gains by avoiding commitment to aspects would be lost because of its need to postulate PRIMITIVE LINK.

This all depends on whether a view like the second one outlined above can be made to work. That is, whether a plausible version of the aspecthood view can be developed, which does not need to invoke PRIMITIVE LINK. This is the only version of the aspecthood view that is as parsimonious as a parthood version of CPQ, and therefore not susceptible to the parsimony objection against aspecthood. An advocate of this version of the aspecthood view will claim that once we invoke aspecthood, and claim that the powerful and the qualitative are aspects of properties, we do not need another primitive to explain the link between the qualitative and powerful aspects, as aspecthood can do this explanatory work. This would leave us with only one primitive (aspecthood), giving us a version of the second view outlined above. Conversely (the argument continues) parthood cannot itself explain the link between quality and power, so the parthood version of CPQ is forced to accept PRIMITIVE LINK, which is a version of the third view. Since the second and third views are equal on parsimony considerations, the parthood version does not have a parsimony advantage over the aspecthood version. So the argument would go.

Unfortunately, this strategy is hampered by the fact that there is so little information about aspecthood, so it is difficult to see whether an aspecthood version of CPQ needs to invoke PRIMITIVE LINK in addition to aspecthood, or whether aspecthood is sufficient on its own. Here is another way to put this point. There are at least two versions of the aspecthood CPQ view. One says that once we accept that qualities and powers are aspects of properties, then the relation between those aspects will be fully accounted for. This is the more parsimonious version of the aspecthood view. The other version of the aspecthood CPQ view says that, even if we accept that qualities and powers are aspects, this still leaves the relation between them unexplained, and so we will have to

accept some other metaphysical relation in addition to aspecthood, such as *PRIMITIVE LINK*. This is the unparsimonious version of the aspecthood view. The problem is, that in order to decide which of these was more plausible, we would need to know more about the relation of aspecthood than we currently have. Unfortunately (as we can see from my description of aspecthood in Sect. 4.1), our grasp on the notion of aspecthood is not sufficiently complete to allow for this. The point is that our account of aspecthood needs to be complete enough to indicate whether it can explain the relation between qualities and powers purely in terms of the fact that they are aspects of a property, or whether such a view also requires something else, like *PRIMITIVE LINK*. Without this, the advocate of aspecthood will not be able to claim that the aspecthood strategy is as parsimonious as the parthood strategy. Therefore, the parsimony objection remains a serious objection to the aspecthood version of CPQ.

The dialectic is now clear. For those advocates of the aspecthood view, the challenge is to explain aspecthood thoroughly enough to determine whether it is sufficient to account for the relation between the two aspects of a property. Until this work can be done, the charge of parsimony will be a serious issue for the aspecthood version of CPQ. Conversely, for those who embrace *PRIMITIVE LINK* (whether they embrace a parthood view or an aspecthood view) the challenge is to give a more thorough account of *PRIMITIVE LINK*. I conclude that the explanation of the relation between power and quality remains as one of the most important challenges for an advocate of the CPQ view, whether they embrace the aspecthood or parthood version.

6 Objections and replies

Objection 1: The argument in favour of CPQ (Sect. 2) relies on accepting a lot of background metaphysical arguments. Is that a problem?

Reply: We must be open about the background arguments in the metaphysics of properties that CPQ requires: the explanatory force of powers views (premise RC), the regress argument against pure powers views (premise RP), and the arguments against the identity theory (premise RI). However, we should recall the dialectical point at which the compound powerful qualities view enters the debate. It is intended as a hybrid position that steers between the twin extremes of pure powers and categoricism, so we should expect that some of the arguments concerning those views will be relevant to the view's motivations. It is designed to appeal to thinkers who are convinced that powers theories hold promise, but who are dissatisfied with other powers views. For these reasons, it is legitimate in this dialectical context to assume that these background arguments have plausibility, and to see what positions follow from them. Even for a reader unconvinced of the background metaphysics that the compound view relies on, the argument for CPQ can be conditionalized: *if* we accept the background metaphysical commitments of the argument for CPQ, then the compound powerful qualities view should be accepted. Even readers unconvinced of these background issues will be interested in examining the positions that result from assuming them.

Objection 2: CPQ leads us to the conclusion that properties are partially individuated by qualities, but it doesn't offer much in the way of a positive conception of 'quality'.

Reply: CPQ is deliberately neutral over the nature of qualities, and is consistent with a range of options (Lewis, 2009; Locke, 2012; Smith, 2016; Tugby, 2022). This neutrality is a positive aspect of the theory. We should remember that qualitative elements of properties are postulated for theoretical reasons. As a result, we get a grasp on them through the theoretical roles that they play.

Objection 3: CPQ blends some elements from categoricalism, the pure powers view, and the identity theory. But the danger with hybrid positions is that they will inherit not only the virtues of other positions, but also their drawbacks, whilst adding complexity.³¹

Reply: CPQ is more complex than its three main rivals. This complexity would be problematic if it were unmotivated, but this is not the case. As outlined in Sect. 2, the view has significant advantages over its main rivals. These theoretical advantages justify its complexity. Furthermore, it may be true that CPQ inherits *some* of the drawbacks of the views of which it is a hybrid, but hybridising these views is also likely to *solve* some of their problems too. We cannot infer from the fact that the view is a hybrid that it will inherit *all* of the drawbacks of more standard views.

7 Conclusion

I have presented an argument for a compound powerful qualities view. I have explained how the view tackles property individuation. I have also distinguished parthood and aspecthood versions of the view. I have argued that the relation between quality and power is necessary, but there are a variety of live options on what this relation is. I conclude that that the compound powerful qualities view is a novel and respectable option, worthy of serious attention in the metaphysics of properties.

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Declarations

Conflict of interest The author has no competing interests to declare that are relevant to the content of this article.

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³¹ Thanks to an anonymous referee.

References

- Armstrong, D. (1983). *What is a law of nature?* CUP.
- Armstrong, D. (1989). *A combinatorial theory of modality*. CUP.
- Armstrong, D. (1997). *A world of states of affairs*. CUP.
- Armstrong, D. (2005). Four disputes about properties. *Synthese*, 144, 309–320.
- Barker, S. (2009). Dispositional monism, relational constitution and quiddities. *Analysis*, 69, 242–250.
- Barker, S. (2013). The emperor's new metaphysics of powers. *Mind*, 122, 605–653.
- Baysan, U. (2019). Quidditism and contingent laws. *Thought*, 8, 286–290.
- Bennett, K. (2017). *Making things up*. OUP.
- Bird, A. (2007). *Nature's metaphysics*. OUP.
- Bird, A. (2016). Overpowering: How the powers ontology has overreached itself. *Mind*, 125, 341–383.
- Black, R. (2000). Against quidditism. *The Australasian Journal of Philosophy*, 78, 87–101.
- Coates, A. (2020). Making sense of powerful qualities. *Synthese*. <https://doi.org/10.1007/s11229-020-02576-5>
- Coates, A. (2022). Events and the regress of pure powers: Reply to Taylor. *Analysis*. <https://doi.org/10.1093/analys/anac031>
- Coates, A. (2023). The meta-grounding theory of powerful qualities. *Philosophical Studies*. <https://doi.org/10.1007/s11098-023-01982-y>
- Cotnoir, A. (2010). Anti-symmetry and non-extensional mereology. *Philosophical Quarterly*, 60, 396–405.
- Dasgupta, S. (2014). The possibility of physicalism. *The Journal of Philosophy*, 111, 557–592.
- Dasgupta, S. (2015). Inexpressible ignorance. *The Philosophical Review*, 124(4), 441–480.
- Effingham, N. (2010). Mereological explanation and time travel. *Australasian Journal of Philosophy*, 88, 333–345.
- Ehring, D. (1997). Lewis, temporary intrinsics, and momentary tropes. *Analysis*, 57, 254–258.
- Engelhard, K. (2010). Categories and the ontology of powers. In A. Marmodoro (Ed.), *The metaphysics of powers*. Routledge.
- Fine, K. (1994). Essence and modality. *Philosophical Perspectives*, 8, 1–16.
- Fine, K. (2010). Towards a theory of part. *Journal of Philosophy*, 107(11), 559–589.
- Fine, K. (2015). Unified foundations for essence and modality. *Journal of the American Philosophical Association*, 1, 296–311.
- Giannotti, J. (2021). The identity theory of powers revised. *Erkenntnis*, 86, 603–621.
- Hawthorne, J. (2001). Causal structuralism. *Philosophical Perspectives*, 15, 361–378.
- Heil, J. (2003). *From an ontological point of view*. OUP.
- Heil, J. (2012). *The universe as we find it*. OUP.
- Inghthorsson, R. (2015). The regress of pure powers revisited. *European Journal of Philosophy*, 23, 529–541.
- Jacobs, J. (2011). Powerful qualities, not pure powers. *The Monist*, 94, 81–102.
- Kimpton-Nye, S. (2022). Laws of nature: Necessary and contingent. *The Philosophical Quarterly*, 72(4), 875–895.
- Langton, R. (2004). Elusive knowledge of things in themselves. *Australasian Journal of Philosophy*, 82(1), 129–136.
- Lewis, D. (2009). Ramseyan humility. In D. B. Mitchell & R. Nola (Eds.), *Conceptual analysis and philosophical naturalism* (pp. 203–222). MIT Press.
- Locke, D. (2012). Quidditism without quiddities. *Philosophical Studies*, 160, 345–363.
- Lowe, E. J. (2006). *The four category ontology*. OUP.
- Lowe, E. J. (2012). What is the source of our knowledge of modal truths? *Mind*, 121, 919–950.
- Lowe, E. J. (2013). Mereological extensionality, supplementation, and material constitution. *The Monist*, 96(1), 131–148.
- Marmodoro, A. (2020). Review of *The Powers Metaphysic*. By Neil Williams. *Notre Dame Philosophical Reviews*. <http://ndpr.nd.edu/reviews/the-powers-metaphysic/>.
- Marmodoro, A., & Grasso, M. (2020). The power of color. *American Philosophical Quarterly*, 57, 65–78.
- Martin, C. B. (2008). *The mind in nature*. OUP.
- McDaniel, L. (2009). Extended simples and qualitative heterogeneity. *The Philosophical Quarterly*, 59, 325–331.
- Molnar, G. (2003). *Powers*. OUP.
- Mørch, H. (2017). The evolutionary argument for phenomenal powers. *Philosophical Perspectives*, 32, 293–316.

- Mumford, S. (2004). *Laws in nature*. Routledge.
- Mumford, S. (2006). The ungrounded argument. *Synthese*, 149, 471–489.
- Mumford, S. (2021). Where the real power lies: A reply to Bird. *Mind*. <https://doi.org/10.1093/mind/fzab046>
- Mumford, S., & Anjum, R. (2013). *Getting causes from powers*. OUP.
- Schaffer, J. (2005). Quiddistic knowledge. *Philosophical Studies*, 123, 1–32.
- Sider, T. (2007). Parthood. *The Philosophical Review*, 116(1), 51–91.
- Sider, T. (2013). Against parthood. In K. Bennett & D. Zimmerman (Eds.), *Oxford studies in metaphysics* (Vol. 8, pp. 237–293). Oxford University Press.
- Simons, P. (1987). *Parts: A study in ontology*. OUP.
- Smith, D. (2016). Quid quidditism est? *Erkenntnis*, 81, 237–257.
- Smith, D. (2023). On the cardinality argument against quidditism. *Acta Analytica*, 38, 275–281.
- Taylor, H. (2017). Powerful qualities, phenomenal concepts, and the new challenge to physicalism. *Australasian Journal of Philosophy*, 69, 53–66.
- Taylor, H. (2018). Powerful qualities and pure powers. *Philosophical Studies*, 175, 1423–1440.
- Taylor, H. (2021). A new solution to the regress of pure powers. *Analysis*. <https://doi.org/10.1093/analysis/anab039>
- Taylor, H. (2022). Powerful problems for powerful qualities. *Erkenntnis*, 87, 425–433.
- Thompson, N. (2016). Metaphysical interdependence. In M. Jago (Ed.), *Reality making*. Oxford University Press.
- Trogon, K. (2013). Grounding: Necessary or contingent? *Pacific Philosophical Quarterly*, 94, 465–485.
- Tugby, M. (2012). Rescuing dispositionalism from the ultimate problem: Reply to Barker and Smart'. *Analysis*, 72, 723–731.
- Tugby, M. (2013). Platonic dispositionalism. *Mind*, 122, 451–480.
- Tugby, M. (2021). Grounding theories of powers. *Synthese*, 198, 11187–11216.
- Tugby, M. (2022). *Putting properties first: A platonic metaphysics for natural modality*. OUP.
- van Inwagen, P. (1990). *Material beings*. Cornell University Press.
- Wang, J. (2016). The nature of properties: Causal essentialism and quidditism. *Philosophy Compass*, 11(3), 168–176.
- Whittle, A. (2006). On an argument for humility. *Philosophical Studies*, 130, 461–497.
- Williams, N. (2011). Dispositions and the argument from science. *Australasian Journal of Philosophy*, 89(1), 71–90.
- Williams, N. (2019). *The powers metaphysic*. OUP.
- Wilson, J. (2010). What is Hume's dictum, and why believe it? *Philosophy and Phenomenological Research*, 80, 595–637.
- Varzi, A. (1996). Parts, wholes, and part-whole relations: The prospects of mereotopology. *Data and Knowledge Engineering*, 20, 259–286.
- Vetter, B. (2013). Multi-track dispositions. *The Philosophical Quarterly*, 63(251), 330–352.
- Vetter, B. (2015). *Potentiality*. OUP.

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