

QUIDDITISM WITHOUT QUIDDITIES

Dustin Locke

Claremont McKenna College

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Abstract. Structuralism and quidditism are competing views of the metaphysics of property individuation: structuralists claim that properties are individuated by their nomological roles; quidditists claim that they are individuated by something else. This paper (1) refutes what many see as the best reason to accept structuralism over quidditism and (2) offers a methodological argument in favor of a quidditism. The standard charge against quidditism is that it commits us to something ontologically otiose: intrinsic aspects of properties, so-called ‘quiddities’. Here I grant that quiddities are ontologically otiose, but deny that quidditism requires them. According to a view I call ‘austere quidditism’, properties are individuated by bare numerical identity. I argue that, as far as ontological parsimony is concerned, austere quidditism and structuralism are on a par. But is austere quidditism a coherent alternative to structuralism? To see that it is, we must get clear on what exactly we mean by ‘property individuation’. What we discover is that structuralism is a *counterpart* theory for properties, and that austere quidditism is simply the rejection of counterpart theory. I conclude with a methodological argument to the effect that counterpart theory for properties ought to be rejected. This paper begins by situating the debate between structuralists and quidditists within the context of a debate over the epistemic limits of fundamental science. At the center of this debate is David Lewis’s posthumously published ‘Ramseyan Humility’ (2008). In the appendix I explain the precise role of austere quidditism in Lewis’s argument.

1. Introduction: Ramseyan Humility

According to a popular view, fundamental science tells us only about the *nomological structure* of our world.¹ For example, fundamental science tells us that there is a property, which we call ‘mass’, which is such that the spacetime around objects is curved in such and such way, according to how much of that property those individuals have.² Fundamental science also tells us that this is the *same* property as the property that makes individuals resist acceleration under force. This is just more information about the property’s *role* in nature. To introduce a bit of terminology, let us say that, according to this view, fundamental science tells us about ‘general realization facts’—facts of the form *there is a property that realizes such and such nomological role*.

Is there a further question about *which* property realizes a given role—that is, a fact *beyond* the mere general realization fact? Call such a fact a ‘quiddistic fact’.³ If there are quiddistic facts, they would seem to be beyond the epistemic reach of science. What would it take for there to be a quiddistic fact about a given role? I assume that facts are individuated at least as finely as what might have been. In particular, I assume that if *a* is the unique F but it might have been that *b* was the unique F, then there is a particular fact about which thing is the unique F that is beyond the mere fact that *there is* a unique F—namely, the fact that *a* is the unique F. Hence, for there to be a quiddistic fact about some nomological role, it suffices that the following thesis is true:

¹ In preparing this paper, I received an incredible amount of help from my friends and colleagues. In particular, I would like to thank Yuval Avnur, Greg Keenan, Ivan Mayerhofer, David Braddon-Mitchell, Shamik Dasgupta, Kenny Easwaran, Andy Egan, Jim Joyce, Amy Kind, Jim Kreines, Heather Lowe, David Plunkett, Jonathan Schaffer, Allie Scott, all the members of the Claremont Colleges works-in-progress group, and the Rackham Graduate School at the University of Michigan for a grant to travel to the philosophy departments at the University of Sydney and the Australian National University, to whom I also owe a large debt of gratitude.

² I use the term ‘property’ to include not only one-place properties but many-place relations as well. I also include quantities (e.g., mass) as well as qualities (e.g., quark colors).

³ I use the phrases ‘quiddistic fact’ and ‘quiddistic realization’ with precisely the meaning I here stipulate them to have. As we will see below, there is an ambiguity in the terms ‘quiddities’ and ‘quidditism’. The stipulations that I make here should be taken to block these ambiguities from infecting the phrases ‘quiddistic fact’ and ‘quiddistic realization’.

Quiddistic Realization (QR). For at least some nomological role R realized by some property P, R might have been realized without being realized by P.

What is especially interesting here is that quiddistic facts are not the sort of facts that are commonly alleged to be outside the reach of science. They are not facts about the musings of a deity, facts about the qualitative character of mental states, nor facts that depend in any way on a ‘first-person standpoint’.⁴ They are, rather, objective physical facts about the world. It would be interesting to discover that some such facts are beyond our epistemic reach.

David Lewis presents a version of the foregoing argument in his posthumously published ‘Ramseyan Humility’ (2008). It would be nice, I suppose, if there were no facts ultimately beyond our epistemic reach. But is the denial of such facts just wishful thinking, or is there a legitimate reason to doubt their existence? There would seem to be three legitimate ways to try to block Lewis’s argument: (1) we could attack QR, (2) we could attack the inference from QR to the existence of quiddistic facts or (3) we could attack the inference from the existence of quiddistic facts to the unknowability of such facts (the ‘skeptical inference’).

I here set aside approaches (2). As noted above, the inference from QR to the existence of quiddistic facts rests on the plausible principle that facts are individuated at least as finely as what might have been. I also set aside approach (3). Rae Langton (2004), Jonathan Schaffer (2005), and Ann Whittle (2006) have each, in one way or another, argued that the skeptical inference rests on an implausibly strong epistemic assumption. Elsewhere (2008), I have argued that these critics are mistaken. But I will not take a stand on the skeptical inference here.

In what follows, my focus is on the plausibility of approach (1). In particular, I aim to defend QR against what appears to be the most promising argument for rejecting it. As we will see, the argument against QR proceeds in two stages. First, it is argued that QR implies a certain thesis about how properties are individuated. That thesis is *quidditism*, and its chief rival is *structuralism*. Second, it is argued that a plausible principle of parsimony gives us reason to prefer structuralism to quidditism. My response to this argument will be that there are two forms of quidditism, both of which are consistent with QR, but only one of which is defeated by the argument from parsimony. The upshot will be that we have here no reason to reject QR.

What about Lewis? In the course of endorsing QR, Lewis endorses quidditism. But which form of quidditism does he intend to endorse? I take up this historical question in the appendix, where I argue that Lewis endorsed the form of quidditism that I endorse here.

⁴ Lewis (1975) discusses the latter sort of facts and why he thinks that they are beyond the reach of science.

However, the body of this paper is concerned to defend QR for its own sake; it is not concerned with whether Lewis would endorse the given defense.

Before I begin, let me make one more disclaimer. I believe that the term ‘structuralism’ has been used for both a certain anti-realism with respect to properties and a certain sort of realism. It will be clear that the structuralists I have in mind are *realists* about properties. In this essay, I am concerned exclusively with a domestic dispute amongst property realists. I leave open all relevant questions about the nature of properties (How are they individuated? Are they categorical or dispositional?), but I take all parties to agree on their existence.

2. Structuralism vs Quidditism

A good number of philosophers would reject QR because it is inconsistent with a certain thesis about how properties are individuated—namely:

Property Structuralism. Properties are individuated by their nomological roles.⁵

According to property structuralism, what it is to have mass is to have whatever property realizes a certain nomological role.⁶ Assuming that our world is Newtonian, structuralism holds that what it is to have *mass* is to have the property *x* such that individuals with *x* accelerate under a net

⁵ Property structuralists include Chris Swoyer (1982), Sydney Shoemaker (1984, 1998), and Max Kistler (2002). Shoemaker, however, holds that properties are individuated by their *causal* roles, not nomological roles. This distinction is not idle, as a property’s nomological role may sometimes come apart from its causal role. Nonetheless, everything I say here should be taken to apply *mutatis mutandis* to Shoemaker’s view.

⁶ We use ‘Ramsification’ to make the notion of a nomological role precise. Suppose that we live in a Newtonian world, a world where there are two fundamental laws in which the property *mass* figures. First, there is the law of gravitation: between any two individuals with mass, there is an attractive force proportional to the product of their masses divided by the square of the distance between them. Second, there is Newton’s Second Law of Motion: the net force on an object is equal to the product of its mass and its rate of acceleration. Now we conjoin these laws and replace each occurrence of ‘mass’ with a variable: between any two individuals with *x*, there is an attractive force proportional to the product of their respective amounts of *x* divided by the square of the distance between them, and the net force on an object with *x* is equal to the product of its amount of *x* and its rate of acceleration. This open-sentence defines a *second-order* property possessed by the first-order property mass. This second-order property is what we call mass’s nomological role, and to ‘realize this role’ is simply to have this second-order property.

force in proportion to the net force divided by their amount of x and such that between any two individuals with x there is a force proportional to the product of their amounts of x divided by the square of the distance between them.

Below we will return to the question of what exactly property structuralists mean by ‘property individuation’. For now, the important thing to note is that property structuralism is inconsistent with QR. On any plausible reading of ‘individuation’, it should turn out that if properties are individuated by their nomological roles, then any property that might have realized the nomological role that mass actually realizes would have therefore *been* mass. Thus, if QR is true, properties must not be individuated in structuralist fashion. How then are they individuated?

The standard view is that QR requires quidditism, the view that properties are individuated by their *quiddities*. Quiddities have been informally characterized in a variety of ways: they are said to be the natures,⁷ intrinsic aspects,⁸ suchnesses,⁹ and/or the haecceities¹⁰ of properties. Below we will have more to say about what exactly quiddities are meant to be. The important thing for now is that a property’s quiddity is understood to be *something distinct* from the property’s nomological role.

3. The Parsimony Argument

Several philosophers take the fact that QR entails a commitment to quidditism as a reason to *reject* QR. Why? What’s wrong with quidditism? In his review of the debate between quidditists and property structuralists, John Hawthorne (2001) concludes

The best case for thinking that the causal [nomic]¹¹ profile of a property exhausts its nature proceeds... via the thought “We don’t need quidditative extras in order to make sense of the world.” Let us return to negative charge. All scientific knowledge about negative charge is knowledge about the causal [nomic] role it plays. Science seems to offer no conception of negative charge as something over and above “the thing that plays the charge role”. If there were a quiddity that were, so to speak, the role filler, it would

⁷ David Armstrong (1989: pp. 44, 59) and Jonathan Schaffer (2005: note 2).

⁸ Denis Robinson (1993: p. 19).

⁹ Schaffer (2005: note 2).

¹⁰ Armstrong (1989: p. 44). Schaffer (2005: note 2) says that quiddities are ‘in some ways’ analogous to haecceities.

¹¹ Please see fn 4.

not be something that science had any direct cognitive access to, except via the reference fixer “the quiddity that actually plays the charge role”. Why invoke what you don’t need? Unless certain logical considerations forced one to suppose that properties are individuated by something over and above their causal role, then why posit mysterious quiddities? (pp. 368 – 369)

I shall call this the ‘the parsimony argument’, as its implicit premise seems to be something like the following:

Metaphysical Parsimony. When given a choice between two metaphysical theories, one of which posits *only* ontological resources posited by empirical science, and the other of which posits the same resources of the first *plus* something that is not posited by empirical science, we have, all other things being equal, reason to reject the second theory in favor of the first.

Note just how weak this principle is. It is not the principle that we ought to reject any metaphysical theory with ontological posits that go beyond that of empirical science. This stronger principle may be doubted on the basis that sometimes the only *available* metaphysical theories all posit entities not posited by empirical science. It is not even the principle that, all things being equal, we ought to prefer the ontologically more conservative theory. This stronger principle may be doubted on the grounds that when two metaphysical theories posit *only* entities independently posited by empirical science, there may be no reason to prefer one to the other as a matter of ontological parsimony, although one theory has a strictly larger ontology than the other. The above principle simply encapsulates the thought that metaphysicians ought to have a small amount of respect for empirical science: unless you can get something in return, don’t posit what science doesn’t already need. Because it appears that science does not posit quiddities, it appears that this principle gives metaphysicians a reason to prefer structuralism to quidditism.

I think that we should endorse the parsimony argument, but with an all-important qualification. At one point Hawthorne refers to the quiddity as the ‘role filler’:

If there were a quiddity that were, so to speak, the role filler, it would not be something that science had any direct cognitive access to, except via the reference fixer “the quiddity that actually plays the charge role”. (p. 368)

But the role is presumably filled, if filled at all, by *negative charge*—that is, the property itself. However, the term ‘quiddity’, in common usage and as I am using it here, refers to the alleged intrinsic *aspect* (nature, haecceity, etc.) of the property. Interestingly, Hawthorne says that he is ‘not requiring of the quidditist that he be ontologically serious about quiddities, considered as something metaphysically distinct from the properties themselves’ (2001: fn 5). However, the parsimony argument seems to *hang* on whether we take quiddities to be something distinct from the properties themselves. Let me explain.

Suppose that we take the quiddity of a property as something distinct from the property itself (in the minimal sense that the two are not *one and the same entity*). In that case, the above argument is sound: scientific explanations do not require that properties have quiddities, where these are something distinct from the properties themselves. However, if we take the quiddity of a property to simply *be* the property itself, then it is not at all clear that scientific explanations do not require the existence of quiddities, for it is not at all clear that scientific explanations do not require the existence of the properties themselves.

Why did the pen fall when I released it? Because the pen has so much *mass* and the Earth has so much *mass*, and objects with mass are attracted to one another in accordance with the inverse-square law. This explanation certainly seems to require the existence of *mass*, and mass is a paradigm property. This explanation does not require the existence of a quiddity considered as something distinct from mass itself, but it does seem to require the existence of the property *mass*.

The argument of the past paragraph is a bit too quick. As noted in the introduction, it is plausible to think that although scientific explanations may appear to concern particular properties—e.g., mass—they are really disguised existential quantifications.¹² What the above scientific explanation is saying, according to this line of thought, is not that the pen falls because it has some specific property and this specific property obeys such and such law, but, rather, that the pen falls because it has *some property that obeys such and such law*. Let us call this view of scientific explanations ‘scientific structuralism’. Several points are in order here.

- (1) Scientific structuralism is not property structuralism. Scientific structuralism is a view about scientific explanations—it is a thesis about what scientific explanations *say*, or ought to say. Property structuralism, on the other hand, is a thesis about the

¹² P. F. Ramsey (1929).

metaphysics of property individuation. Henceforth, I will reserve the unqualified ‘structuralism’ to refer exclusively to property structuralism.

(2) Even if scientific structuralism is true, and thus scientific explanations involve postulates to the effect that there is *some* property that obeys such and such laws, then scientific explanations still postulate that there is some property that obeys such and such law (this is intended to be as trivial as it sounds). In other words, scientific explanations, even on the structuralist view of scientific explanations, require the existence of properties.¹³

(3) Property structuralism itself requires the existence of properties. The debate between property structuralism and the view that properties are individuated by their quiddities is a debate between distinct *realisms* about properties. Both views agree that there are properties—they disagree merely over how those properties are individuated. Hence, if the parsimony argument really were an argument against the existence of properties, it would apply as much to property structuralism as it does to quidditism.

Let us then grant that scientific explanations do not require the existence of *specific* properties. Moreover, let us also grant, as I did above, that scientific explanations do not require the existence of quiddities, provided that quiddities are understood to be something distinct from the properties themselves. But let us *insist*—as a structuralist herself ought to insist—that scientific explanations do require the existence of properties.

Do we have here a case *for* structuralism? Not exactly. What we have is a case for structuralism *over* the view that properties are individuated by their quiddities, where the latter are considered to be something *distinct from the properties themselves*. But what about letting the properties, so to speak, *self-individuate*? This amounts to accepting quidditism, but conceiving of quiddities as nothing other than the properties themselves. As previously noted, Hawthorne himself allows that the quidditist might conceive of quiddities in just this way (2001: note 5).

Why has there been this ambiguity in the term ‘quiddity’? I think there are two considerations that pull in opposite directions. On the one hand, the term ‘quiddity’ is used to refer to the intrinsic *aspect* or *nature* of the property—this makes it sound like quiddities are

¹³ As stated in the introduction, we are here setting aside anti-realism about properties.

distinct (although perhaps not wholly distinct) from the properties themselves. On the other hand, the term ‘quiddity’ derives from the scholastic ‘quidditas’, which was used to refer to the essential *natures of individuals*—this makes it sound like quiddities *just are* the (first-order) properties. In any case, such is the terminological situation in which we find ourselves: contemporary philosophers have been using the term ‘quiddity’ a bit ambiguously.

To avoid further confusion, let us make a terminological stipulation. Let us use the term ‘quiddity’ to refer to the intrinsic aspect/nature/haecceity of a property only when we are conceiving of this as something *distinct* (although perhaps not wholly distinct) from the property itself. And let us take the bold step of simply using the term ‘property’ when we mean to refer to the properties themselves. In this terminology, we can distinguish two forms of quidditism as follows:

Extravagant Quidditism. Properties are individuated by their quiddities.

Austere Quidditism.¹⁴ Properties are individuated by numerical identity.

By this point, the reader is no doubt becoming suspicious of the phrase ‘properties are individuated by’. Does it even make sense to say that ‘properties are individuated by numerical identity’, and if it does make sense, exactly what does it mean? I will postpone these questions just a bit longer. For the moment, grant me that austere quidditism is a coherent view.

If austere quidditism is a coherent view, then there is nothing in the parsimony argument to favor structuralism over austere quidditism. Why? Because austere quidditism is quidditism *without* quiddities. More precisely, structuralism and austere quidditism have the same ontology—both posit the existence of properties, and both postulate that these properties realize nomological roles. The views differ merely by how they use these ontologies to individuate properties: structuralism individuates properties by their nomological roles, while austere quidditism individuates properties by numerical identity.

For our purposes, the upshot is that the parsimony argument poses no obstacle to QR. The parsimony argument was meant to pose an obstacle to QR *via* providing us reason to accept structuralism—which is inconsistent with QR—over quidditism. However, the parsimony

¹⁴ A special thanks to Amy Kind for suggesting the name ‘austere quidditism’.

argument does not provide us with reason to accept structuralism over *austere* quidditism, which is consistent with QR.¹⁵ Hence, the parsimony argument gives us no reason to reject QR.

In section five, I will fulfill my promise to show that austere quidditism is a coherent view of property individuation. But before I do, I want to consider a possible rejoinder to my criticism of the parsimony argument. In effect, the rejoinder is that the parsimony argument is not really an argument for *structuralism* but an argument for a view known as *dispositionalism*. After considering the rejoinder, I will return in section five to the question of just what we mean by ‘property individuation’. Then, in section six, we will see that not only is austere quidditism *coherent*, but there is reason to prefer austere quidditism to structuralism. (There is no reason for the anxious reader not to skip straight to section five.)

4. An Argument for Dispositionalism?

I noted above that the structuralist agrees with the quidditist that *there are properties* and that *these properties realize nomological roles*—they merely disagree on whether the roles individuate the properties. There is a view closely related to structuralism, which, so to speak, denies any real distinction between the property and its nomological role. This view has come to be known as ‘dispositionalism’.¹⁶ According to dispositionalism, all properties are really dispositions: for example, to have so much mass *just is* to be disposed to behave in various ways, e.g., to resist acceleration under force in such and such way.

According to dispositionalism there is not, on the one hand, the property, and on the other, the property’s nomological role: there is simply a dispositional property. This may seem to give dispositionalism an advantage over austere quidditism, for we may try to rework the parsimony argument as follows. Above I said that the major premise of the argument is that scientific explanations do not require quiddities but merely properties which realize certain nomological roles. Perhaps a case could be made that scientific explanations do not even require

¹⁵ Does austere quidditism *imply* QR? Not without the help of a principle of recombination. Please see the appendix.

¹⁶ Dispositionalism seems to have had its heyday in and around the 1970s. D. H. Mellor (1974, 1982) endorsed dispositionalism, and R. Harre and E. M. Madden (1975) did as well, provided that we count ‘causal powers’ as dispositions. More recently, Brian Ellis and Caroline Lierse (1994) flirt with dispositionalism, but they do not go as far as to argue that scientific explanations deal *exclusively* in dispositions. Similarly, George Molnar (2003) holds that most but not all properties found in fundamental science are dispositions (or, more accurately, ‘powers’). Perhaps one of the few remaining dispositionalists (‘dispositional monists’, to use his phrase) is Alexander Bird (2007).

properties that realize nomological roles: they merely require *dispositions*. This is Brian Ellis and Caroline Lierse's view of scientific explanations, although they admit that there are 'a few exceptions'.¹⁷

Philosophers have offered a number of arguments against dispositionalism. Of the two most popular, I find one question-begging and the other fairly convincing. The question-begging argument is the so-called 'always packing, never travelling' argument.¹⁸ The claim here is that dispositionalism implies that when a disposition is 'manifested', the manifestation is simply the instantiation of another disposition, and hence, according to dispositionalism, 'nothing ever really happens'. I reply that of course something happens: a disposition comes to be instantiated! To assume that dispositions are not *real properties* and hence that the instantiation of a disposition is not a 'real event', is quite obviously to beg the question against the dispositionalist—according to her, those are the only real events there are! The argument against dispositionalism that I find fairly convincing is that for any proposed dispositional analysis of an apparently non-dispositional property, we always seem to be able to find an object that has the property but lacks the disposition.¹⁹ But this argument is not decisive against dispositionalism, for it may be that every property *is* a disposition, even if we are ultimately unable to figure out *which* disposition.

There is however an objection to dispositionalism that cuts quite a bit deeper. Let us begin by asking what a dispositionalist would say about the property mass. Which disposition is mass? One wants to say something like this: *having mass* is being disposed to resist acceleration under force. But mass also, as a matter of natural law, makes individuals attracted to one another in accordance with the inverse-square law. Thus, if mass is simply the disposition to resist acceleration under force, then it seems that *this disposition* realizes the nomological role of being the property that makes individuals attracted to one another in accordance with the inverse-square law. But the whole reason we introduced dispositionalism above was to find a way of avoiding the view that properties (whether dispositions or not) realize nomological roles.

The obvious response is to 'push' that nomic feature of mass into the disposition with which we identify mass. Rather than saying that mass is the disposition to resist acceleration under force and that this disposition realizes the role of being the property that makes individuals attract one another in accordance with the inverse-square law, we should instead say that mass is the disposition to resist acceleration under force *and* the disposition to be attracted to individuals with mass. Unfortunately, this 'pushing in' approach introduces a vicious circularity into the

¹⁷ Ellis and Lierse's (1994: p. 32)

¹⁸ Armstrong (1997: p. 80).

¹⁹ E. J. Lowe (2010: notes 19, 20).

dispositional analysis of mass.²⁰ When asked which disposition mass is, the dispositionalism has responded that it is ‘the disposition to... and attract objects with *mass*’.

It’s important to note that there is nothing about mass in particular that is causing the problem here. A circularity will arise whenever (A) a property has a nomic relationship to itself, as in the case of mass or (B) a property has a nomic relationship to a property which in turn (perhaps through another intermediary) has a nomic relationship to the original property. I do not see how dispositionalism can avoid these circularities. Note that structuralism can. A structuralist will say this: to have mass is to have the property *x* such that individuals with *x* resist acceleration under force and such that individuals with *x* attract other individuals with *x* in accordance with the inverse-square law. There is no vicious circularity here.²¹ I conclude that the chief competitor to (austere) quidditism is structuralism, not dispositionalism.²²

5. “Property Individuation”

I return now to the task of arguing that austere quidditism is a coherent view—in particular, to the task of arguing that it is at least coherent to claim that properties are individuated by bare numerical identity.

²⁰ Is this circularity really *vicious*? Unfortunately, no one has yet proposed non-controversial necessary and sufficient conditions for when a circularity is *vicious*. Note however that the circularity which I am pointing to is not of the type that was once thought to be vicious but is now widely regarded as legitimate—the kind of circularity involved in *impredicative definitions*. An impredicative definition is one that involves quantification over a domain of entities that includes the entity the definition picks out. But if we are to identify *mass* with a certain disposition, we need to *explicitly* define this disposition in terms of ‘mass’ and not just quantify over a domain of entities one of which is the entity that our definition picks out. That, it would seem, is a vicious circularity.

²¹ The structuralist account of mass is circular only in the sense that all impredicative definitions are circular. As mentioned in the previous footnote, such definitions are now widely regarded as legitimate. In any case, I grant this much on behalf of the structuralist.

²² It is important that the move to structuralism here is not the ‘appeal to structure’ that Lowe (2010) considers and rejects. (Lowe is explicitly discussing the view that all properties are *powers*, but I take the distinction between such a view and dispositionalism, if there is a distinction, to be tangential to the present discussion.) The appeal to structure that Lowe has in mind is an attempt to defend dispositionalism (proper) against by appeal to certain structural facts that exist between token dispositions. The move that I have in mind is the abandonment of dispositionalism for another view altogether—the view I am calling ‘structuralism’.

Quidditism was introduced as an alternative to structuralism. Hence, to get clear on the notion of property individuation at play in quidditism, we first need to get clear on the notion of property individuation at play in structuralism. The first question we should ask is whether the structuralist thesis is meant to concern individuation of properties *within possibilities* (e.g., individuation of properties within the actual world) or *across possibilities* (e.g., individuation of properties between the actual world and some merely possible world).

Suppose we take structuralism to be the view that properties are individuated within a possibility by their nomological roles.²³ As other authors have argued, such a view is simply implausible.²⁴ After all, it might turn out that there are two properties P and N with the following nomic profiles: for all individuals x and y, if x and y both have P or both have N, then x and y repel, and if x and y have P and N, respectively, then x and y attract. In that case, the nomological role of P is that of being the property ϕ such that there is a property ψ such that for all individuals x and y, if x and y both have ϕ or both have ψ , then x and y repel, and if x and y have ϕ and ψ respectively, then x and y attract. But this is exactly the same as the nomological role of N. Nevertheless, the situation, which I assume is perfectly possible and possibly actual, is one in which there are *two distinct* properties.

What this symmetry argument shows is that the same role can be multiply realized within a possibility. Another problem with taking structuralism as a theory of intra-possibility individuation is that, so understood, structuralism would be *consistent* with QR. I repeat QR here for convenience:

Quiddistic Realization (QR). For at least some nomological role R realized by some property P, R might have been realized without being realized by P.

QR is *not* the thesis that a given role might have been realized by more than one property—it is the thesis that a given role might have been realized by a property other than the one that actually realizes it. Thus, if structuralism is to be inconsistent with QR, then the structuralist thesis cannot simply be a thesis about the individuation of properties *within* a possibility: it must be a thesis about the individuation of properties *across* possibilities.

²³ Shoemaker (1998: p. 59) appears to endorse such a view when he claims that ‘properties sharing all of their causal features are identical’. (As stated in fn 4, everything I say in this paper about *nomic* structuralism is to be taken to apply *mutatis mutandis* to causal structuralism.)

²⁴ See Robinson (1993: pp. 23 – 4) and Hawthorne (2001: pp. 373 – 74).

It is thus tempting to take structuralism as a theory of property *identity* across possibilities.²⁵ On this understanding, structuralism is the view that when a property in one possibility is numerically identical to a property in another possibility, this is because those properties realize the same nomological role. But there are two major problems for understanding structuralism in such a way. First, by the transitivity of identity, structuralism so understood would ultimately face the same symmetry argument given above.²⁶ Second, structuralism as a theory of identity is obviously false: there is nothing *in virtue of which* an entity is identical with itself, even when we are talking about identity ‘across’ possibilities (Lewis, 1986: p. 192 - 193); hence, *a fortiori*, it is not in virtue of realizing a certain nomological role that a property is identical with itself.

We don’t want structuralism to fall victim to the symmetry argument, we don’t want structuralism to be trivially false, and we do want structuralism to be inconsistent with QR. How, then, to understand it? It will be fruitful to focus our attention for a moment on QR.

QR involves a *de re* modal claim: ‘R might have been realized without being realized by P’.²⁷ On the standard analysis, *de re* modal claims are quantifications over possibilities. For example, to say that a given entity *might have been* a certain way is to say that there is a possibility that represents that entity as being that way. But what does it take for one possibility to represent a given entity as being a certain way? Call an answer to *that* question a ‘theory of *de re* modal representation’, or simply a ‘theory of *de re* representation’.

Hawthorne (2001: p. 375) suggests that we take structuralism as a theory of *de re* modal representation. I agree. Let R^P be the nomological role actually realized by P. As a theory of *de re* representation, structuralism is the thesis that a possibility *w* represents a property P as being a

²⁵ This appears to be the view endorsed by both Swoyer (1982) who claims that ‘a property is what it is in virtue of its lawful relations to other properties’ (p. 214) and Kistler (2002) who claims that ‘the identity of a universal is entirely determined by its lawful relations to other properties’ (p. 57).

²⁶ Consider two distinct possibilities in each of which there are two distinct properties symmetrically related to one another exactly as P and N are from the earlier example. In that case, structuralism as a theory of inter-world identity implies that each of the properties in one of the worlds is identical with each of the properties in the other world. By the transitivity of identity, each property is then identical with its *world-mate*. This contradicts the supposition that each of these worlds contains *two distinct* properties.

²⁷ By a ‘*de re* modal claim’, I simply mean a claim about what *must have*, *might have*, or *would have* been true of a given entity.

certain way if and only if w is a possibility where a property that realizes R^P is that way.²⁸ Such a thesis is incompatible with QR. Under the standard analysis of *de re* modal claims, QR is simply the claim that for some property P , there is a possibility w that represents R^P as realized but does *not* represent R^P as realized by P . According to structuralism (now understood as a theory of *de re* representation), there is no such possibility: any possibility that represents R^P as realized thereby represents R^P as realized by P .

Unfortunately, structuralists have been less than clear on how exactly they understand their thesis. When they have been clear, they have suggested the views that we ruled out above on grounds of triviality and falling victim to the symmetry argument.²⁹ For the sake of charity, I propose we interpret these suggestions loosely. On behalf of the structuralist, I follow Hawthorne in suggesting that we understand her view as a theory of *de re* modal representation. In addition to avoiding the symmetry argument and not being trivially false, such a view is incompatible with QR.

We have now reached an understanding of structuralism. What about our quidditisms? If these are to be understood as genuine *alternatives* to structuralism, they too must be understood as offering theories of *de re* representation. Roughly, extravagant quidditism is the view that properties are individuated by their quiddities. Let Q^P be P 's actual quiddity. As a theory of *de re* representation, extravagant quidditism is the view that a possibility w represents a property P as being such and such way if and only if w is a possibility where a property that has Q^P is that way. Roughly, austere quidditism is the view that properties are individuated by numerical identity. As a theory of *de re* representation, austere quidditism is the view that a possibility w represents a property P as being such and such way if and only if w is a possibility where P itself is that way.

Both structuralism and extravagant quidditism are what Lewis would call 'counterpart theories' of *de re* representation: theories according to which *de re* representation is a matter of something other than numerical identity. According to structuralism, *de re* representation of properties is a matter of role-sharing; according to extravagant quidditism, *de re* representation is a matter of quiddity-sharing. (Note that neither of these is the counterpart theory that Lewis endorses. Lewis endorses a counterpart theory *for individuals*; both structuralism and extravagant

²⁸ Hawthorne notes that the structuralist can allow some *context sensitivity* in *de re* modal representation: she need not hold that a property must always share the *exact* nomological role of another in order to *de re* represent it. As far as I can see, there is no need to adjust the arguments of the present paper in light of this qualification.

²⁹ Please see footnotes 22 and 24.

quidditism are counterpart theories *for properties*.) Austere quidditism, on the other hand, is simply the *denial* of counterpart theory for properties: according to austere quidditism, *de re* representation is precisely a matter of numerical identity. As such, austere quidditism can be seen as a more radical alternative to structuralism than extravagant quidditism is to structuralism.

Indeed, extravagant quidditism gets into trouble with the parsimony argument precisely by not going *far enough*—that is, by effectively granting the structuralist assumption that *de re* representation is a matter of something other than numerical identity. The key assumption of the parsimony argument is that a metaphysician ought to try her best to appeal only to the ontological resources of empirical science. The structuralist, effectively assuming that *de re* representation of properties cannot simply be a matter of numerical identity, grabs onto the only character of properties that empirical science seems to offer—nomological roles—and charges the extravagant quidditist with appealing to something extraneous to empirical science—quiddities. However, there is simply nothing in this argument to support the structuralist assumption that *de re* representation cannot simply be a matter of numerical identity. The wise quidditist ought to reject this assumption; the wise quidditist ought to be an austere quidditist.

6. A Methodological Preference for Austere Quidditism

I have thus far defended austere quidditism against the parsimony argument, but I have not provided a positive argument in *favor* of austere quidditism. I want to conclude by doing exactly that.

Note that it is possible to combine a counterpart theory of *de re* representation with respect to one type of entity (e.g., individuals) with an identity theory of *de re* representation with respect to another type of entity (e.g., properties). Universal counterpart theory, however, is quite implausible. This is because all counterpart theories are ‘buck-passing’ theories of *de re* modal representation. For instance, Lewis’s counterpart theory for individuals holds that *de re* representation for individuals is a matter of qualitative similarity—that is, property-sharing.³⁰ But what is it for A and A* to share a property? Must there be some property P such that A has P and A* has P? Or is it enough that there be some property P such that A has P and A* has the *counterpart* of P?

³⁰ How many properties they must share, and which properties they must share, is for Lewis a matter of context. But the basic point remains: they are qualitatively similar in virtue of sharing (enough of the right sort of) properties.

Suppose the answer is that A* must have the *counterpart* of P in order to be the counterpart of A. This raises another question: what makes one property the counterpart of another? Suppose the answer is role-sharing. Then we can ask: do P and P* share roles in virtue of there being one role that P and P* both have? Or do they share roles in virtue of sharing *counterpart* roles? Presumably, the structuralist will want to say that role-sharing is a matter of genuine identity of roles. But why stop there? Why not say that role-sharing is a matter of role-counterpart-sharing? Of course, once such a counterpart theory is given, we will be faced with another question in turn. But the ascent of counterpart theory must end somewhere. Otherwise, there will be no facts even at the lower levels about *de re* modal representation.

There are two important lessons to be learned here. The first is fairly modest: anyone who is a counterpart theorist at some level must grant that identity theory is true at some other level (he need not say which). This means that there can be no *in principle* objection to an identity theory of *de re* representation—that is, no objection to the *mere* claim that possibilities *de re* represent in virtue of the numerical identity of the entities they contain. Hence, there can be no charging austere quidditism—the identity theory for properties—with incoherence. If there is a reason to reject austere quidditism, it will need to be some special reason concerning the implausibility of individuating *properties* by bare numerical identity. This is the modest lesson of this section: austere quidditism is at least a coherent view of property individuation.

The second lesson is less modest. Suppose that we are forced to make a (tentative) decision as to where we think the ascent of counterpart theory stops. A reasonable methodological principle, it seems to me, is something like this: we should stop the ascent of counterpart theory where we can find no *reason* to be counterpart theorists. If there were no reason to accept counterpart theory for individuals, then we ought to be identity theorists about *de re* representation for individuals. Of course, many think that there is some reason to accept counterpart theory for individuals.³¹ But what about properties?

As we have already seen, the parsimony argument is not an argument for counterpart theory over identity theory—it is an argument for one counterpart theory over another (structuralism over extravagant quidditism). And as far as I know, no one has yet offered a good

³¹ Importantly, the two most commonly endorsed arguments for counterpart theory *for individuals*—Lewis’s (1986) argument from accidental intrinsics and Gibbard’s (1975) argument from spatiotemporal coincidence—are no good as arguments for counterpart theory *for properties*. Without going into details, the reasons, respectively, are that properties do not have accidental intrinsics, and properties are perfectly capable of being non-identical and yet occupants of precisely the same spatiotemporal region.

reason to accept counterpart theory for properties.³² Our principle thus recommends identity theory for properties—that is, our principle recommends austere quidditism. This is the more ambitious lesson of this section: there is a methodological reason to prefer austere quidditism to structuralism.³³

Appendix: Lewis on Quidditism, Recombination, and QR

In ‘Ramseyan Humility’ (2008), Lewis gives three arguments to the effect that quidditism, together with a principle of recombination, implies QR. These three arguments might be called ‘the argument from permutation’, ‘the argument from aliens’, and ‘the argument from idlers’. Here I will focus exclusively on the argument from permutation, and I will address two issues: first, exactly what sort of principle of recombination is required, and second, exactly which form of quidditism does Lewis have in mind? My answers, respectively, are ‘it depends’ and ‘austere quidditism’.

First, we’ll need to introduce some of Lewis’s terminology. Let *T* be the complete and true theory about which nomological roles are realized at our world. *T* is equivalent to one (infinitely) long existentially-quantified sentence: there exist properties x_1, x_2, \dots, x_n such that x_1, x_2, \dots, x_n have such and such relationships to one another. Call the *n*-tuple of properties that *actually* satisfies *T* ‘the actual realization of *T*’. In rough terms, QR says that the world might have been just like it actually is with respect to *which roles* are realized, and yet different with

³² Robert Black (2000) offers an argument squarely directed at the view I am calling ‘austere quidditism’. Unfortunately, I do not have space to deal with this argument here. However, no philosopher seems to have taken the argument very seriously, not even Black himself (p. 92). Nonetheless, if the main argument of the present paper is correct—that austere quidditism is a coherent alternative to structuralism—those interested in the structuralism/quidditism debate ought to turn their attention to arguments such as Black’s.

³³ It should go without saying that I have not provided a positive reason to accept QR. My aim has merely been to defend QR against what many would take to be the best reason to reject it. However, I have taken a step towards providing a positive argument in favor of QR. The less modest conclusion of section six is that we have a reason to accept austere quidditism over structuralism. Although austere quidditism does not itself imply QR, it does imply QR when combined with a certain principle of recombination. In the appendix I explain how this works. It is, however, beyond the spatial limitations of this paper to provide you with a reason to accept the needed principle of recombination.

respect to *which properties* realized those roles. In Lewis's terminology, QR says that T might have been realized without being realized by the n-tuple that *actually* realizes T.

Here is Lewis's argument from permutation for QR:

Suppose we have the actual realization of T. Maybe some members of the n-tuple that realizes T are not fundamental properties, or maybe some belong to single-membered categories [e.g., perhaps there is only one property that is a *2-place quantity*]. Hold those ones fixed. Permute the rest within their categories to obtain a new n-tuple. It too would realize T. (2008: p. 208)

Why does Lewis think that such a permutation is a possible realization of T? He goes on to say that

Possibility is governed by a combinatorial principle [here Lewis cites Lewis (1986: §1.8) and Armstrong (1989)]. We can take apart the distinct elements of a possibility and rearrange them. We can remove some of them altogether. We can reduplicate some or all of them. We can replace an element of one possibility with an element of another. When we do, since there is no necessary connection between distinct existences, the result will itself be a possibility. How much this means depends on what we take the distinct elements to be. Here, let us take them to include not only spatiotemporal parts, but also abstract parts—specifically, the fundamental properties...

Combinatorialism tells us that possibility is preserved under permutations of items—at least if they are items from the same category. If it is possible that –A—B—C—, and if A, B, and C, are, say, all-or-nothing monadic properties, then it is also possible that –C—A—B—. The actual realization of T is a possible realization; we permute items within more-than-one-member categories; and what we get is also a possible realization of T. (pp. 208 - 209)

Lewis then asks whether this possibility—the existence of which is guaranteed by the recombination principle—is *different* from the actual realization of T. Here is his answer:

Quidditism is the premise that tells us that the permutation is indeed a different possibility [here Lewis cites Black (2000)]. Two different possibilities can differ just by a permutation of fundamental properties. They do not differ in whether T is realized...

Quidditism is to properties as haecceitism is to individuals. If we start with a possibility and permute individuals, combinatorialism says that we get a possibility; haecceitism says that it is a different possibility. (p. 209)

Again, our two questions are (1) what principle of recombination does the argument require? And (2) what form of quidditism does Lewis have in mind? There is reason to think that the two questions cannot be answered independently: the required form of quidditism will depend on what it is we are recombining, which will in turn affect which principle of recombination is in play. So let us then begin by asking: what precisely is being recombined when we move between possibilities in Lewis's argument?

Lewis says that the principle of recombination implies that 'if it is possible that $-A-B-C-$, and if A, B, and C, are, say, all-or-nothing monadic properties, then it is also possible that $-C-A-B-$.' Clearly, it is *properties* that are being recombined here. That part is easy. But how, exactly, are they being recombined? Answer: by permutation. Yes, but permutation *with respect to what*—in other words, what do the dashes in Lewis's text represent? I think there are two main possibilities here: first, Lewis may intend to be permuting A, B, and C with respect to their *spatiotemporal distributions*; second, Lewis may intend to be permuting A, B, and C with respect to how these properties *realize T*—that is, with respect to their *nomological roles*.

I think that Lewis is being intentionally ambiguous here.³⁴ What Lewis ultimately wants to show, of course, is that possibility is preserved under permutation of properties with respect to their nomological roles (this, combined with quidditism, is meant to entail QR). However, Lewis does not himself have a principle of recombination that entails that possibility is preserved under permutation of properties with respect to their nomological roles. What he does have [what is endorsed in Lewis (1986: §1.8)] is a principle that entails that possibility is preserved under permutation of properties with respect to their spatiotemporal distributions.³⁵ Moreover, Lewis accepts a Humean theory of laws according to which the laws (and thus which properties realize

³⁴ Hence the foreign dash notation.

³⁵ Unfortunately, Lewis never gives an exact formulation of the recombination principle. He begins with the principle that 'anything can coexist with anything else', but ultimately rejects this principle because he sees it as incompatible with his view that one individual never exists in more than one possible world. Nevertheless, Lewis's subsequent discussion (especially on p. 163) makes it clear that the principle he implicitly endorses implies that possibility is preserved under permutation of properties with respect to their spatiotemporal distributions. See Efird and Stoneham (2008) for a thorough discussion of Lewis's principle of recombination.

which nomological roles) are determined by the spatiotemporal distribution of properties. Hence, his principle of recombination—which itself concerns spatiotemporal distributions—together with his Humean theory of laws, entails that possibility is preserved under permutation of properties with respect to their nomological roles.

But Lewis of course realizes that not everyone accepts a Humean theory of laws. Hence, he implicitly acknowledges that others may need a different principle of recombination—one that, together with their view of laws, entails that possibility is preserved under permutation of properties with respect to their nomological roles. All of this is confirmed in (2008: note 14), where Lewis writes:

If laws are suitable regularities [in the distribution of properties through spacetime], the exchange of locations of P_1 and P_2 will guarantee the exchange of nomological roles. If laws of nature are certain special lawmaking relations of fundamental properties, P_1 and P_2 will have to be exchanged also as arguments of these lawmaking relations to guarantee the exchange of nomological roles.

One of the questions with which we began this appendix was: what sort of recombination principle is required by Lewis's argument? The answer is this: any recombination principle that, together with one's theory of laws, entails that possibility is preserved under permutation of properties with respect to their nomological roles. More generally, we might simply say that what the argument requires is the principle that possibility is preserved under permutation of properties with respect to their nomological roles—let us call this simply 'the permutation principle'. There are many ways to get to the permutation principle, but we need not adjudicate between them. So much for our first question. We turn now to our second question: what form of quidditism does Lewis have in mind?

It may seem that the permutation principle alone entails QR, and so the appeal to quidditism is superfluous. After all, the permutation principle implies the following:

- (1) There is a possibility where positive charge (and not mass) realizes the nomological role that is actually realized by mass (and not positive charge).

Doesn't (1) imply QR?

Quiddistic Realization. For at least some nomological role R realized by some property P, R might have been realized without being realized by P.

Why does Lewis appeal to quidditism?

To see why Lewis needs quidditism to get from the permutation principle to QR, we must keep in mind that, for Lewis, it is not always true that a thesis about *what possibilities there are* is equivalent to the corresponding thesis about *what might have been*. For example, because Lewis is a counterpart theorist about individuals, he allows that *it might have been that Humphrey won the election*, but he denies that *there is a possibility where Humphrey wins the election*. The latter is equivalent to the former if and only if we assume the identity theory of inter-possibility individuation for individuals, which Lewis denies.

Similarly, if structuralism is true, then (1) does not imply QR. According to structuralism, the possibility mentioned in (1) is, for the purpose of evaluating claims about *what might have been*, no different from actuality: (1) merely implies that the role actually realized by mass might have been realized by mass. On the other hand, given the identity theory of inter-possibility individuation for properties—that is, given austere quidditism—(1) implies that the role actually realized by mass might have instead been realized by positive charge. Hence, given austere quidditism, (1) implies QR.

Moreover, it is clear that *extravagant* quidditism is of no help in getting from the permutation principle to QR. The permutation principle says nothing at all about quiddities—in particular, it does not say that possibility is preserved under permutation of *quiddities* with respect to the nomological roles of the properties that have those quiddities. Indeed, nowhere in Lewis's argument will you find mention of quiddities, intrinsic aspects, essential natures, or anything of the kind. I take all of this as strong evidence that Lewis preferred his quidditism *without* quiddities.

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