

Impure Concepts and Non-Qualitative Properties

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Abstract: Some properties such as *having a beard* and *being a philosopher* are intuitively qualitative, while other properties such as *being identical to Plato* and *being a student of Socrates* are intuitively non-qualitative. It is often assumed that, necessarily, a property is *qualitative* if and only if it can be designated descriptively without the aid of directly referential devices (such as demonstratives, indexicals, or proper names). I argue that this linguistic thesis fails in both directions: there might be non-qualitative properties that can be designated descriptively, and there appear to be qualitative properties that can only be designated directly. I conclude that while the linguistic thesis is ultimately untenable as stated, it can be plausibly recast as a thesis about our concepts rather than the properties they designate.

1 Introduction

The distinction between qualitative and non-qualitative properties plays an important role in cashing out the intuitive notions of duplication and indiscernibility. Duplicates instantiate the same intrinsic qualitative properties, while indiscernibles instantiate the same intrinsic as well as the same extrinsic qualitative properties. Consider, for example, two drops of water—Agenor and Belos—with exactly the same size, shape, weight, and chemical composition. They are duplicates. But one has the property *being identical to*

Agenor, the other does not. Next consider an actual and a merely possible silver dollar, composed of exactly the same kinds of metals, with exactly the same size, shape, and weight. They are perfect duplicates. But they nevertheless appear to differ in an important respect: they belong to fundamentally different ontological kinds. One has the property *being actual*, the other does not.¹ The aforementioned properties do not appear to be

¹ These two examples are drawn from Kant ([1781/ 1787] 1998: A 263-4/ B 319, A 599/ B 627). The second example might strike some as somewhat contentious for one of two reasons. First, it turns Kant's example on its head. I assume *possibilism*, the view that some things are non-actual, and take the example of an actual and a merely possible dollar to highlight the peculiarly non-qualitative status of actuality. But Kant appears to use the example to argue against possibilism itself. See Stang (2015) for a recent defense of this interpretation. I can, however, see no real reason to object here provided that we are clear about what we are and what we are not attributing to Kant.

A second, more pressing, reason is that it assumes that there are concrete merely possible entities. But since few will accept this assumption, the example might seem unfit to motivate the project at hand. This problem can, I think, be (partially) remedied. For while the assumption that there are merely possible entities is highly contentious, the assumption that there are past—and even future—entities is much less so. Suppose we accept an ontology that contains past, present, and future entities. We might still wish to accommodate the basic A-theoretic intuition that time 'flows' or 'passes'. One way to do so is to think of the present as a spotlight moving through time, shining now on these, now on those entities. But note that, on this view, the entities that currently bask in the light of the present seem to enjoy a special ontological status. Yet they need not thereby differ qualitatively from any past—or future—entities. A past and a present entity could, it seems, be perfect duplicates. But while one has the property *being present*, the others does not. Thus, on this version of the moving spotlight theory of time, the property of being present appears to be something like an intrinsic non-qualitative property. (The reason I take this to be only a partial remedy is that I am not sure whether the 'shiftiness' of the present—the fact that one and the same thing can be present at one time and past at

concerned with how their objects are related to anything else. They would appear to divide not only duplicates, but even indiscernible duplicates. They thus appear to be intrinsic non-qualitative properties.

Many philosophers believe that, in addition to this connection to duplication and indiscernibility, there is also an interesting connection between the qualitative/non-qualitative distinction and various linguistic facts.² It is commonly held that if we had a sufficiently rich language (containing general—but not necessarily primitive—predicates for all the basic qualitative properties and relations, and allowing for complex infinitary constructions), we could describe the complete qualitative profile of every possible object. But it is also held that unless this language were to contain demonstratives (such as *'this cat'* and *'that dog'*), indexicals (such as *'I'*, *'here'*, *'now'*, and *'actual'*), or proper names (such as *'Socrates'* and *'Plato'*), it would lack the resources to specify any of an object's non-qualitative properties. The basic idea is captured by the following thesis.

another—is ultimately intelligible. Since I see no such problem in the case of actuality, I take it to better serve as a motivating example.)

² See, for example, Carnap (1947b: 138), Adams (1979: 7), Lewis (1986: 221), Gallois (1998: 249), and Divers (2002: 349 n 12). Each of these authors holds that qualitative properties can be expressed without the use of proper names (or, as Carnap would have it, without the use of individual constants). Adams adds that they can be expressed without the use of proper adjectives, proper verbs, indexical expressions, or referential uses of definite descriptions, while Divers also mentions natural kind terms in this context. Gallois goes so far as to claim that the qualitative properties are expressible by predicates that don't themselves contain any rigid designators other than the ones used to designate those properties.

The Linguistic Thesis: necessarily, a property is *qualitative* if and only if it can be designated descriptively without the aid of directly referential devices (such as demonstratives, indexicals, or proper names).

This thesis appears to depend upon two assumptions concerning the descriptive, qualitative predicates of any sufficiently rich language. The first assumption is that these predicates are closed under even infinitely many applications of conjunction, disjunction, negation, and quantification: every predicate that is defined up out of descriptive predicates is itself a descriptive predicate.³ The second assumption is that a sufficiently rich language will contain descriptive predicates for all the fundamental qualitative properties and relations (although these predicates need not themselves be primitive). I shall call these the *closure* and *fundamentality* assumptions.

A few brief comments are in order before we proceed. We can often designate a property in a variety of different ways. Indeed some qualitative properties are most readily designated with the aid of various directly referential devices. Consider, for example, the determinate shape had by the Eiffel Tower. A perfect duplicate of the Eiffel Tower would, it seems, have this very shape. We might designate the property of having this shape in a direct fashion: namely, as *having the shape of the Eiffel Tower*. But we could also give a

³ Carnap (1947b: 138) would not have accepted this assumption since he held that complex predicates such as 'red or not red' do not designate a qualitative property, but rather a trivial non-qualitative (or, as he would say, positional) one. He would have thus rejected the linguistic thesis because he held that the necessary property can be designated descriptively, but is not purely qualitative.

purely qualitative specification of this property as *having such and such a shape*. The presence of a direct route to a property need not impugn its qualitative status.⁴

The absence of a purely descriptive route is, however, an entirely different matter. We can often come close to specifying some identity properties descriptively. So, for example, consider Benjamin Franklin. He invented bifocals, and since no one else shares this distinction at our world, we can pick him out indexically as the actual inventor of bifocals. We can then specify his identity property as *being identical to the actual inventor of bifocals*. But, by invoking an indexical, we will have failed to designate the property *being identical to Benjamin Franklin* in a purely descriptive fashion. If, as seems plausible, this identity property is non-qualitative, then the linguistic thesis predicts that our search for a descriptive route will turn up empty.

I should, next, distinguish between stronger and weaker versions of the linguistic thesis. On a strong version of this thesis, a qualitative property can be designated in an infinitary expansion of a language had by creatures like us, in epistemic situations similar to our own, without the aid of directly referential devices; while on a weaker version, a

⁴ This is not entirely uncontroversial. So, for example, Hoffmann-Kolss (forthcoming: sect. 2) claims that *having the shape which the Eiffel Tower actually has* and *having such and such shape* are different properties. For, she thinks, while the former property is haecceitistic, the latter is not. She also claims that given an entity, call it Isengard, at a world w_1 that has the same shape that the Eiffel Tower actually has, *having the shape which the Eiffel Tower actually has* and *having the shape which Isengard has at w_1* are intuitively different properties, and hence that neither should be identified with *having such and such a shape* (forthcoming: n 1). I cannot see, however, why we should think that *having the shape which the Eiffel Tower actually has* and *having the shape which Isengard has at w_1* are different properties. Indeed, this strikes me as a clear case where there are simply different ways to pick out the same property.

qualitative property can, at least in principle, be designated without such devices, but perhaps only in an infinitary expansion of a language had by agents in much better epistemic situations than our own. These different versions of the linguistic thesis might, in turn, yield different results about the qualitative status of certain properties. I will focus my attention on the strong version of the linguistic thesis (although my criticisms should carry over to weaker versions as well).⁵

I should, finally, be clear that the linguistic thesis is not here intended as an analysis, nor should it be put forward as one.⁶ One problem is that the linguistic thesis, if true, is presumably true due to the special nature of the qualitative properties. This should become clear by considering the above-mentioned connection to duplication. It seems plausible that two objects are duplicates because they share all their intrinsic qualitative properties. If, however, the linguistic thesis were taken as an analysis, the reason these objects share all their intrinsic qualitative properties would be due to various linguistic facts. It thus appears that they would be duplicates because we can designate their intrinsic profiles descriptively. But, intuitively, their being duplicates does not have anything to do with facts about our language. Duplication seems to be a mind- and language-independent relation. If we think the linguistic thesis is true, we should say that a property can be designated

⁵ Thanks to an anonymous referee for encouraging me to make this distinction.

⁶ I assume here that an analysis does not simply tell us that the *explanandum* holds if and only if the *explanans* holds, but also that the *explanandum* holds because the *explanans* holds and not the other way around. So, were we to take the linguistic thesis as an analysis, it would tell us that a property is qualitative because it can be designated without the use of directly referential devices and not the other way around; thus, it would tell us not only what the qualitative properties are like, but *what it is* to be a qualitative property.

descriptively because it is qualitative, not the other way around. If proposed as an analysis, the linguistic thesis would appear to invert the proper direction of explanation.⁷

Another problem is that the linguistic thesis, if it is to be at all adequate, requires the assumption that the primitive descriptive predicates of our language always designate purely qualitative properties. This should become clear once we consider cases of inadmissible predicates. Take, for example, the predicates 'pegasizes' and 'socratizes'. Since I am not here assuming a view on which all individuals have qualitative essences (that is, purely qualitative properties that are their individual essences), these predicates will intuitively designate non-qualitative properties. But if we took them on board as primitive and unanalyzable predicates, they would not contain any directly referential devices. They are, however, inadmissible as descriptive predicates because, as we just noted, they designate non-qualitative properties.⁸ If the linguistic thesis were put forward as an analysis, a property would be qualitative because it can be designated by an admissible predicate. But, as we have just seen, a predicate is only admissible because it designates a

⁷ See Rosenkrantz (1979: 516, 1993: 69) and Cowling (2015: 287) for similar criticisms. Rosenkrantz objects to explaining a non-linguistic distinction in linguistic terms, while Cowling objects to explaining a mind-independent distinction in mind-dependent terms. I have tried to amplify these criticisms by focusing upon the connection to duplication.

⁸ We might instead insist that proper verbs such as 'pegasizes' and 'socratizes' (along with proper adjectives such as 'solar' or 'lunar') are themselves directly referential devices. But, again, the only reason for classifying them as such appears to be that they designate non-qualitative properties.

qualitative property. If proposed as an analysis, the linguistic thesis would appear to be circular.⁹

I will argue that the linguistic thesis fails in both directions. There might turn out to be, on the one hand, non-qualitative properties that can be designated descriptively. So, for example, depending upon the lay of logical space, we might be able to designate certain identity properties—or, more problematically, the property of actuality—with infinite conjunctions, disjunctions, and negations of purely descriptive predicates and without the use of directly referential devices. This indicates a potential failure of the closure assumption. In such cases, the right-hand side of the biconditional would be true, while the left-hand side would be false. There appear to be, on the other hand, qualitative properties that can only be designated directly. So, for example, we seem unable to designate certain fundamental physical properties without the use of directly referential devices. This indicates a failure of the fundamentality assumption. In these cases, the left-hand side of the biconditional will be true, and the right-hand side will be false.

In what follows, I will be working within a broadly modal realist framework supplemented with absolute actuality (see Bricker 2001, 2006, 2008).¹⁰ I assume that our

⁹ See Adams (1979: 7) and Stalnaker (2012: 61-2) for this criticism. We might seek to avoid it by distinguishing between the because of *analysis* and the because of *explanation*. The circularity is supposed to arise when the claim that a property is qualitative because it can be designated by an admissible predicate is supplemented by the claim that a predicate is admissible because it designates a qualitative property. There would only be a genuine circularity involved here if the ‘because’ in both cases were the because of analysis. But an explanation need not be an analysis. Thanks to André Gallois for suggesting this line of response. It is, however, not entirely clear to me how we could adequately explain the difference between an admissible and an inadmissible predicate without providing an analysis.

world—the whole of our physical universe, the cosmos—is but one of a plurality of possible worlds. These worlds are very much like our own. They are concrete, fully determinate individuals. Each world is an internally unified whole, and is absolutely isolated from every other world. I also assume that possible individuals are world-bound: that is, that they are wholly part of at most one world.¹¹ The property of being identical to a particular individual will thus correspond to the unit class containing that individual. But I won't assume that all worlds are ontologically on a par. Our world, at least, appears to be special. It is actual, while others are merely possible. This marks a genuine, objective difference between these worlds. They belong to fundamentally different ontological kinds. Nor will I assume that our world alone is actual. I hold instead that it is possible for many worlds to be co-actual.¹² The mereological sum of these co-actual worlds would not, however, itself constitute a further world, nor would there be a world that duplicates this

¹⁰ Some will, no doubt, find this framework too much to be believed and worthy only of an incredulous stare. I would advise such readers to treat it as a useful heuristic, enabling us to identify a property's intension with its extension across all possible worlds. My arguments, except where they concern co-actual worlds, could then easily be recast with only slight modification. The only real points of substance that would be lost concern the basis for my antipathy toward biting the bullet concerning the qualitative status of the property of actuality in section 2, and my objection to global structuralism in section 3.

¹¹ I do not say, as Lewis (1986: 214) does, that possible individuals are wholly part of *exactly* one world. Trans-world individuals are composed of parts of different worlds; they are not wholly part of even one world. But I would not thereby call them impossible. For I accept a non-standard possible worlds analysis, according to which something is possible iff it is true at some world or worlds (see Bricker 2001: 40-5, 2006: 53, 2008: 117).

¹² The possibility of multiple actual worlds is left open, for example, by the pre-critical Kant. See Kant ([1770] 1992: Ak 2:408).

sum. For worlds are internally unified and anything made up of absolutely isolated parts is not. I am thus forced to adopt Bricker's non-standard possible worlds analysis, according to which something is possible iff it is true at some world or worlds.¹³

A possible object's status as actual is not a mere matter of its being a part of our world—there is a genuine objective difference between the actual and the merely possible—and yet, given the peculiarly ontological nature of this difference, any attempt to capture it requires making reference to ourselves, our world, etc. For admissible descriptive predicates are plausibly assumed to designate properties that are observable or detectable in some way or another.¹⁴ But the property of actuality does not appear to be

¹³ In order to capture the contingency of actuality, we must distinguish between what is true *at* a world—what a world represents to be the case—and what is true *of* a world—what that world is really like. Every world (and every plurality of worlds) represents itself as being actual whether or not it really is actual. It is thus true at every world that it is actual. But since the truth conditions of modal statements are cashed out in terms of what is true at a world (and not in terms of what is true of that world), it will turn out that other worlds could have been actual. The distinction between what is true of and what is true at a world is not *ad hoc*. The modal realist already needs it to provide adequate truth conditions for *de re* modality. For discussion, see Bricker (2008: 50-3).

¹⁴ Carnap (1947a: 84, 1947b: 138, 1950: 74), for example, appears to assume that admissible predicates must designate properties that are somehow observable or otherwise detectable (for he believes that all observable differences should be expressible in terms of the admissible predicates). Leibniz ([1717] 1956: 38) also appears to assume, at least implicitly, that the qualitative properties must be observable or detectable when he claims in his fourth letter to Clarke that:

To say that God can cause the whole universe to move forward in a right line, or in any other line, without making otherwise any alteration in it; is another chimerical supposition. For, two states

observable or detectable in any way. We can, for example, observe a coin's size, shape, and weight, we can detect its chemical composition, but we can neither observe nor detect its actuality. Indeed nothing could, even in principle, affect us in such a way that we would be able to tell that it is actual rather than merely possible.¹⁵ For the property of actuality is simply too thin, too empty, and too diaphanous to be detected at all. So if we have a conception of our status as absolutely actual, as I believe we do, we could not have acquired

indiscernible from each other, are the same state; and consequently, 'tis a change without any change.

This passage is often interpreted as putting forward something like the following argument: if spacetime exists, then a world at rest and a boosted world (where everything moves at an absolute velocity of 5 kilometers per hour to the west) would be distinct; but since these worlds are exactly alike observationally, they are qualitatively indiscernible, and hence identical; therefore, spacetime does not exist. This argument has come to be known as the 'boost' (or 'kinematic shift') argument against substantivalism. See Maudlin (1993: sect. 3) and Dasgupta (2015) for helpful discussion. Earman (1989: 118-20) complains, in effect, that Leibniz's combination of the claim that the qualitative properties are observable with the principle of the identity of qualitative indiscernibles leads to an objectionable form of positivism where '[a] difference, to be a real difference, must be a verifiable difference'. But note that it is the addition of the principle of the identity of indiscernibles that leads to this result, not the claim that the qualitative properties are observable. I deny this principle, and so avoid the charge of positivism.

¹⁵ We should distinguish between contrastive and non-contrastive conceptions of detectability. A *non-contrastive* conception merely requires the ability to detect the presence of a property. But a *contrastive* conception requires the ability to detect the presence rather than the absence of a property. It is the latter conception that I have in mind here. Note that since there seems to be no way to detect the presence rather than the absence of non-qualitative properties like *being identical to Pegasus* or *being identical to Socrates*, the assumption that admissible predicates must designate properties that are somehow observable or otherwise detectable nicely explains why predicates like 'pegasizes' and 'socratizes' are inadmissible.

it by means of observation and so, it seems, cannot designate the corresponding property of actuality descriptively.¹⁶ We can only hope to successfully designate this property by means of directly referential devices: the thought that a thing is actual (in this robust ontological sense) is the thought that it is of the same ontological kind as me and everything else at my world.

2 The possibility of non-qualitative properties that can be designated descriptively

If we assume both that there are no indiscernible worlds and that necessarily coextensive (or cointensive) properties are identical, then it will turn out that some intuitively non-qualitative properties can be specified without the use of directly referential devices. I'll focus my attention on two examples. Suppose, first, that the complete qualitative profile of some possible person, call him Arturo, is unique. Arturo is part of exactly one world, he is discernible from all of his worldmates, and no other world is a duplicate of his own. The property *being identical to Arturo*, which corresponds to Arturo's unit class, will thus be necessarily coextensive with—and hence identical to—the property *having such and such a qualitative profile*.¹⁷ Suppose, next, that the complete qualitative profile of the actual world

¹⁶ See Williams (1962: 751) for an argument along these lines. It is the unobservability of absolute actuality—or 'existence' as Williams puts it—that ultimately leads to the skeptical problem of how I can know that I am 'a member of the existing world and not a mere possible monad on the shelf of essence' (1962: 752). See Lewis (1970: 19, 1986: 93-4) and Bricker (2006) for further discussion of this problem.

¹⁷ See Eddon (2011: 320-1) and Cowling (2015: 297) for similar examples. Eddon's example focuses on arbitrary individuals at non-symmetrical worlds (where a world is *non-symmetrical* iff the only one-one function that both maps the domain of that world onto itself and preserves all its qualitative properties and relations is the identity map). Cowling's example focuses on individuals that are themselves worlds. If the

is unique. The actual world is discernible from every merely possible world, and so any indiscernible duplicate of an actual object must itself be actual. The property *being actual* will thus be cointensive with—and hence identical to—the property *having such and such, or so and so, or some other qualitative profile* (where this is shorthand for the disjunction of the complete qualitative profile of every actual object).

What should we say about these cases? There are three straightforward responses available: (1) we could claim that every world has an indiscernible duplicate and thus reject the first assumption; (2) we could adopt a hyperintensional conception of properties and thus reject the second assumption; or (3) we could simply deny that the properties in question are non-qualitative after all.

Let's start with the first response. Should we believe in indiscernible worlds? David Lewis (1973, 1986) is officially agnostic. There are, on the one hand, pragmatic reasons to favor the hypothesis that there are no indiscernible worlds. It is more quantitatively parsimonious—that is, it posits fewer entities—than its competitors. But, on the other hand, these worlds are supposed to be independent of us. And, in the face of this independence, we should admit to a certain amount of humility. We should confess that there might be much about these entities that we do not—and perhaps cannot—know (see Lewis 1973: 87-8). And so, it seems, there are no theoretical benefits to be gained by accepting or rejecting the hypothesis that there are indiscernible worlds (see Lewis 1986: 157, 224).

worlds in their examples fail to have indiscernible duplicates, then the individuals in question will fail to have indiscernible duplicates as well.

Phillip Bricker (2001: 49) is more enthusiastic. We need indiscernible worlds to account for the possibility of duplicate island universes. We arrive at this possibility in two steps. First, we need to show that island universes are possible. It seems like we can robustly imagine them; that is, we can imagine reality—or actuality—dividing up into two or more parts that are casually and spatiotemporally isolated from each other. To accommodate this, we need to amend the standard analysis of possibility. Rather than saying that something is possible iff it is true at a world, we should instead say that it is possible iff it is true at some (class, aggregate, or) plurality of worlds (see Bricker 2001:40-5, 2006: 53, 2008: 117). But we also need a way to distinguish our simply being able to think about a plurality of worlds and our being able to think about those worlds as island universes. We do this by allowing more than one world to be actual. If multiple worlds were actual, then reality—or actuality—would appear to divide into absolutely isolated parts, it would be made up of island universes. The possibility of island universes is best represented by pluralities of co-actual worlds. Next, we need to show that *duplicate* island universes are possible. It seems there could be island universes that are all very similar to each other. But if they could all be very similar, then it seems that they could all be exactly alike as well. Thus, it seems that there could be any number of duplicate island universes (see Bricker 2001: 49). Belief in indiscernible worlds allows us to capture possibilities that we wouldn't be able to capture otherwise. There are theoretical benefits to be had after all.

Suppose we're convinced that every world is infinitely reduplicated. This guarantees that Arturo is not unique. He will have hoards of indiscernible duplicates littered throughout logical space. Any description of Arturo will pick out these doppelgängers as well. We can only specify the property *being identical to Arturo* by making use of directly

referential devices. But that only solves half the problem. For suppose, first, that there are infinitely many indiscernible duplicates of our world; and, second, that all and only these worlds are actual. The property *being actual* will then be cointensive with the infinitely disjunctive property *being identical to this, that, or some other possible object* (where we here directly designate every one of the objects at the plurality of these actual worlds), which will in turn be cointensive with the infinitely disjunctive and intuitively qualitative property *having such and such, or so and so, or some other qualitative profile* (where we here descriptively designate every actual object by disjoining descriptions of their qualitative profiles).¹⁸ So, even if we allow that every world has infinitely many indiscernible duplicates, we might still be able to describe the property *being actual* without making use of directly referential devices.¹⁹ The first response seems to leave open

¹⁸ Note that the mereological sum of any of these actual worlds will itself be actual as well. So we will need to be able to directly designate these sums in order to include them in the intension of the property *being identical to this, that, or some other possible object*. Note also that these sums will have qualitative profiles that are distinct from the qualitative profiles of the worlds from which they are fused. So we will also need to be able to descriptively designate these sums in order to include them in the intension of the property *having such and such, or so and so, or some other qualitative profile*. We might do this by first describing the qualitative profile of our world, and by then describing, for instance, pairs of sums of distinct duplicates of our world as those things that are composed of exactly two distinct worlds with such and such a qualitative profile.

¹⁹ We might seek to close off this possibility in one of two ways. We might, first, deny that every indiscernible duplicate of our world could be actualized. For if there are infinitely many indiscernible duplicates of our world, then the possibility realized by all of these worlds being actualized would be no different in kind from the possibility realized by all but one of these worlds being actualized. So there seems to be a way to can get all the intuitive possibilities we want without being saddled with the possible cointensivity of *being actual*

the possibility that there be at least one non-qualitative property which can be designated without the use of directly referential devices.

Let's turn to the second response. Should we break with philosophical orthodoxy and adopt a hyperintensional conception of properties? Let's say that hyperintensional distinctions are distinctions that cut finer than necessary equivalence. Take, for example, the distinction between the property *being a trilateral figure* and the property *being a triangular figure*. These properties have the same intension; they apply to the same things across all possible worlds. But they seem to be different somehow. One is concerned with the number of a figure's sides. The other is concerned with the number of a figure's angles. Or take the property *being identical to Arturo* and the property *having such and such a qualitative profile*. These properties, given our assumptions, have the same intension; they

and *having such and such, or so and so, or some other qualitative profile*. The problem with this line of response is that, in order to maintain it, we would need to say that the ontological status of some worlds might depend upon the ontological status of some other worlds, and this claim strikes me as implausible.

We might, next, adopt a creation rather than a transformation version of modal realism with absolute actuality. The difference between these versions lies with the entities to which the property of actuality applies: according to the *transformation* version, the property of actuality applies directly to the realm of *possibilia*, but, according to the *creation* version, it applies to a separate realm of entities. See Bricker (2001: 30, 2006: 48). I have been assuming the transformation version. If, however, we assume the creation version instead, then our world will be guaranteed to have a merely possible duplicate no matter how many times over it is duplicated in actuality. The property *being actual* will thus divide the property *having such and such, or some other qualitative profile*, that is, only some of the objects that have the latter property will have the former property; they will not be cointensive. This appears to be a point in favor of the creation version, but I still think we should on balance prefer the transformation version. See Bricker (2006: 48-9) for considerations in its favor.

apply to only one possible object: namely, Arturo. But he doesn't seem to have them in the same way. He has the property *having such and such a qualitative profile* partly in virtue of his surroundings, while he has the property *being identical to Arturo* solely in virtue of himself alone. One is extrinsic. The other is intrinsic. We might take these kinds of considerations to motivate a hyperintensional conception of properties (see Eddon 2011).

I grant that there are differences here. But I think they're differences in our concepts, not in the properties they designate. I thus take hyperintensional distinctions to be conceptual, not metaphysical. How should we cash this out? Let's distinguish between concepts and properties.²⁰ A *concept* is what we grasp in virtue of our understanding of a predicate in our language; it is associated with that predicate's meaning. A *property* is what gets designated by the use of a predicate in our language. The basic idea is that there are different ways to represent the same parts or aspects of reality. We must, on this view, distinguish between concepts and properties so as not to confuse representation with reality. Take the predicates 'is trilateral' and 'is triangular'. We can think about the class of triangles by fixing upon their having three sides. But we can also think about them by fixing upon their having three angles. Either way we fix upon the class of triangles, we're thinking about the same property. We're just thinking about it using different concepts: namely, the concept *being a trilateral figure* and the concept *being a triangular figure*.²¹

I think we should say the same thing about Arturo's unit class. I can think about it in different ways. I can think about it in a way that is primarily descriptive: as containing a

²⁰ I here follow Bricker (2006: 60).

²¹ See Bealer (1982) for a worked-out version of a view along these lines. Also see Lewis (1986: 55-9) on the difference between structured and unstructured properties.

person of a certain size and shape, who is related to a variety of external objects. When I do this, I think about it by a route that involves descriptive elements, which situate Arturo in his environment. But I can also think about this class in a way that is more direct: namely, as containing Arturo. When I do that, I think about it by a route that is directly referential and bypasses Arturo's environment. Either way I think about this class, I think about the same property. I'm just thinking about it using different concepts: namely, the concept *having such and such a qualitative profile* and the concept *being identical to Arturo*. One is relational. The other is not.²² Our concepts provide different routes by which our thoughts can hit the same targets. We can, as we observed in section 1, designate the very same property in a variety of different ways. The second response requires a proliferation of properties where a proliferation of concepts will suffice.

Let's turn now to the third response. Should we just bite the bullet? Suppose that Arturo really doesn't have any indiscernible duplicates. I don't think it would be all that bad to deny that *being identical to Arturo* is non-qualitative. Suppose we were agnostic about the existence of indiscernible worlds. We wouldn't know that Arturo is special. And while we would know that we can pick the property *being identical to Arturo* out directly, we wouldn't know that we can also pick it out descriptively (because we wouldn't know that it is necessarily coextensive with the property *having such and such a qualitative profile*). We should then be agnostic about whether or not this property can only be indicated directly. But we're not. Why not? I suspect we give too much weight to the structure of our concepts. We know that the identity properties of indiscernible worldmates are non-qualitative.

²² See Humberstone (1996: 209-27) for a defense of the claim that the relational/non-relational distinction applies to concepts rather than properties.

Consider, for example, a world containing nothing but two duplicate iron spheres—Castor and Pollux—located a mile apart.²³ These spheres are qualitatively indiscernible. But they do not share all their properties: one has the property *being identical to Castor*, the other does not. Some identity properties are clearly non-qualitative. We also know that the concepts by means of which we can think about these properties have the same form as the concept by means of which we usually think about the property *being identical to Arturo*. But we make one or another mistaken assumption: either we assume that concepts with the same form always fix upon properties with the same qualitative status; or we assume that concepts containing non-qualitative components always fix upon properties that are non-qualitative.²⁴ We can, it seems, plausibly deflate our intuitions concerning the qualitative status of the property *being identical to Arturo*.

I do not, however, think that a similar story will be plausible in the case of actuality. Suppose that no actual worlds have any merely possible, indiscernible duplicates. We

²³ This example is due to Black (1952: 156).

²⁴ To see that the first assumption is mistaken, just pick some qualitative property with denumerably many instances, say, *being such and such a big, purple hippopotamus in a world of two-way eternal recurrence*. We can fix upon this property with the infinitely disjunctive concept *being identical to Albert, or Beatrice, or Candice, or....* Now suppose we had a different concept that left out every other disjunct: namely, the concept *being identical to Albert, or Candice, or Ester, or....* This concept would have exactly the same form as the first. But—given how we’ve selected its disjuncts—it will fix upon a non-qualitative property. Thus, concepts of the same form do not always fix upon properties of the same qualitative status.

To see that the second assumption is mistaken, recall the concept *having the same shape as the Eiffel Tower* from section 1 above. This concept contains a non-qualitative component. But the property indicated by our use of this concept is the qualitative property *having such and such shape*. Thus, concepts containing non-qualitative components do not always fix upon properties that are themselves non-qualitative.

should, of course, be agnostic about this because—given what has been suggested above—we should be agnostic about whether the property *being actual* is cointensive with the property *having such and such, or so and so, or some other qualitative profile*. And since we know—or should believe—that cointensive properties are identical, we should also be agnostic about whether the property *being actual* can be designated descriptively. But if we accept the linguistic thesis, an agnosticism about whether a property can be designated descriptively should carry over to an agnosticism about its qualitative status. We are not, however, agnostic about the qualitative status of the property of actuality. Why not? Perhaps because our concept of actuality is, as Bricker (2006: 64, 2008: 125) suggests, that of *being of the same ontological kind as all the things at my world*.²⁵ Our intuitions about the non-qualitative status of the property designated by our use of these concepts do not appear to be based upon judgments about the form of these concepts, but about their content. We think the ontological kind indicated by these concepts carves reality at the joints: the objects belonging to it are all objectively similar, and yet they are otherwise too qualitatively heterogeneous for this similarity to spring from anything other than a basic source. Our intuitions about the non-qualitative status of actuality rest upon the judgment that the source of this similarity must itself be non-qualitative. The third response fails

²⁵ Bricker's main motivation for this suggestion appears to be that it offers us a way out of a skeptical problem: namely, the problem of how we can know that we're actual if actuality is absolute. The idea is that I know that I'm actual simply by knowing that I belong to the same ontological category as myself. I find the suggestion that our concept of absolute actuality is indexical to be independently plausible because, as I argued in section 1, we cannot acquire it by means of observation.

because we cannot plausibly deflate our intuitions concerning the non-qualitative status of the property *being actual*.

What we have just seen is that unless we are prepared to take on board a hyperintensional conception of properties, we should admit that there might be at least one non-qualitative property that can be designated without the use of directly referential devices. I do not believe that such a conception of properties can be independently motivated enough to justify a break with current orthodoxy. I thus prefer not to go hyperintensionalist about properties, and so believe that there might be a non-qualitative property that can be designated descriptively.

3 The existence of qualitative properties that can only be designated directly

We have just seen that there is reason to be skeptical about the closure assumption: depending upon the lay of logical space, certain infinitary descriptive predicates might turn out to designate some intuitively non-qualitative properties. We now turn to the fundamentality assumption, which says that a sufficiently rich language will contain descriptive—albeit not necessarily primitive—predicates for all the fundamental qualitative properties.

If we assume both that the fundamental roles given to us by our best scientific theories could have been realized by fundamentally different properties and that we can only pick out the properties that actually realize these roles by specifying the roles which they in fact play, then it will turn out that some intuitively qualitative properties can only be designated with the aid of directly referential devices. I'll focus my attention on the following examples. Suppose, first, that there are worlds structurally just like our own, but

where unit positive and negative charge switch their causal and nomic roles.²⁶ The fundamental property that here occupies the positive charge role, there occupies the negative charge role and *vice versa*. These worlds differ from our own by a permutation of fundamental qualitative properties (see Lewis 2009: 205-12). Suppose, next, that there are worlds structurally just like our own, but where the properties realizing the unit positive and negative charge roles are uniformly replaced by alien fundamental properties, uninstantiated at our world. The unit positive and unit negative charge roles are there occupied by alien fundamental properties. These worlds differ from our own by a uniform replacement of fundamental qualitative properties (see Lewis 2009: 212-13). What these two examples seem to show is that the unit positive and negative charge roles could have been realized by fundamentally different properties. But then, given that there are worlds where other properties fill these roles, we cannot designate the properties that actually play these roles by merely describing the roles themselves (for each of these worlds satisfy the same Ramsey sentence). We also need to add that these properties are the occupants of these roles in our world; that is, that the fundamental kinds of things in question are the kinds of things that actually play the unit positive and negative charge roles.²⁷ And to do

²⁶ We'll assume that the properties designated by the predicates 'has unit positive charge' and 'has unit negative charge' are fundamental physical properties. If this turns out to be false, then our examples can simply be reworked.

²⁷ I am assuming, for example, that the fundamental qualitative property that in our world plays the unit positive charge role, which we might call *being F*, is the property that we designate as *being the kind of thing that actually plays the unit positive charge role*. The later designation specifies a class of objects which includes not only the actual instances of the fundamental property in question, but all possible instances of the same kind—whether or not those objects themselves play a similar role in their respective worlds. The

that—to pick out the properties these kinds of things have indexically—we must rely upon directly referential devices.²⁸

properties *being F* and *being the kind of thing that actually plays the unit positive charge role* will thus be cointensive.

²⁸ We might worry, at this point, that the argument in this section cannot simply treat the modal realist framework in which I am working as a useful heuristic, but must instead rely upon it as a substantive hypothesis. Suppose we were to endorse some form of ersatzism and hold that possible worlds are abstract: they might be maximal possible states of affairs, maximally consistent sets of sentences, or what have you. Suppose, further, that the actual world is among these possible worlds. It has the distinction of obtaining in—or corresponding to—concrete reality (or actuality). This concrete reality (or actuality) is absolute. Thus, on this view, ‘actual object’ and ‘concrete object’ would appear to be cointensive; they pick out the same parts of concrete reality. If we were to accept this alternative account of the metaphysics of modality, then it seems that we could designate the properties that actually play the fundamental roles in our best scientific theories by replacing occurrences of ‘actual’ (a directly referential device) with ‘concrete’ (a seemingly descriptive referential device). So, for example, the property *being the kind of thing that plays the unit positive charge role in the actual world* will be cointensive with the property *being the kind of thing that plays the unit positive charge role in the concrete world*. But, then, we could designate the qualitative properties that in fact play the fundamental roles in our best scientific theories without relying upon any directly referential devices at all. Thanks to an anonymous referee for suggesting this line of response.

It should be clear that something has gone seriously wrong here. For if everything we have just said were correct, then the intuitively non-qualitative identity property *being identical to Benjamin Franklin* would be cointensive with the property *being identical to the person who is the inventor of bifocals in the concrete world*, and that would mean that an intuitively non-qualitative property could be designated without the aid of directly referential devices. The argument from section 2 would return with a vengeance. But what exactly has gone wrong here? This, I think, is much less clear. The problem, as I see it, is that talk of the concrete world is ambiguous between talk of the possible world that corresponds to concrete reality and talk of that concrete reality itself. Understood the first way, ‘the concrete world’ is a name for the possible world that

What should we say about these cases? There are, once again, three straightforward responses available: (1) we could deny quidditism—the thesis that there are quidditistically different worlds; that is, worlds that have the same structure but differ over which qualitative properties confer which causal powers²⁹—and thus reject the first assumption; (2) we could accept some weak form of quidditism but deny that it entails any

corresponds to concrete reality. But since a name is a directly referential device, the designation *being identical to the person who is the inventor of bifocals in the concrete world* will turn out to contain a directly referential device after all. Understood the second way, talk of concrete reality seems to be talk of the ontological status that things like these (pointing at various donkeys, puddles, protons, and stars or just waving all around) enjoy. The suggestion here is that the abstract/concrete distinction is best explained by, what we might call, the Way of Demonstrative Example. This seems plausible given that the difference between, say, a number and a nightingale does not seem to be exhausted by their qualitative differences but instead appears to transcend them, which suggests that the abstract/concrete distinction cannot be straightforwardly explained by the Way of Negation. See Cowling (2017: sect. 2.2) for a number of arguments to this effect. It thus appears that the concept of concrete reality (or *being concrete*) should be indexical for the ersatzist in the same way that the concept of absolute actuality (or *being actual*) is indexical for the realist. But if that's right, the designation *being identical to the concrete inventor of bifocals* will contain a directly referential device after all.

²⁹ Quidditism is often defined as the view that there are primitive identities between fundamental qualitative properties across possible worlds. It is, so construed, a view about property individuation. I prefer to define quidditism—or what Tyler Hildebrand (2016) calls *qualitative quidditism*—as the thesis that there are qualitatively discernible worlds with the same overall structure. This thesis might be entailed by various principles of plenitude (which tell us that if something is possible, then something else is possible as well). But it is not itself in the business of expressing the plenitude of possible worlds. We could, I think, coherently accept the quidditist thesis while rejecting the more general principles of plenitude that might lead to it.

kind of semantic humility and thus reject the second assumption; or (3) we could simply deny that the properties in question are qualitative after all.

Let's start with the first response. Should we deny that there are quidditistically different worlds? Suppose we were attracted to a causal theory of properties according to which properties have their causal profiles essentially (see Shoemaker 1980, 1998, 2007: 142-4).³⁰ If that's right, then the property that plays the unit positive charge role could not have played the unit negative charge role. And so there isn't a world where these properties switch roles. We also find that the property that plays the unit positive charge role could not play this role in a world where a different property plays the unit negative charge role. For their causal profiles are interdefined. A world without unit positive charge is a world without unit negative charge, and *vice versa*. But that's not all. Their causal profiles are, as Jonathan Schaffer points out, holistically interdefined in terms of a web of causal interrelations with all the other physical properties: 'charge is defined in terms of a disposition to exert force, force is defined in terms of its connection to charge and its disposition to accelerate mass, etc.' (Schaffer 2005: 11). A world without unit positive and negative charge would be a world without any of the other actual physical properties as well. And so there isn't a world otherwise just like our own except that alien properties there play the unit positive and negative charge roles.

³⁰ Bird (2005: 446-7) calls this view *weak essentialism*. It amounts to a kind of necessity claim. It should be distinguished from *strong essentialism* which adds to this the corresponding sufficiency claim: namely, that if properties F and G have the same causal features, then they are identical.

So far, so good. But we haven't yet shown that quidditism—understood as the thesis that there are quidditistically different worlds—is false.³¹ For while it might be essential to charge that it is structurally related to force and mass in a certain way, this doesn't guarantee that there aren't worlds with wholly alien properties (schmarge, quorce, and schmass) that are structurally related to each other in that very same way. The causal theory of properties is thus consistent with there being worlds structurally just like our own, but otherwise wholly alien to it.³² If we want to rule out such worlds, we need to take on board more than just a causal theory of properties.

Suppose we were instead attracted to some form of pure global structuralism according to which two worlds are structurally isomorphic only if they are qualitative duplicates.³³ We'll say that an individual (or world) is *structurally isomorphic* to another

³¹ This point is conceded by Bird (2005: 446, 450-1), who grants that weak essentialism is compatible with the thesis that there are quidditistically distinct worlds.

³² This is, for example, a possibility left open by the modest causal structuralism canvassed in the appendix to Hawthorne (2001: 226-7).

³³ I assume that the structuralist at issue here will take the properties that realize the fundamental roles given to us by our best scientific theories to be qualitative. This might be denied by a structuralist who accepts some form of what Bricker (2017: 49 n 18) calls *haecceitism about properties*. The haecceitist about properties agrees with the global structuralist that there cannot be qualitative differences between worlds without structural differences, but adds that worlds can differ by a permutation or wholesale replacement of properties without differing qualitatively. For, according to the haecceitist, the fundamental properties lack primitive qualitative suchnesses and have only bare non-qualitative thisnesses. The haecceitist about properties thus breaks the link between the properties that play various causal or nomic roles and the properties that make for qualitative similarity. I shall return to haecceitism about properties when I turn to the third response to the argument in this section below.

individual (or world) iff there is a one-one correspondence between their parts that preserves the overall pattern of their fundamental qualitative properties and relations.³⁴ And we'll say that an individual (or world) is a *qualitative duplicate* of another individual (or world) iff there is a one-one correspondence between their parts that preserves not just the overall pattern of fundamental qualitative properties and relations, but the fundamental qualitative properties and relations themselves.³⁵ A global structuralist can allow for structurally isomorphic individuals that are not qualitative duplicates provided that those individuals are worldmates. She can, for example, allow for worlds populated by several differently colored spheres. She can even allow for a world containing nothing but two differently colored spheres located a mile apart. This world is, after all, not structurally isomorphic to any world containing nothing but two identically colored spheres located a mile apart, since these two worlds differ in their overall pattern of fundamental qualitative properties. But these are possibilities that a *local* structuralist—who holds that two individuals are structurally isomorphic only if they are qualitative duplicates—would be forced to deny. It is for this reason that local structuralism seems much less plausible than its global cousin.³⁶

³⁴ See Leuenberger (2010: 331-2, 334-5) for the technical details. But note that what I call a structural isomorphism, Leuenberger calls a fundamental isomorphism.

³⁵ This is essentially the definition from Lewis (1986: 61), but the formulation is drawn from Bricker (1993: 274, 1996: 227). Note that, due to their isolation, worlds are duplicates iff they are indiscernibles.

³⁶ We might also distinguish between strong and weak forms of global structuralism. *Weak* global structuralism, which I am here simply calling global structuralism, is the view that worlds are structurally isomorphic only if they are qualitatively indiscernible. *Strong* global structuralism adds to this the claim that worlds are qualitatively indiscernible only if they are numerically identical. Heller (1998) defends an ersatzist

I don't think we should accept global structuralism. For just as it seems possible for there to be duplicate island universes, it also seems possible for there to be structurally isomorphic alien island universes. We'll say that an individual (or world) is *qualitatively alien to* another individual (or world) iff no part of one is a duplicate of any part of the other.³⁷ We can imagine there being another part of reality out there, which is causally and spatiotemporally disconnected from—as well as structurally isomorphic to—our own, and we seem to be able to make sense of the thought that the objects in the other part of reality are totally alien to the objects in this part of reality. But, as we observed in section 2 above, the best way to represent this possibility is in terms of pluralities of co-actual worlds. Then, since worlds have the same contents when they are considered plurally as they do when they are considered singularly, there must be structurally isomorphic worlds that fail to be qualitative duplicates.

The global structuralist might object to this argument in one of two ways.³⁸ She might, first, object to our interpretation of the possibility of island universes, and instead

version of strong global structuralism. But as we have already seen, in section 2 above, the possibility of island universes gives us reason to reject its realist counterpart.

³⁷ This is essentially the definition from Lewis (1986: 91-2), but the formulation is due to Bricker (forthcoming: sect. 3.2).

³⁸ A third objection might come from the structuralist who accepts haecceitism about properties and thereby breaks the link between the properties that play various causal or nomic roles and the properties that make for qualitative similarity. This structuralist could say that two individuals (or worlds) are *bare duplicates* whenever there is a one-one correspondence between their parts that preserves not just the overall pattern of fundamental properties and relations but the bare identities between them as well, and then add that two individuals (or worlds) are *brutally alien to* each other iff no part of one is a bare duplicate of the other. This

seek to accommodate this possibility within a single world. This world would be composed of causally and spatiotemporally disconnected islands, which would nevertheless be unified by a primitive worldmate relation. If, however, this were the right way to think about this possibility, then—since worlds are internally unified wholes—the other part of reality that we’re imagining would not be absolutely disconnected from our own. But, it seems, this was something we could indeed imagine. So it seems that we would do better to think of the possibility of island universes as represented not by a single world, but by pluralities of co-actual worlds. Worlds must be unified, reality need not be.

The global structuralist might, instead, object to the very possibility of structurally isomorphic alien island universes. She might simply deny that there could be such universes. But this denial appears to be difficult to maintain for two reasons. First, the global structuralist thinks that it is possible for there to be nothing but two structurally isomorphic alien individuals. She thinks, as we saw above, that there can be a world containing nothing but, say, a wholly red sphere and a wholly blue sphere located a mile apart. But since every part of the red sphere is red and every part of the blue sphere is blue, no part of one is a duplicate of the other. These two spheres are both structurally isomorphic and alien to each other. Yet once the global structuralist allows for complete possibilities that are represented not just by single worlds but also by pluralities of worlds,

allows the structuralist to claim that brutally alien island universes are possible even if qualitatively alien island universes are not, which might be enough to satisfy our intuitions about the present case. But given that structuralist who accepts haecceitism about properties denies that the properties that realize various causal or nomic roles are qualitative, the present objection ultimately collapses into a version of the third response below.

she opens up the possibility that these structurally isomorphic individuals be worlds in themselves. The second reason that it is difficult for the global structuralist to deny the possibility of structurally isomorphic alien island universes is that she thinks that it is possible for there to be alien island universes that have almost the same overall structure. There might, for instance, be a pair of co-actual worlds where one contains nothing but a perfect red sphere and the other contains nothing but a scratched blue sphere. These alien worlds are not structurally isomorphic: one is perfectly spherical, the other is not. But they have almost the same structure: they only differ by a small scratch. And yet it seems, however, that if we can imagine there being island universes with almost the same overall structure, then we can also imagine a sequence of island universes whose structures become more and more alike until they eventually converge. We can imagine a sequence of pairs of worlds where each pair is just like the last pair except that the scratch on the blue sphere is a little less pronounced.³⁹ We have then, at the limit of this sequence, the possibility of structurally isomorphic alien island universes: a pair of co-actual worlds where one contains nothing but a perfect red sphere and the other contains nothing but a perfect blue sphere. To deny this possibility, would be to accept an arbitrary gap in logical space.⁴⁰ The first response requires us to give up an intuitively plausible possibility.

³⁹ One might be tempted to insist, on the global structuralist's behalf, that the color of the scratched blue sphere turns to red as the scratch disappears. But this is only an artifact of the example. This response would not have been open to us had I instead chosen two properties that were not obviously determinates of the same determinable. It would not, for instance, have been so readily available had we started off with, say, a perfect wooden sphere and a scratched iron sphere.

⁴⁰ This argument is adapted from Adams (1979) and Bricker (2001: 49).

Let's turn to the second response. Should we deny that quidditism carries with it a commitment to some form of semantic humility, and thereby insist that the properties that play the unit positive and negative charge roles can be designated both descriptively and determinately even if quidditism is true? These properties could, it seems, be so designated in a language which contained primitive predicates for all the fundamental qualitative properties. These predicates would get their extension not from the role they play in describing our world, but from the role they play in describing all of logical space. Suppose we had such a language.⁴¹ We could use this language to construct what Theodore Sider (2002) calls a pluriverse sentence, which represents the totality of possible worlds—the whole of logical space—at once. We would seem to have a way to describe our world that would not at the same time describe any inverted—or even structurally isomorphic alien—worlds. Indeed, with such a language, we would be able to describe all of logical space, we just wouldn't be able to locate ourselves within it. But this is, of course, exactly what we should expect of a purely descriptive language.

I don't think this response can solve the problem without ultimately surrendering the linguistic thesis. Suppose that the pluriverse sentence of the language in question both descriptively and determinately (or uniquely) designates the totality of possible worlds. No two fundamental qualitative properties could then be similarly distributed throughout logical space (for otherwise there would be a structural isomorphism from the totality of possible worlds onto itself that did not preserve the fundamental qualitative properties

⁴¹ I suspect that we could not have such a language in anything like our current epistemic situation. If that's right, then the current suggestion could only be used to salvage what I called the weaker versions of the linguistic thesis in section 1 above. It does not seem available to proponents of stronger versions of the thesis.

themselves, and thus the role our primitive predicates play in describing the totality of possible worlds would not be unique; the pluriverse sentence would map onto the totality of possible worlds in different ways). But, given the plenitude of possible worlds, it seems quite plausible to think that some fundamental qualitative properties are similarly distributed throughout logical space: that is, that there is a structural isomorphism from the totality of possible worlds onto itself that does not preserve the fundamental qualitative properties themselves. Thus, it seems that we either need to give up on taking the primitive predicates of the language in question to be descriptive or we need to give up on taking them to be determinate. They cannot be both. In order to avoid this indeterminacy problem, we might make an exception for the primitive predicates of this language by allowing them to designate the fundamental qualitative properties directly.⁴² But, as a defense of the linguistic thesis, this exception appears to be completely *ad hoc*. We thus appear to be saddled with a commitment to a form of semantic humility after all. The second response fails because it requires us to smuggle directly referential devices into the very fabric of our basic descriptive predicates themselves.

Let's turn now to the third response. Should we just deny that the properties in question are qualitative after all? Consider, for the moment, how things appear to us as conscious subjects. We find ourselves in a world where everything looks, smells, sounds, tastes, and feels a certain way. But different (centered) worlds might appear the same to certain subjects. We can, for example, imagine people on Twin Earth, who—like the ancient

⁴² This is, in effect, what Gallois (1998: 249-50) does when he takes the qualitative properties to be those properties that are expressible by predicates that do not themselves contain rigid designators other than the ones used to designate them.

Greeks—see a certain heavenly body in the evening sky and call it ‘Hesperus’ and see a certain heavenly body in the morning sky and call it ‘Phosphorus’. These Twin Greeks have, as Saul Kripke puts it, ‘exactly the same evidence, qualitatively speaking’ as the ancient Greeks once did, but—unlike the ancient Greeks—when they use the names ‘Hesperus’ and ‘Phosphorus’ they happen to refer to two different objects (Kripke 1980: 104). We can also imagine people on Twin Earth, who have ‘the same sensory evidence’ about the watery stuff on their planet that we had prior to the discovery that the watery stuff on our planet is composed of molecules of H₂O. These Twin Earthlings are ‘in a situation qualitatively identical to [our own] with respect to all the evidence’ we once had, but—unlike us—when they use the predicate ‘is water’, they manage to designate the property *being composed of molecules of XYZ* (Kripke 1980: 142).

The epistemic situations of these Twin Earthlings were, for a while at least, qualitatively similar to our own. But the similarity between our epistemic situations was quite fragile. There were a lot of differences between our worlds that we weren’t seeing. As we both discovered more about the worlds around us, our epistemic situations began to diverge and ceased to be qualitatively similar. If, however, our worlds had been structurally isomorphic, then our epistemic situations could not have diverged. This might lead us to say that such isomorphic situations are qualitatively indiscernible.⁴³ The differences between them could then be said to be non-qualitative. Worlds that differ from our own only by the permutation or wholesale replacement of properties would be qualitatively no different from our own. The properties that realize the fundamental roles given to us by our best scientific theories would be non-qualitative.

⁴³ This is, in effect, to endorse a version of haecceitism about properties (see footnotes 33 and 38 above).

The plausibility of this response will depend upon how we understand the sensory evidence had by the agents in these epistemic situations; it will depend, moreover, on whether the fundamental properties could ever be given immediately in experience.⁴⁴ For if there were pairs of isomorphically situated epistemic agents that were directly acquainted with different fundamental properties, then their epistemic situations would intuitively differ from the inside.⁴⁵ If their worlds differed by the permutation of certain fundamental properties, these epistemic agents, being directly acquainted with all the same fundamental properties, would be able to clearly and distinctly conceive of what it would be like, qualitatively speaking, to inhabit each other's worlds. They could thus conceive of structurally isomorphic but qualitatively discernible worlds. But given that their only access to the fundamental qualitative properties appears to be direct, these epistemic

⁴⁴ Russell ([1912] 1959) held that our knowledge of some properties is by acquaintance. I am here only assuming that there are possible epistemic agents who are directly acquainted with some of the fundamental properties.

⁴⁵ To see how this might work, suppose that colors are given immediately in experience and consider a world exactly like our own except that the qualitative color spectrum is systematically inverted. Our epistemic situation would be structurally isomorphic to that of our spectrum inverted counterparts. But these epistemic situations would not be qualitatively alike from the inside. For we can clearly and distinctly conceive of what it would be like to occupy the epistemic situations of our spectrum inverted counterparts, and we seem to be in a position to know that these isomorphic situations would be qualitatively unlike—and hence discernible from—our own. Yet we can, it seems, only designate redness directly as the property that appears here and over there. No purely structural qualitative description will do since the property of *being red* plays the very same structural role in our world that the property of, say, *being green* plays in the inverted world. See Swinburne (1980: 317-19) and Hildebrand (2016: 518) for similar appeals to cases of inverted spectrums.

agents would only be able to describe the differences between these worlds with the use of directly referential devices.⁴⁶

I believe that such pairs of epistemic agents are possible. It would, however, be a mistake to think that because they cannot describe the differences between their worlds descriptively, their experiences—and hence the (centered) worlds they directly represent—must be exactly alike qualitatively speaking. It is their basic concepts that appear to be non-qualitative, not the properties they designate. The third response fails because it mistakes a conceptual distinction for a metaphysical one.⁴⁷

What we have just seen is that unless we are prepared to accept some form of structuralism, we should think that there are qualitative properties that can only be designated with the use of directly referential devices. I prefer not to go structuralist, and so believe that there are qualitative properties that can only be referred to directly.

⁴⁶ These considerations appear to show that even the weak version of the linguistic thesis—according to which a property is qualitative iff it can, in principle, be designated without the use of directly referential devices, but perhaps only by agents in better epistemic situations than our own—fails in the ‘only if’ direction. But if the weak version fails in this direction, the strong version should fail as well.

⁴⁷ This might not be the only problem with the third response. For, as noted in footnote 43 above, it is wedded to some version of haecceitism about properties. And as Hildebrand (2016) argues, haecceitism about properties—or what he calls *bare quidditism*—is the proper target of many of the objections that are standardly aimed at quidditism. But while these arguments might, as Hildebrand (2016: 526) rightly points out, ‘have some force against’ the haecceitist about properties, ‘they are powerless against’ quidditism as I understand it.

4 Conclusion

Let's take stock. I have argued that the linguistic thesis fails in both directions: there might be non-qualitative properties that can be designated descriptively, and there appear to be qualitative properties that can only be designated directly. I have also suggested that the best way to avoid these failures is to adopt a hyperintensional conception of properties along with some form of global structuralism. But these proposed solutions—while perhaps not strictly speaking incompatible—do not appear to sit particularly well with each other: for the hyperintensionalist seeks to inflate, while the structuralist seeks to deflate our overall catalogue of properties.⁴⁸ It thus seems that we should look elsewhere if we wish to vindicate the initial appeal of the linguistic thesis.

The suggestion that has begun to emerge is that while the linguistic thesis is ultimately untenable as stated, it can be recast as a thesis about our concepts rather than the properties they designate. We should have assumed the following thesis all along.

The Conceptual Thesis: a concept is *pure* (or *qualitative*) if and only if it does not contain any directly referential concepts (such as demonstrative, indexical, or singular concepts).

Our concepts are often built up from and thereby contain other concepts. Consider, for example, the concept of *being trilateral*. It is built up from the concepts of *being a closed plane figure* and *having three sides*. It will be pure if, upon analysis, its component concepts do not themselves contain directly referential concepts. Consider, next, the concept of *having the same shape as the Eiffel Tower*. Since a component of this concept—namely, the

⁴⁸ See Shoemaker (1980: 213-14) for the related charge that the claim that properties are individuated by their causal powers is incompatible with a hyperintensional conception of properties.

singular concept of *being identical to the Eiffel Tower*—is directly referential, the concept of *having the same shape as the Eiffel Tower* is thereby impure.⁴⁹ Our concepts, unlike the properties they designate, are structured. When the nodes in these structures serve as directly referential hooks, when, for instance, our concepts contain demonstrative, indexical, or singular concepts, they latch themselves onto the world. These concepts are somehow impure; they are intermixed with something empirical.

Let's consider the conceptual analogs of our earlier linguistic assumptions. We can retain the spirit of the closure assumption. Concepts are closed under construction: concepts built up from entirely pure concepts are guaranteed to themselves be pure. But there is no guarantee that the properties they designate will themselves be qualitative. So, for example, if all and only worlds structurally isomorphic to our own were actual, then the pure concept *having such and such, or so and so, or some other structural profile* would designate the seemingly fundamental non-qualitative property *being actual*. But we should give up on the fundamentality assumption. Pure basic concepts are not always needed for a complete understanding of the world: our conceptual scheme is in no way impoverished when we lack pure concepts for the fundamental qualitative properties. I might, as a world-bound subject, need to employ the impure concept *being the kind of thing that plays the unit positive charge role in my world* in order designate the seemingly fundamental qualitative property *having unit positive charge*.

⁴⁹ Similarly, the concept of *being water* appears to be the concept of *being the clear, potable, liquid substance of my acquaintance that falls from the clouds; flows in the lakes, oceans, and rivers; is used for bathing, cooking, and drinking; etc.* But a component of this concept—namely, the indexical concept of *being the substance of my acquaintance*—is directly referential, and so the concept of *being water* appears to be impure.

We have seen that there might be non-qualitative properties that can be designated descriptively and qualitative properties that can only be designated directly. We have thus severed the link between qualitative properties and directly referential devices. I take this to be particularly interesting because it opens up the possibility that there are other properties (such as identity, parthood, and set-membership), which can apparently be designated descriptively, that might turn out to be non-qualitative as well.

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