

# Modal Idealism

David Builes

Draft - Forthcoming in *Oxford Studies in Philosophy of Mind*

## 1. Introduction

According to some philosophers, consciousness has a fundamental place in nature. Property Dualists hold that there are fundamental properties involving consciousness. Substance Dualists and Panpsychists go further in ascribing such fundamental properties to some fundamental entities (e.g. immaterial souls, particles, or the universe as a whole). Idealists go even further in claiming that *every* fundamental entity is conscious, and moreover every fundamental property is a phenomenal property (i.e. a property that specifies what it's like to be something).<sup>1</sup> My goal will be to argue for a thesis that goes even beyond Idealism: it is *metaphysically necessary* that Idealism is true. Call this view Modal Idealism.

Modal Idealism might seem to be an incredible thesis to most contemporary philosophers, but philosophical fashion was not always this way. Bradley (1893) explicitly endorsed Modal Idealism in his *Appearance and Reality*, and even went so far as to say that is “evident at once”:

We perceive, on reflection, that to be real, or even barely to exist, must be to fall within sentience. Sentient experience, in short, is reality, and what is not this is not real. We may say, in other words, that there is no being or fact outside of that which is commonly called psychical existence. Feeling, thought, and volition (any groups under which we class psychical phenomena) are all the materials of existence, and there is no other material, actual or even possible. This result in its general form seems evident at once...[Any] fact that falls elsewhere seems, in my mind, to be a mere word and a failure, or else an attempt at self-contradiction. It is a vicious abstraction whose existence is meaningless nonsense, and is therefore not possible (144-145).

---

<sup>1</sup> For a defense of property dualism, see Chalmers (1996). For a defense of substance dualism, see Swinburne (2013). For defenses of panpsychism, see Strawson (2006), Chalmers (2013), and Goff (2017). For defenses of idealism, see Adams (2007), Kastrup (2018), Albahari (2019), Chalmers (2019), and Robinson (2022). The phrase “idealism” has been defined in various different ways: some versions of “panpsychism” will coincide with the present definition of idealism (in particular, see Chalmers’ (2019) definition of “pure” panpsychism).

While I do not think that Modal Idealism is as obvious as Bradley takes it to be, I do think that it is a plausible view with many attractions. My hope in what follows is to illustrate some of these attractions.<sup>2</sup>

I'll begin by arguing for a claim that is closely related to, but strictly weaker than, Modal Idealism (sections 2-6), after which I'll proceed to give three more arguments for Modal Idealism (sections 7-9) and then conclude (section 10).

## 2. The First Argument: A Question and an Answer

In order to state the first claim I'll be arguing for, we'll need to draw several distinctions between different kinds of properties. First, we'll be restricting our attention to "one-place" properties that apply to a single thing, rather than more general "n-place" properties (or "relations"), which apply to multiple things. We'll also restrict ourselves to *fundamental* properties, where a property F is fundamental whenever it is necessarily the case that, if [x is F], then [x is F] does not hold in virtue of any other facts.<sup>3,4</sup> Note that fundamental (one-place) properties must be *intrinsic* properties, given the definition that a property F is intrinsic to x if and only if [x is F] does not hold partly in virtue of facts involving entities distinct from x and its parts.<sup>5</sup>

I'll be further restricting my attention to (intrinsic) fundamental *non-haecceitistic* properties.<sup>6</sup> Intuitively, a property F is a haecceitistic property just in case [something is F] is about some particular object(s); any property that is not haecceitistic is non-haecceitistic. So, for example, the property of *being Alice* is a haecceitistic property, since [someone is Alice] concerns a particular object (namely Alice), but the property of *being red* is a non-haecceitistic property, since [something is red] is not about any particular object(s).

---

<sup>2</sup> Sprigge (1980: 110-140) also defends a view that is close to Modal Idealism, namely that we cannot *conceive* of something that is not in some way conscious.

<sup>3</sup> For more on the "in virtue of" relation, see Rosen (2010) and Audi (2012). One can also take the notion of "fundamentality" to be primitive and not defined in terms of the "in virtue of" relation" (e.g. see Sider (2011) and Wilson (2016)).

<sup>4</sup> One worry about this definition of "fundamental property" is the following. Say that a property F is *weakly fundamental* iff it is *possibly* the case that, if [x is F], then [x is F] does not hold in virtue of any other facts. Might there be properties that are weakly fundamental but not fundamental, and if so, will anything of substance turn on this point? For example, perhaps *being in pain* is weakly fundamental but not fundamental, since *being in pain* could figure in fundamental facts if Dualism is true, but it could also figure in non-fundamental facts if Physicalism is true (supposing that both Physicalism and Dualism are possibly true). In response to this kind of example, one could think that there really are two properties here, namely *pain<sub>Dualism</sub>* and *pain<sub>Physicalism</sub>*, the first of which is a fundamental property and the second of which is a non-fundamental property. Following Correia (2005), Faller (forthcoming), and others, I will be assuming that properties are at least partly individuated by how they are grounded, and so a property is weakly fundamental if and only if it is fundamental. However, if properties are not individuated in this way, much of the following discussion will still hold with suitable modifications.

<sup>5</sup> See Rosen (2010) for this definition.

<sup>6</sup> For more on the distinction between haecceitistic and non-haecceitistic properties (sometimes called "non-qualitative" and "qualitative" properties), see Dasgupta (2017) and Plate (2022).

Within the space of possible fundamental non-haecceitistic properties, some philosophers believe that some such properties are *dispositions* or *powers*. The nature of a disposition or power is exhausted by its causal/nomic relations to other possible properties. For example, perhaps *being massive* is a dispositional or powerful property: to have a certain mass *just is* to resist acceleration in certain ways and interact gravitationally with other massive objects in certain ways. Some philosophers believe that there are fundamental non-haecceitistic properties that are *quiddities*, whose nature is not even partly characterized by their causal/nomic relations to other possible properties.<sup>7,8</sup>

Following Hildebrand (2016), we can further distinguish between two types of quiddities: *bare quiddities* and *qualitative quiddities*. David Lewis' "Humean" metaphysics was committed to bare quiddities.<sup>9</sup> According to Lewis (1986: 205), "there isn't much to the intrinsic nature of a [quiddity]", and Black (2000: 91) goes further in saying that "just about all there is to a Humean fundamental [quiddity] is its identity with itself and its distinctness from other [quiddities]". So, let us say that a bare quiddity is a quiddity whose nature is wholly characterized by which other quiddities it is (non-)identical with, and let us say that a qualitative quiddity is any quiddity that is not a bare quiddity. Intuitively, qualitative quiddities have a "substantive" qualitative nature, while bare quiddities lack any substantive nature.

For short, I will use the word "quality" to refer to fundamental qualitative quiddities. The first question that I will be addressing is the following:

*Question:* What is the space of all metaphysically possible qualities?

Anyone who accepts the coherence of the notions of "metaphysical possibility" and "quality" is faced with this question. However, there is remarkably little that has been said to try to answer this question. The first thesis I want to defend tries to provide an answer:

*Answer:* The space of all metaphysically possible qualities just is the space of all metaphysically possible fundamental phenomenal properties.

---

<sup>7</sup> The "nature" of a property is meant to be a hyperintensional notion, so this definition of a quiddity leaves it open whether a quiddity might necessarily have a particular causal/nomic role. Alternatively, one could say that the "essence" of a quiddity is not characterized by its causal/nomic role, or that quiddities are not "individuated" by their causal/nomic role.

<sup>8</sup> Might there be "mixed" properties whose nature is partly characterized by their causal/nomic role and partly characterized independently of their causal/nomic role? Perhaps "conjunctive" properties like *being red and resisting acceleration* are like this, but no such property would be fundamental (since it will be grounded in each of its conjuncts), so we can set such examples aside. Some defenders of "powerful qualities" (e.g. Strawson (2008b), Martin (2008), and Heil (2010)) hold a view where properties are both "powerful" and "qualitative" (yet not merely conjunctive), but following Coates (2020) and Tugby (2022), I think the best way to make sense of such properties are as (qualitative) quiddities that ground (and hence necessitate) their dispositional role.

<sup>9</sup> Although the label is now entrenched, it is not clear which aspects of David Lewis' metaphysics are ones that David Hume himself would have endorsed (e.g. see Strawson 2014).

### 3. The First Argument: Two Initial Objections

Before I begin arguing for this answer, it will be helpful to address two immediate objections one might have about it.

One objection is that phenomenal properties are not even qualities in the first place. There are three reasons why one might think this. First, one might think that there simply are no phenomenal properties. It might seem as if we have phenomenal properties, but this seeming is an illusion.<sup>10</sup> Second, one might think that phenomenal properties are identical with, or reducible to, facts about the spatiotemporal and causal structure of physics.<sup>11</sup> Third, one might think that phenomenal properties both exist and are irreducible to such structural facts, but nevertheless one might think that no phenomenal property is *fundamental*. For example, a “Panprotopsychoist” might think that, although phenomenal properties are not identical, or reducible, to such structural facts, they are nevertheless wholly constituted by the non-experiential qualities found in matter.<sup>12</sup> Whether one of these three views is correct is a matter of intense debate, and I will not be entering into this debate here. Instead, this first argument will simply be assuming, alongside Dualists, Panpsychists, and Idealists, that phenomenal properties cannot be reduced to, or identified with, wholly non-experiential phenomena. This is certainly a large assumption, but there is still a large gap between the claim that *some* qualities are phenomenal properties and the claim that *all possible* qualities are phenomenal properties. The main goal of this first argument will be to try to bridge this gap.

A second worry one might have is that our proposed answer is incompatible with science, on the grounds that physics has already given us examples of qualities that are non-experiential, such as (say) mass and charge. In response, I will be assuming, alongside “epistemic structural realists”, that physics does not tell us about the underlying qualities possessed by fundamental physical entities. Physics only describes the causal role of properties like mass and charge. For example, it only tells us that massive objects resist acceleration and attract other massive objects, but it does not tell us about the underlying quiddity that plays this causal role. This kind of structuralism has been defended by Kant, Russell (1927), Foster (1982), Lewis (2009), and many other contemporary metaphysicians and philosophers of science, and I will be assuming it for this first argument.<sup>13</sup>

In the absence of these two objections, we at least know that (i) some qualities are phenomenal properties, and that (ii) science does not tell us of any non-experiential qualities, so our answer starts to become a live option. In fact, our answer immediately becomes the most conservative and

---

<sup>10</sup> See Frankish (2016) and Kammerer (2022).

<sup>11</sup> Facts about the “spatiotemporal and causal structure of physics” are facts that only use logical/mathematical, causal/nomic, and spatiotemporal notions. See Papineau (2002) and Balog (2012).

<sup>12</sup> See Stoljar (2006).

<sup>13</sup> See Langton (2004) for an interpretation of Kant along these lines, and see Ladyman (2016) for an overview of structural realism in the philosophy of science.

parsimonious response to our Question, since the only examples of qualities we seem to know of are phenomenal properties.<sup>14,15</sup> But how can we rule out the possibility that there are non-phenomenal qualities that we have not thought of? Addressing this challenge will be the task of the next section.

#### 4. The First Argument: The Unity of Qualities

My goal is to argue that if *some* possible qualities are phenomenal properties, then *all* possible qualities are phenomenal properties. However, before I present my official argument, I'll start with an intuition pump.

Suppose physics had ended with classical electromagnetism, so that the fundamental intrinsic properties of matter seemed to be exhausted by *mass* and *electric charge*. Furthermore, suppose someone (who was not a structuralist about physics) put forward the following bold hypothesis: the only qualities that *there could possibly be* are qualities associated with mass and electric charge.

Of course, given that physics has advanced beyond classical electromagnetism, we know that such a position can't be right. However, it seems to me that even if physics had never advanced beyond classical electromagnetism, this answer still would have been problematic (even bracketing worries about structuralism). It would have been problematic because it seems unacceptably *arbitrary*. What's so special about mass and charge? Why *couldn't* there have been some third kind of quality, which is as different from mass and charge as mass and charge are from each other? It's very unclear how there could be satisfying answers to these questions. But, if there are no satisfying answers to these questions, then the space of possible qualities would itself be arbitrary. This arbitrariness would then lead to a corresponding *brute necessity*: it would be necessary that there at most two distinct kinds of qualities in the world, but there would be no explanation for why there could only be *those two* kinds of qualities (rather than some extra third kind).

However, one of the main motivations to be a non-reductionist about consciousness in the first place is to avoid brute necessities. If experiential phenomena wholly reduced to non-experiential phenomena, then experiential phenomena would have to be necessitated by non-experiential phenomena.<sup>16</sup> However, there doesn't seem to be any intelligible way for experiential phenomena

---

<sup>14</sup> I will address other potential examples of qualities we might know about in section 5.

<sup>15</sup> Goff (2017: 169-171) argues that parsimony reasons give us good grounds for thinking that the only qualities that are actually instantiated in our world are phenomenal qualities, but it's doubtful whether similar parsimony reasons give us good grounds for thinking that the only *possible* qualities are phenomenal qualities. In general, there is no methodological requirement for thinking that modal space is as simple as possible. Perhaps the simplest modal space is one that only contains the actual world, but, on its own, this doesn't give us good reasons to endorse Spinozism.

<sup>16</sup> There is some controversy about whether all "grounding" relationships involve necessitation (e.g. Skiles (2015)), but it is widely agreed that reductionism about consciousness requires some kind of supervenience thesis.

to “arise out of” wholly non-experiential phenomena, because experiential phenomena seem so radically different in kind from non-experiential phenomena. As Strawson (2006) puts it, “The experiential/non-experiential divide, assuming that it exists at all, is the most fundamental divide in nature” (17-18).

With this intuition pump in mind, here is how one might put the argument:

- 1) Some possible qualities are phenomenal qualities.
- 2) There are no brute necessities.
- 3) If some possible qualities are phenomenal qualities and some possible qualities are non-phenomenal qualities, then there are brute necessities.
- 4) Therefore, all possible qualities are phenomenal qualities.

Premise 1 follows from the assumption that experiential phenomena cannot be reduced to wholly non-experiential phenomena.

Premise 2 is what underlies one of the main motivations for being a non-reductionist about consciousness: if experiential phenomena were reducible to non-experiential phenomenon, then such a reduction would involve brute necessitation, but necessitation can't be brute, therefore experiential phenomena cannot be reduced to non-experiential phenomena.<sup>17</sup> Even bracketing issues about consciousness, many other philosophers have independently defended the view that there are no brute necessities.<sup>18</sup> To give an illustrative example, suppose it was a brute contingent fact that there were exactly 823093874138 fundamental particles. That doesn't seem philosophically problematic. But suppose someone further said that it was *absolutely necessary* that there be exactly 823093874138 particles: no possible world contains one fewer or one more. Moreover, there is no reason at all why the number 823093874138 should be special in this way. It is just a brute fact that there is no possible world that contains any other number of particles. Such a view seems bizarre. It seems to be in the nature of metaphysical necessity that metaphysical necessity cannot be brute in this way. Metaphysical necessity is often defined to be the “broadest” objective kind of necessity, but a kind of necessity that was subject to these kinds of arbitrary and ad hoc restrictions could not be the broadest objective kind of necessity.<sup>19</sup>

---

<sup>17</sup> Chalmers (2003a) analyzes the “knowledge” argument, the “conceivability” argument, and the “explanatory gap” argument as all involving an assumption that metaphysical necessities cannot be brute. How we should understand the claim that “there are no brute necessities” is controversial, but one popular way is via Chalmers's (2002) thesis of Modal Rationalism. Also see Goff's (2019) “Essentialist” Modal Rationalism.

<sup>18</sup> For an overview of the literature on brute necessities, see Van Cleve (2018).

<sup>19</sup> One modality is “broader” than another just in case the first kind of modality recognizes more possibilities than the second. It is controversial what it takes for a modality to be “objective”, but at a minimum it is supposed to be non-epistemic, non-deontic, and not sensitive to the guises under which various objects, properties, and relations are presented. For more on the claim that metaphysical modality is the “broadest objective” modality, see Rosen (2006), Williamson (2016), Clarke-Doane (2019), Balaguer (2021), and Glazier (2021).

Premise 3 is supposed to be justified by similar kinds of reasons as the mass/charge example above. If the space of possible qualities consisted of phenomenal qualities, together with (say) three other unknown kinds of qualities, qualities of kind X, Y, and Z, then it's not clear how there could be an intelligible explanation for why the space of all possible qualities consisted of *just those four* kinds of qualities, rather than some other extra fifth kind of quality.

On its own, this justification for premise 3 is too quick. One might just despair at the possibility of *ever* explaining why the space of possible qualities has the structure that it has, no matter what one's views are about the space of possible qualities. If so, the hypothesis that the space of all possible qualities is exhausted by phenomenal qualities might be just as inexplicable as any other hypothesis.

In order to provide a helpful contrast, let's consider an example of an *intelligible* space of possible qualities. Consider the following quality space:



It seems like this quality space is the space of all possible greys. Moreover, it seems intelligible why this quality space exhausts all possible greys. The source of the intelligibility seems to be that there is an underlying *unity* to the space of possible greys, where one can intelligibly see how all the possible greys can be generated by continuous variation across a certain dimension.

Here is a speculative hypothesis about the space of all possible qualities: the explanation for why the space of all possible qualities is ultimately intelligible is similar in kind to the explanation for why the space of all possible greys is ultimately intelligible. Namely, the space of all possible qualities has a certain kind of *unity* to it. The relevant notion of “unity” is hard to pin down, but at a minimum it can be understood in terms of a certain kind of connectedness: for any two possible qualities, there is a path through the space of possible qualities that connects any one quality to any other (just as there is a path through the space of possible greys that connects any grey-quality to any other). Let's call this *The Unity Hypothesis*.

In order to make the Unity Hypothesis more precise, we would need to take a stand on certain controversial structural questions about the space of possible qualities. For example, a natural *sufficient* condition for the Unity Hypothesis is that the relevant space of possible qualities  $P$  is “path-connected”, in the topological sense that for any two qualities  $q_1$  and  $q_2$  there is a continuous

function  $f: [0,1] \rightarrow P$  that connects  $q_1$  and  $q_2$  (i.e.  $f(0) = q_1$  and  $f(1) = q_2$ ).<sup>20</sup> However, given minimal assumptions, this would imply that  $P$  is in certain ways structurally similar to the real numbers (e.g. the cardinality of  $P$  would have to be at least as great as the cardinality of the real numbers).<sup>21</sup> This would be a controversial commitment.<sup>22</sup> An alternative (epistemic) possibility is that  $P$  is “discrete” in the sense that the integers are discrete: it is not the case that for any two qualities there is a third quality “between” the first two (just as there is no integer between 1 and 2).<sup>23</sup> If  $P$  was discrete in this way, then  $P$  could be represented by a *graph*, a mathematical structure consisting of a set of “vertices” together with a set of “edges” between certain vertices. In order to represent  $P$ , the vertices in such a graph would represent possible qualities, and an edge between two vertices would represent that the two vertices are qualitatively “adjacent” to one another. For example, 1 and 2 are adjacent in the integers, but 1 and 3 are not adjacent in the integers. If the space of possible greys was discrete, then two grey qualities  $q_1$  and  $q_2$  would be qualitatively adjacent to one another just in case  $q_1$  is either minimally darker or minimally lighter than  $q_2$  (where  $q_1$  is “minimally lighter/darker” than  $q_2$  if and only if  $q_1$  is lighter/darker than  $q_2$ , but no other quality  $q_3$  is both (i) lighter/darker than  $q_2$  and (ii) darker/lighter than  $q_1$ ). If we grant ourselves a notion of qualitative adjacency<sup>24</sup>, then we can say that an alternative sufficient condition for the Unity Hypothesis is that  $P$  is representable by a *connected graph*, which is a graph where any two vertices can be connected by a path of edges starting at the first vertex and ending at the second vertex.

In what follows, I will remain neutral on how exactly the Unity Hypothesis should be made precise, since our informal characterization of the Unity Hypothesis will be sufficient for our purposes.<sup>25</sup>

Why believe that the Unity Hypothesis is the only way for the space of possible qualities to be intelligible? I don’t have any decisive reason to offer. For all I know, there might be some totally different way in which the space of possible qualities might be rendered intelligible. However, positing this kind of unity in the space of possible qualities, by analogy to the space of possible greys, is the only way I can see how the space of possible qualities might be rendered intelligible.

---

<sup>20</sup> Here, “[0,1]” refers to the set of all real numbers greater than or equal to 0 and less than or equal to 1.

<sup>21</sup> Any path-connected topological space that (i) has more than one element and (ii) is “Hausdorff” has a cardinality at least as large as the continuum. For an introduction to these topological notions, see Munkres (2013).

<sup>22</sup> See Builes and Wilson (2022) for skepticism about the possibility of there being continuum-many things. However, such a view might be able to interpret the space of possible qualities as “indefinitely extensible” (just like it interprets the space of possible real numbers as indefinitely extensible).

<sup>23</sup> See Lee (MS) for further clarification and discussion about whether consciousness is continuous or discrete.

<sup>24</sup> One natural way to precisify the notion of qualitative adjacency is that two qualities are qualitatively adjacent if and only if they minimally differ with respect to one dimension of quality space, but they are otherwise identical with respect to every other dimension of quality space.

<sup>25</sup> Another epistemic possibility is that  $P$  might be structured similarly to the rational numbers, in the sense that, although it is “infinitely divisible” (for any two qualities  $q_1$  and  $q_2$ , there is a quality  $q_3$  “between”  $q_1$  and  $q_2$ ), it is nevertheless only countably infinite. In such a case, one could impose a slightly different definition of the standard topological notion of path-connectedness. If we let  $[0,1]^*$  be the space of *rational* numbers between 0 and 1, then another sufficient condition for the Unity Hypothesis might be that  $P$  is path-connected\*, in the sense that for any two qualities  $q_1$  and  $q_2$  there is a continuous function  $f: [0,1]^* \rightarrow P$  such that  $f(0) = q_1$  and  $f(1) = q_2$ .



More specifically, if the space of all possible qualities consisted of multiple “disjoint” quality spaces, which were fundamentally different in kind and could not be seen to be connected with one other (like the case of mass and electric charge), then I don’t see how there could be an intelligible explanation for why *those exact* disjoint quality spaces would be the only possible ones. The only way for there to be an explanation for this, it seems to me, is if those quality spaces could somehow be “generated” by some underlying mechanism (such as continuous variation across a dimension in the case of the greys), but such an explanation doesn’t seem to be applicable if such quality spaces are fundamentally different in kind.<sup>26</sup>

Of course, one could easily define spaces of possibility that do not satisfy the Unity Hypothesis. For example, the space of possible properties that are *determinates of either mass or electric charge* is clearly not unified in the relevant sense. In this kind of “disjunctive” case, we can straightforwardly analyze the property of “being a determinate of mass or electric charge” into the properties of “being a determinate of mass” and “being a determinate of electric charge”, and we can intelligibly see how there is a unified space of properties corresponding to both disjuncts, which results in a disunified space of properties for the overall disjunctive property. Perhaps the best way to resist the Unity Hypothesis is to try to argue that the notion of a *quality* is also a disjunctive notion that can be analyzed into multiple unified components in this way, but it’s difficult to see how one could motivate a (non-arbitrary) disjunctive analysis of the notion of a quality.

If we are willing to grant the Unity Hypothesis, then premise 3 can be supported in a more convincing way. The idea is that, if there *were* fundamentally different kinds of possible non-phenomenal qualities, then the space of possible qualities would be disunified, and if the space of possible qualities were disunified, then it could not be rendered intelligible. For example, if there were exactly seventeen disjoint different kinds of quality spaces, there could be no explanation why there were *exactly those seventeen*, rather than some other number.<sup>27</sup>

---

<sup>26</sup> One might instead posit that there are an *infinite* number of disjoint quality spaces, in order to avoid any arbitrariness that comes with specific finite numbers (e.g. seventeen disjoint quality spaces). However, the cardinality of disjoint quality spaces is not the issue. Even if there were infinitely many disjoint quality spaces, we could still ask why there couldn’t be an extra disjoint quality space that we were missing, even though such an extra quality space would not affect the overall cardinality of quality spaces. Moreover, there is no “maximal” infinite cardinality: for every infinite cardinality, there is a larger one. So, there would still be arbitrariness in specifying the exact cardinality of the number of disjoint quality spaces. To get around these problems, one might hypothesize that the number of disjoint quality spaces is *indefinitely extensible*, in the sense that, no matter how many fundamentally different kinds of qualities that there could have been, there could always have been more (e.g. see Uzquiano (2015) for different ways to make the notion of “indefinite extensibility” precise). This would avoid the worry that there could always be an additional kind of quality, since there is no definite totality of “all possible qualities” in the first place. However, the only reason for thinking that *sets* are indefinitely extensible is that there is a formal procedure that can be used to generate a new set given any plurality of sets (e.g. one could consider the set of all sets in that plurality), but there doesn’t seem to be any kind of formal “procedure” that could generate a fundamentally new kind of quality from a plurality of other kinds of qualities.

<sup>27</sup> One might worry that positing seventeen kinds of quality spaces is just as arbitrary as positing one quality space: why one rather than seventeen? But the number of quality spaces isn’t what’s important. What’s important is that the

Why accept the assumption that the space of possible qualities would be disunified if it contained both phenomenal and non-phenomenal qualities? Because of the motivations behind our initial assumption that consciousness cannot be reduced. The reason for thinking that experiential phenomena cannot be reduced to wholly non-experiential phenomena is captured by Strawson's (2006) intuition that "The experiential/non-experiential divide, assuming that it exists at all, is the most fundamental divide in nature" (17-18). If one thought that experiential/non-experiential distinction was *not* a fundamental divide, then the motivation for non-reductionism about consciousness would evaporate. If experiential phenomena were fundamentally unified and continuous with wholly non-experiential phenomena, then it would be natural to think that phenomenal experience is reducible for the very same reasons that other kinds of phenomena, such as *life*, are reducible. There is no "fundamental divide" between the living and the non-living (e.g. viruses), so we should not be non-reductionists about life. Similarly, if there is no fundamental divide between the experiential and the non-experiential, then we shouldn't be non-reductionists about consciousness.

So, we now have the argument fully in view. In order for the space of possible qualities to be intelligible (i.e. in order for it not to lead to brute necessities), it must be unified. But adding both phenomenal and non-phenomenal qualities to the space of qualities would be disunified, because there is a "fundamental divide" between the experiential and non-experiential (motivated by the thought that experience cannot be reduced to non-experience).

This kind of argument raises an immediate objection, so I'll close this section by addressing this objection.

The objection is that it is not at all clear whether the space of all possible phenomenal qualities is *itself* unified: visual experiences seem fairly different in kind than (say) auditory experiences. However, if the space of all phenomenal qualities is not unified, then identifying the space of possible qualities with the space of possible phenomenal qualities would not result in a unified space either.

I have four main responses to this worry. My first response is to try to emphasize the continuity of conscious experience by appealing to particular examples. For example, gustatory-experiences seem to seamlessly combine with olfactory-experiences when eating food: eating food without a sense of smell is remarkably different than eating food with a sense of smell. Affective experience can seamlessly combine with various kinds of perceptual experience, such as by experiencing a foul-smelling odor, a screeching loud sound, an extremely spicy taste, or an unpleasantly rough

---

space of possible qualities satisfies the Unity Hypothesis: a space needs to be unified in order to be intelligibly "generated" by some underlying mechanism (such as continuous variation along certain dimensions like the grey case), and a *consequence* (rather than a presupposition) of The Unity Hypothesis is that there aren't multiple disjoint quality spaces that are fundamentally different in kind.

and abrasive texture.<sup>28</sup> Cognitive phenomenology seems at least closely related to various kinds of sensory phenomenology, to the extent that some philosophers believe that cognitive phenomenology can be fully reduced to sensory phenomenology.<sup>29</sup> Furthermore, there are at least sixty different known kinds of “synesthesia”, where certain sensory experiences of one modality become associated with sensory experiences of a different modality.<sup>30</sup> Perhaps in some of these cases, sensory experiences of different modalities can be seen to be connected in ways that those of us without synesthesia cannot fully appreciate. More generally, ordinary human experience is very limited, as those who have taken various kinds of mind-altering substances can attest to. So we should be very cautious in making the inference that different kinds of experiences cannot be connected with one another just because we cannot imagine how they might be connected.

My second response is to appeal to certain very general views about conscious experience that suggest that conscious experiences might be more connected than we might initially think. For example, according to “holistic” views about the structure of conscious experience, the most basic kinds of conscious experiences are total experiential states at a given time, so that at any given time, the various visual, auditory, gustatory, olfactory, cognitive, affective, *etc.* kinds of experiences that one is having should be thought of as mere aspects of a total experience that integrates all of these kinds of experiences into a unified whole.<sup>31</sup> On this holistic view, it is easier to see how total states of consciousness of various different modalities might be continuously connected to other total states of consciousness of various modalities. For example, on the assumption that our own total conscious states evolve continuously through time, we can continuously connect any total conscious state you have at one time (e.g. dancing at a rock concert) to any other total conscious state you have that same day (e.g. having a relaxing massage) by tracing the continuous trajectory of how your total conscious experience evolves throughout that day. Lastly, one might worry that the space of possible phenomenal qualities does not satisfy the Unity Hypothesis on the grounds that radically different kinds of experience have nothing in common, but some philosophers have argued that all experiences *do* have a particular phenomenal aspect in common: namely a distinctive kind of *for-me-ness* that is supposed to capture the essentially subjective or perspectival character of all experience.<sup>32</sup>

My third response is that the Unity Hypothesis only applies to *fundamental* phenomenal qualities, and it is not at all clear that the ordinary phenomenal properties that we are familiar with are

---

<sup>28</sup> For more on how affective experience combines with various kinds of perceptual experience, see Fulkerson (2020) and De Vignemont (2023).

<sup>29</sup> For a survey of debates about the nature of cognitive phenomenology (including whether cognitive phenomenology might reduce to sensory phenomenology), see Smithies (2013).

<sup>30</sup> For an overview of synesthesia, see Banissy, Jonas, and Cohen Kadosh (2014).

<sup>31</sup> For more on the distinction between “holistic” and “atomistic” approaches to conscious experience, see Bayne and Chalmers (2003), Bayne (2010), and Lee (2014).

<sup>32</sup> See Kriegel and Zahavi (2015). To take another example, it has also been argued that various sensory experiences of different modalities all have a certain spatial character in common (e.g. see Aasen (2018) and Wilson (forthcoming)).

fundamental. For example, according to certain “constitutive” versions of panpsychism and idealism, the macroscopic phenomenal properties we are familiar with are non-fundamental properties that are grounded in the phenomenal properties had by fundamental entities (e.g. particles or the universe as a whole). It may be that our ordinary macroscopic phenomenal properties seem to be fairly disunified, even if the fundamental phenomenal properties that ground them are ultimately unified.<sup>33</sup>

My fourth and final response to this worry is simply to *modus tollens*. The space of all possible qualities must be intelligible, and if it is to be intelligible then it must be unified, and so if phenomenal qualities are included in the space of possible qualities, then the space of phenomenal qualities must be unified.<sup>34</sup> It might be *prima facie* difficult to see how the space of phenomenal qualities can be unified, but we all have reason to think that it must somehow be if we are to avoid brute necessities.

### 5. The First Argument: Potential Counterexamples

I have so far argued that if *some* possible qualities are phenomenal qualities, then we should think that *all* possible qualities are phenomenal qualities, on the grounds that the space of possible qualities must exhibit a certain kind of unity in order to avoid brute necessities. However, in response to this fairly abstract argument, one might simply point to certain alleged counterexamples of possible non-phenomenal qualities. The job of this section is to respond to two potential kinds of counterexamples.

The first kind of counterexample appeals to properties found in science. As we have seen earlier, the most obvious kinds of counterexamples – e.g. mass, charge, spin, etc. – can be responded to by a structuralist stance towards physics. Physics only tells us about the causal role that these kinds of properties play, rather than any intrinsic qualities underlying this role. However, one might argue that *geometrical* properties, like *being spherical*, might constitute a different kind of counterexample. On the face of it, properties like *being spherical* seem to be intrinsic properties that have a non-dispositional nature.

There are several things to say about such geometrical examples. First, *being spherical* does not seem to be a *fundamental* property, and by “quality” I mean to only be referring to (intrinsic) fundamental qualitative quiddities. More generally, a standard view is that spatiotemporal structure is grounded in fundamental spatiotemporal *relations*, such as distance relations, that ground shape

---

<sup>33</sup> See Lee (2019) for further discussion of the possibility that our introspectable macrophenomenal properties are realized by non-introspectable microphenomenal properties.

<sup>34</sup> Technically speaking, it might be that the space of phenomenal qualities is a disunified subspace of the (unified) space of all possible qualities. But this seems implausible: phenomenal qualities seem more unified to each other than they are to allegedly non-phenomenal qualities.

properties like *being triangular* or *being spherical* (e.g. a macroscopic object is only spherical because of the spatial relations that its parts stand in). Such a view is perfectly compatible with the claim that all possible qualities are phenomenal qualities, since such a view does not posit any fundamental spatiotemporal *qualities*. It should also be noted that the view that there are only fundamental spatiotemporal relations (rather than qualities) is compatible with a substantival view of space-time, according to which there are fundamental space-time points, which are themselves structureless entities that lack any spatiotemporal extension and dimensionality, that stand in various spatiotemporal relations to one another.<sup>35,36</sup>

A second point to make is that there are strong independent reasons for thinking that, at least in the context of science, spatiotemporal concepts pick out *functional* properties rather than intrinsic qualities. For example, one could have a phenomenological analysis of spatiotemporal concepts, where spatiotemporal concepts pick out whatever properties play a role in bringing about certain spatial/temporal experiences, or a non-phenomenological analysis of spatiotemporal concepts, where spatiotemporal concepts pick out whatever properties play a suitable “spatiotemporal role” in fundamental physical theories.<sup>37</sup> Such a functionalist approach is needed to account for a variety of fundamental physical theories, such as certain philosophical interpretations of quantum mechanics and certain speculative theories of Quantum Gravity, where spacetime is “emergent” rather than fundamental.<sup>38</sup>

A third and last point to make is that one could just as easily *modus tollens* potential geometric counterexamples to Modal Idealism by means of the argument in the previous section. On the face of it, phenomenal qualities and wholly non-experiential geometric qualities seem radically different in kind. If the space of possible qualities consisted of a space of phenomenal qualities together with a totally disjoint space of geometric qualities, this would cry out for explanation. What could explain why there are only *these two* specific kinds of qualities, rather than some other third kind of quality? In the absence of any kind of unity between the space of phenomenal qualities

---

<sup>35</sup> See Pooley (2013) for an overview of the debate between substantivalism and relationism. One might think that an ontology of space-time in terms of space-time points might still need to posit fundamental intrinsic geometrical properties to space-time points, such as the property of *being point-sized*. But *being point-sized* might be better understood as a “merely negative” property, such as *lacking spatial extension* and *lacking dimensionality*, and merely *lacking* a certain property should not be understood as a fundamental property itself (see note 43 for more discussion). Sider (2006) discusses this point further, writing that “a natural and economic theory of points of spacetime is that each one is a partless, truly bare particular that stands in a network of spatiotemporal relations” (393).

<sup>36</sup> Substantivist views of space-time need not be committed to a fundamental ontology of space-time points. For example, Schaffer (2009) argues for a monistic conception of space-time, according to which the spatiotemporal manifold as a whole is the only fundamental entity.

<sup>37</sup> Both such analyses are explored in Chalmers (2021), focusing mostly on the spatial case. Also see Lam and Wüthrich (2018) for more on the relevant functional role of spacetime in physical theories. Chalmers also discusses whether we might have a primitive (non-functional) concept of “Edenic shape” properties that are represented in perception. I have two responses to this. First, perhaps Edenic shape properties are also better thought of as non-fundamental properties that are grounded in Edenic spatial relations, and second, I will be further discussing the general class of “Edenic qualities” later in this section.

<sup>38</sup> For more on spacetime emergence, see Huggett (2021).

and geometric qualities, it's unclear how there could be an answer to this question. But if there is no answer to this question, then there would be brute necessary facts about the space of possible qualities.

Let us now turn to a second kind of counterexample, which is inspired by perception rather than physics. Within perception, it is natural to think that our perceptual states represent external objects as having certain primitive non-phenomenal qualities, which Chalmers (2006) calls "Edenic" qualities. For example, color experience seems to represent the surfaces of external objects as being primitively and qualitatively colored, where there is no *a priori* connection between such primitive Edenic colors and (say) the surface-reflectance properties studied by physics. Naïve Realists about perception believe that external physical objects really have such primitive (non-phenomenal) qualities, and they typically appeal to such Edenic qualities to explain the phenomenal character of our (veridical) perceptual experiences.

In my own view, there are good reasons for thinking that external objects don't have Edenic qualities. However, the mere fact that external objects don't *actually* have Edenic qualities doesn't let Modal Idealism off the hook. If it is even *possible* for there to be (non-phenomenal) Edenic qualities, then Modal Idealism would be false. Moreover, Edenic qualities have the interesting feature that they seem to be very closely related to phenomenal properties, so they might serve as a counterexample to Modal Idealism that *also* avoids our argument in the previous section. In particular, perhaps Edenic qualities are sufficiently closely related to phenomenal qualities that they would not render the space of possible qualities "disunified" in the way that other kinds of qualities might. The purpose of the rest of this section will be to address this important potential counterexample to Modal Idealism.

However, before I begin to argue that Edenic qualities are impossible, I want to make a (less important) dialectical point. In section 3, I flagged that I would be making the assumption that experiential phenomena cannot be reduced to non-experiential phenomena, contrary to Physicalists and "Panprotopsychists". However, it is natural to think that, if Edenic qualities are possible, then it *would* be possible to reduce facts about experience to facts about Edenic qualities (together with other (non-phenomenal) psychological facts). After all, one of the main motivations for positing Edenic qualities is precisely to account for our (perceptual) phenomenal experiences in terms of such Edenic qualities.<sup>39</sup> So, technically speaking, the possibility of Edenic qualities might not be relevant to the claim that I wish to defend. The metaphysical possibility of Edenic qualities *does* pose a counterexample to the unconditional claim that "Modal Idealism is true", but it's unclear whether it poses a counterexample to the conditional claim that "*if* phenomenal qualities cannot

---

<sup>39</sup> This is one of the main motivations behind "Panqualityism" (see Chalmers (2013) and Coleman (2017)). Although this is one of the main motivations for positing Edenic qualities, see Cutter (2022) and Mihalik (2022) for arguments that this motivation cannot succeed.

be reduced, then Modal Idealism is true”, because the possibility of Edenic qualities might make the antecedent of that conditional false.

Having made this dialectical point, let us set it to the side and see whether a case can be made that Edenic qualities are impossible. In broad strokes, I think that Edenic qualities only seem to be possible when we narrowly focus on Edenic colors. When we broaden our focus to the *general* category of Edenic qualities, we find that the general concept of an Edenic quality starts to unravel, and we find that there are good reasons to reject the general concept as incoherent.

Here is a formal way to state my argument against the possibility of Edenic qualities. If Edenic qualities *were* possible, there would have to be a precise and non-arbitrary answer to the following question:

*Question:* What is the space of all possible Edenic qualities?

However, there is no precise and non-arbitrary answer to this question. So, we should reject the possibility of Edenic qualities. This way to put the argument is rather formal and unintuitive, but I hope that, as I defend it, it will start to become more intuitive why Edenic qualities are not possible.

Start with the first step: why think that there has to be a precise and non-arbitrary answer to this Question? Because different answers to this Question entail different views about the space of possible fundamental qualities. If the answer to this question was arbitrary, then it would imply that the structure of modal space was arbitrary. However, as we’ve seen before, one of the main assumptions of this first argument is that modal space is not arbitrary. If the answer to this question was vague rather than precise, then, because I do not think that the concept of a “possible fundamental quality” is *semantically* vague, such an answer would commit to *metaphysical* vagueness. However, following most philosophers, I think that vagueness should be understood only as a feature of how we *represent* reality, rather than as a feature of reality itself.<sup>40</sup>

The next step is the important one: why think that there is no precise and non-arbitrary answer to this Question? Well, to start, the concept of an “Edenic quality” is supposed to pick out a (non-phenomenal) quality that a possible phenomenal experience can represent an object as having. So, in order for there to be answer to our Question, there would have to be answers to the following two questions:

*Question-1:* Which possible phenomenal experiences represent objects as having a corresponding Edenic quality?

---

<sup>40</sup> For an overview of arguments against metaphysical vagueness, see Barnes (2010).

*Question-2:* Among the Edenic qualities that possible experiences can represent objects as having, which are possible?

The purpose of the first question is to pick out which Edenic qualities are represented by possible experiences, and the purpose of the second question is to decide, of the Edenic qualities picked out by the first question, which are genuinely possible. Note that the second question is needed because it is consistent to hold that (say) visual experience *represents* external objects as having Edenic colors, but nevertheless such Edenic colors are not genuinely metaphysically possible. Once we have answers to these two questions, then we immediately have an answer to our main Question. Conversely, it seems like any answer to our main Question will have to presuppose corresponding answers to Question-1 and Question-2.

What is left is to argue is that there are no precise and non-arbitrary answers to Question-1 and Question-2. If neither question has a precise and non-arbitrary answer, then our main Question will not have a precise and non-arbitrary answer either. In fact, I really only need to argue that *one* of these two questions lacks a precise and non-arbitrary answer, but in fact I believe that neither question has a precise and non-arbitrary answer.

Start with Question-1. It is most common to think that paradigm cases of perceptual experiences represent objects as having primitive non-mental qualities, but we can also ask more broadly: which phenomenal experiences in *general* represent objects as having Edenic qualities? When I start reflecting on this question, I find that I quickly start losing my grip on the question. Consider the following experiences: *feeling anxious, feeling happy, feeling sad, feeling dizzy, feeling nauseous, feeling sexually aroused, having cognitive phenomenology* (associated with thought and understanding), *feeling the need to urinate, feeling nostalgia, feeling anger, feeling regret, feeling hot, feeling cold*, etc. All of these experiences have a distinctive phenomenology associated with them, but for which (if any) of these experiences is there a corresponding primitive non-mental Edenic quality that is represented as being instantiated by some object? I'm not at all sure. But when I reflect on experiences of these various kinds, it seems pretty clear to me that there is no (non-arbitrary) *precise* line to be drawn between those experiences that represent objects as having primitive Edenic qualities, and those that do not.

Moreover, my source of puzzlement about which of these experiences have corresponding Edenic qualities is peculiar. For example, when I try attending to an experience of *feeling dizzy*, it seems like I know perfectly well what that experience is like.<sup>41</sup> Still, even given complete knowledge of the phenomenal character of dizzy-experiences, it's still unclear whether the idea of a corresponding "Edenic dizziness" makes any sense (or "Edenic nausea"). This makes me wonder

---

<sup>41</sup> See Lee (forthcoming) for further clarification and discussion concerning the extent of our knowledge of our conscious experiences.



whether the source of my puzzlement is really puzzlement about what it is to be an “Edenic quality” in the first place.

In response to Question-1, one might simply say the following: a phenomenal experience represents a corresponding Edenic quality in some object if and only if that phenomenal experience is a *perceptual* experience. My first response to this suggestion is that it’s not clear that it is extensionally adequate, and my second response to this suggestion is that I don’t think the distinction between a “perceptual” experience and a “non-perceptual” experience is a precise distinction anyway (and what is needed is a precise and non-arbitrary answer to Question-1).

Consider, for example, experiences like *being in pain*, *experiencing an orgasm*, *feeling an itch*, or *feeling the need to urinate*. It is fairly plausible that such experiences represent certain Edenic qualities in different portions of our bodies. For example, a pain in my foot plausibly represents a certain kind of primitive quality in my foot. However, are such bodily experiences supposed to count as “perceptual”? If perceptual experiences are defined as those that are supposed to give us information about the “external world”, then this question boils down to the question of whether our bodies count as part of the “external world”. This question seems to be a merely verbal question, but the question of which Edenic qualities there could possibly be should not be a merely verbal question. It should be a question of fundamental metaphysics. Sometimes perceptual experiences are thought of as those that we do not have voluntary control over (e.g. visual or auditory experiences), as contrasted with (say) thought or imagination, where we do seem to have more voluntary control. However, *feeling dizzy* and *feeling nauseous* are experiences that we do not have voluntary control over, and it is not at all clear whether such experiences have corresponding Edenic qualities. Lastly, consider the experiences we have while dreaming, or while imagining. Perhaps it is most natural to categorize such experiences as “non-perceptual”, but it’s not clear whether such experiences lack any corresponding Edenic qualities, contrary to the suggestion that an experience represents a corresponding Edenic quality if and only if it is perceptual.

Having argued that there is no precise and non-arbitrary answer to Question-1, let us now turn to Question-2.

Of the possible Edenic qualities that phenomenal experiences can represent objects as having, which are genuinely possible? It seems to me that at least *some* of them are not genuinely possible. Consider an experience of intense pain in your foot (perhaps you just stubbed your toe). It seems like such an experience represents a certain Edenic painful quality as inhabiting your foot. However, Edenic qualities are supposed to be *non-mental* qualities, and such non-mental qualities should be able to be instantiated by physical objects in the absence of any experiencers (just like Edenic colors). But could there really be an intensely painful quality that is not experienced by anyone? For example, could a rock floating in space instantiate an Edenic quality of intense pain,

without being experienced by anyone? It seems like it couldn't. Intense pain seems to have an intrinsically motivating force to it that it doesn't make sense to ascribe to an unexperiencing floating rock. Perhaps in response one could say that, while Edenic pain is possible, it is nevertheless necessary that, whenever it is instantiated, there must be a corresponding experiencer that is "acquainted" with the relevant Edenic pain. There are two worries with this response. First, if it really is necessary that Edenic pain must be experienced whenever it is instantiated, then it is unclear why Edenic pain would still count as a "non-mental" quality in the first place. Second, insofar as we can make sense of a non-mental quality that is necessarily experienced, such a view would seem to be positing a brute necessary connection between wholly distinct existences, and it was an assumption of my original argument that there can't be brute necessities of this kind.

Suppose, then, that at least Edenic pain is impossible. Then so long as *some* Edenic qualities are impossible, the question immediately arises as to *where is the precise line* between those Edenic qualities that are possible and those that are not? Prima facie, it's hard to see where such a precise line should be drawn.

Let us think about some other experiences. Consider the taste experience of something that is really *spicy*. Is Edenic spiciness possible? Well, sufficiently spicy experiences can be, in a way, painful: they can be very unpleasant in a way that quickly makes us try to relieve the spiciness. So, if Edenic pain is impossible, then it seems like intense Edenic spiciness should be too. However, once one says that intense Edenic spiciness is impossible, what should one say for mild Edenic spiciness? Since there doesn't seem to be any non-arbitrary precise line to draw, it seems like we should say that, no matter how mild it is, no Edenic spiciness quality is possible.<sup>42</sup> Similarly, consider *sourness*. Intensely sour things have very different effects on us than intensely spicy things, but in a way, they are also unpleasant, and so for the very same reasons, it seems like Edenic sourness (no matter how mild) should be thought to be impossible. Similar things can be said for sweet and bitter taste experiences (although mildly sweet experiences can be pleasant rather than unpleasant). Once one sees this pattern, it is easy to apply all over the place. For example, consider a *very loud* auditory experience. Such an experience is unpleasant, and so for similar reasons one should think that a corresponding loud Edenic quality is impossible. But, because there is no non-arbitrary dividing line, one should similarly conclude that any auditory Edenic quality, no matter how soft, is impossible. Similar things can be said for (good-smelling or bad-smelling) olfactory Edenic qualities.

One might think that these kinds of examples suggest an interesting response to Question-2: perhaps only phenomenal experiences with *neutral* valence (i.e. ones that are neither pleasant nor unpleasant) have corresponding Edenic qualities that are possible.<sup>43</sup> This is an intriguing suggestion, but it's not clear that it works. For one, consider a holistic taste experience that has

---

<sup>42</sup> A structurally similar argument was given by Berkeley in his *Three Dialogues between Hylas and Philonous*.

<sup>43</sup> The exact nature of valence is contested, but see Carruthers (2018) for two contrasting accounts.

both positive and negative aspects to it, but these positive and negative aspects exactly “cancel out” to result in a holistic taste experience that has overall neutral valence (e.g. perhaps something is sweet and spicy, and the pleasantness of the sweetness exactly cancels out the unpleasantness of the spiciness). Is it possible for there to be a corresponding “holistic” Edenic taste quality? Insofar as I have intuitions about this, the answer seems to be “no”: so long as there is an aspect to the experience that is not neutrally valenced, then there needs to be a corresponding experiencer who is affected by that valenced-aspect (just like the pain case).

In response, one might suggest that only phenomenal experiences that don’t have *any* aspect to them that is positively or negatively valenced have corresponding Edenic qualities that are metaphysically possible. One worry about this view is that it’s not clear whether it picks out a precise class of phenomenal experiences, since it is not clear if there are precise facts about “all aspects” of an experience (or even whether there are precise facts about whether a particular aspect is exactly neutrally valenced). It is also unclear whether there are any phenomenal experiences that satisfy this description in the first place (partly because it’s unclear how to make sense of “every aspect” of an experience). Lastly, the project of stripping away all possible valence out of an experience doesn’t seem to be getting at the heart of the issue. The heart of the issue is that phenomenal experiences have all sorts of capacities to affect us in various ways. This is most obvious in the case of painful experiences, but it is also clearly the case for bad odors, itches, orgasms, etc. Insofar as experiences have these capacities, then it seems like there needs to be a corresponding subject that is affected by these capacities. Moreover, the ways that experiences affect us are many and varied: the impact that experiences have on us can’t be fully captured with a single dimension of “positive” or “negative”: experiences can be more or less interesting, or vivid, or surprising, or beautiful, or sublime, or nostalgic, or visceral, or disgusting, etc. What we would need for an Edenic quality to be possible is to have an experience that has no capacity to affect us in any way whatsoever, and it is unclear whether there are any examples of such experiences.

The case of Edenic color is perhaps the best case for such an example, but on reflection, many of the same things that can be said for other sensory modalities could also be said for color. Consider, for example, being shown an intensely bright white light as soon as you wake up from a deep sleep. Such an experience would be unpleasant (just like sourness and spiciness), and it is moreover unclear where to draw a precise line between such an intense visual experience from other more common visual experiences. Or consider how a visual experience of a beautiful sunset affects you, and how greatly it differs from an experience of uniform grey. Or consider a uniformly white visual field with a flashing bright red circle in the center, and how the red seems to be intrinsically “attention grabbing” in a way that its surroundings are not. The ways that colors affect us are clearly not as striking as the way that (say) placing one’s hand on a hot stove affects us, but it’s unclear whether there is a *sharp* line to be drawn between these experiences, which is what would

be needed to delineate metaphysically possible Edenic qualities from metaphysically impossible ones.

In sum, I have argued that *neither* Question-1 nor Question-2 admits of a precise and non-arbitrary answer. But, if at least *one* of them does not admit of a precise and non-arbitrary answer, then our main Question will not admit of a precise and non-arbitrary answer either, which is incompatible with the possibility of Edenic qualities.

## 6. Interlude: Getting to Modal Idealism

I've finally finished arguing that it is necessary that every quality is a phenomenal quality. But how do we get from this claim to Modal Idealism? Recall that Modal Idealism is the claim that it is necessary that (i) every fundamental entity is conscious and (ii) every fundamental property is a phenomenal property. However, we can disambiguate the second condition in two ways. According to *Impure* Modal Idealism, every fundamental *one-place* property is phenomenal. Such a view is neutral on whether there might be fundamental relations that are not consciousness-involving. According to *Pure* Modal Realism, every fundamental property *and relation* is consciousness-involving. In order to keep the discussion manageable, I will argue for Impure Modal Idealism in the main text, and I will further argue for Pure Modal Idealism in an appendix.

It turns out that there are three ways to resist (Impure) Modal Idealism while granting that every possible quality is a phenomenal quality. However, all three of these ways are highly controversial. In this section, I'll briefly describe these three ways, and mention why they are controversial.

First, one could reject Modal Idealism by arguing that there could be fundamental entities that are *bare particulars*, which do not possess any (non-haecceitistic) fundamental properties at all.<sup>44</sup> If there could be bare particulars, then it would be false that it is necessary that every fundamental entity is conscious (contrary to Modal Idealism), since bare particulars would not be conscious.

---

<sup>44</sup> By "bare particular" I mean to refer to what Sider (2006) calls "truly bare particulars" (rather than any "substratum" in the context of the substratum theory of objects and properties). I am also assuming that "merely negative" properties, like *lacking mass* or *lacking electric charge* are not fundamental properties (because otherwise bare particulars would have such non-haecceitistic fundamental properties). If such merely negative properties were fundamental properties, then there might be an infinity of extra fundamental properties that we would have to ascribe to everything: for every fundamental alien property P that is not instantiated in our world, there would seem to be a corresponding fundamental property of *lacking P* that would be instantiated by everything in our world. I am also assuming that "trivial" properties like *being self-identical* are not fundamental properties, since fundamental properties are typically thought of as substantive properties that are contingently instantiated. For more on properties concerning identity and distinctness, see note 47. Even if one does recognize such merely negative or trivial fundamental properties, then bare particulars could be defined as entities that do not possess any (non-haecceitistic) fundamental non-trivial positive properties.

My first response to this worry is that many philosophers, both historically and in contemporary times, have thought that bare particulars are in some way incoherent or unintelligible.<sup>45</sup> For one, it is not clear that we can positively conceive of bare particulars. Try to positively conceive of a world that contains nothing but a single bare particular. Such a world would be completely devoid of colors, shapes, masses, particles, fields, conscious experiences, etc. Now conceive of a world that contains nothing at all. Did you manage to conceive of two clearly distinct possibilities? To many, the answer will be no. Insofar as one finds bare particulars to be inconceivable, this gives one some (defeasible) reason to think that bare particulars are not genuinely possible. In writing about the “obvious incoherence” of bare particulars, Strawson (2017) writes, “Clearly there can no more be objects without properties than there can be closed plane rectilinear figures that have three angles without having three sides...to be is necessarily to be somehow or other, i.e. to have some nature or other, i.e. to have properties” (69). Armstrong (1997: 109–10) claimed that bare particulars were “vicious abstractions” and was explicit about their impossibility when building his own metaphysics. Although Sider (2006) defends the intelligibility of bare particulars, he aptly summarizes a common attitude towards bare particulars in saying that “bare particulars are widely regarded as the grossest of metaphysical errors” (392).

The second response to make is that there are independently motivated metaphysical views that are incompatible with the existence of bare particulars. For example, according to the “bundle” theory of objects, objects are mere bundles of properties, so if there are no properties to bundle together (as with bare particulars), then there is no corresponding object. The same could be said for a wide variety of other views that reject the existence of an underlying “substratum”, whose role it is to “instantiate” various properties.<sup>46</sup> The idea of a bare particular only seems to make sense according to such a theory - a bare particular is simply an underlying substratum that does not instantiate any fundamental properties. For arguments against this kind of substratum theory, see Dasgupta (2017), Builes (2021), and Strawson (2021).

The second way to resist Modal Idealism is by arguing that there could be fundamental entities that possess fundamental dispositions or powers (and such fundamental powers would not be phenomenal properties, contrary to Modal Idealism). Of course, it is common to believe in dispositions or powers, like the fragility of a glass, but the posit of *fundamental* dispositions or powers, which lack any underlying categorical grounding, is a posit that is highly controversial. For example, while it is intuitive to think that a glass is fragile (i.e. disposed to break if struck) in virtue of its microphysical organization, the idea of a *primitively fragile* glass, which isn't fragile in virtue of any other features that it possesses, seems dubiously coherent. Sider (2001) argues against such brute dispositions on the grounds that they posit brute “hypothetical properties [that] ‘point beyond’ their instances” (41). More generally, anyone who believes that modal facts must

---

<sup>45</sup> See, for example, Plato's *Timaeus* (48c-53c), Aristotle's *Metaphysics* (1029a20-33), Locke (1689/1997), Russell (1996), Mertz (2003), Lowe (2003: 86), Bailey (2012), and Giberman (2012).

<sup>46</sup> See, for example, Dasgupta (2009) and Turner (forthcoming).

be grounded in non-modal facts will reject the possibility of such brute dispositions. For further criticisms of metaphysical views that posit fundamental powers, see Barker and Smart (2012), Barker (2013), and Jaag (2014).<sup>47</sup>

Lastly, one could resist Modal Idealism by arguing that there could be fundamental entities that possess *bare quiddities*, i.e. quiddities whose nature is wholly characterized merely by which other quiddities they are (non-)identical with. Perhaps the primary metaphysical reason to be wary of bare quiddities is that they seem to imply a proliferation of metaphysical distinctions that are ultimately illusory. For example, because bare quiddities lack any substantial nature, it is unclear what the difference is supposed to be between a bare particular and an object whose only fundamental property is a bare quiddity. It is furthermore unclear what the difference is supposed to be between a world where a single object  $x$  instantiates bare quiddity  $Q_1$ , and a world where instead  $x$  instantiates a numerically distinct bare quiddity  $Q_2$ . Because bare quiddities do not have any substantive qualitative nature, such possibilities would be qualitatively indiscernible. Lastly, the main motivation for adopting quiddities (namely, to avoid positing fundamental dispositions or causal powers) is satisfied by adopting qualitative quiddities, which Modal Idealism already does. As Hildebrand (2016) argues, the reasons to posit quiddities are perfectly satisfied by qualitative quiddities, and the many arguments *against* quiddities are only persuasive against bare quiddities.<sup>48</sup>

In sum, the case from “all possible qualities are phenomenal qualities” to Modal Idealism is not airtight. One could avoid Modal Idealism by upholding the possibility of bare particulars, fundamental powers, or bare quiddities. Still, all of these posits are highly controversial, and the claim that all possible qualities are phenomenal qualities at least makes Modal Idealism much more plausible than it otherwise might be.

---

<sup>47</sup> It should be noted that a popular argument against fundamental powers, namely that positing fundamental powers involves a certain kind of vicious regress (e.g. see Robinson (2022: ch. 9)), only applies to views where *all* fundamental properties are powers. However, what is needed here is the stronger claim that it is impossible for there to be *any* fundamental powers.

<sup>48</sup> There are some other more exotic ways to resist Modal Idealism. For example, one could think that there are possible fundamental haecceitistic properties, such as the property of *being identical to p* or the property of *being distinct from q*. However, such properties are not needed to have fundamental haecceitistic facts. For example, suppose the fundamental facts were of the form  $[p_1 \text{ is } F], [p_2 \text{ is } G], \dots, [p_1 \text{ bears relation } R \text{ to } p_2], \dots$ , etc. where all of the properties and relations are non-haecceitistic, but  $p_1, p_2$ , etc. are primitively distinct individuals. Such a view would have fundamental haecceitistic facts, but not because of the fundamental properties that the view recognizes. One could also think that everything has a fundamental non-haecceitistic property of *being self-identical*, which would also be a counterexample to Modal Idealism. However, because everything “trivially” has this property, it seems to be better to not posit this as an additional fundamental property, since fundamental properties are often thought of as contingently instantiated. Lastly, even if these kinds of counterexamples to Modal Idealism succeed, one could refine the definition of Modal Idealism to be “necessarily, every fundamental entity is conscious, and all non-haecceitistic contingently instantiated fundamental properties are phenomenal properties”. Defending such a view would still be of great metaphysical interest. For different accounts of the grounding of identity and distinctness facts, which don’t commit to fundamental properties concerning identity and distinctness, see Litland (2022) and Rubenstein (2023).

## 7. The Second Argument: The Eleatic Principle

The second argument for Modal Idealism appeals to the following principle:

The Eleatic Principle (EP): Necessarily, every concrete object has causal powers.<sup>49</sup>

First, I'll argue that the best way to develop a metaphysics based on EP is to endorse Modal Idealism. Second, I'll argue that several potential counterexamples to Modal Idealism can be resisted by appealing to EP. In sum, I'll be arguing that EP strongly supports Modal Idealism.

Could there be a concrete object that is entirely causally inert? For example, could there be a spatiotemporally located object (hence, a concrete object) that is entirely causally inert? At the very least, it is hard to see how we could ever *know* about the existence of such an entity, since we could never causally interact with it. So perhaps we could never justifiably believe in any counterexamples to EP. However, many philosophers, both historically and in contemporary times, have gone further and defended the metaphysical requirement that having causal powers is a necessary condition for (concretely) existing in the first place. According to Leibniz (1714: 65), "activity...is of the essence of substance", and Schopenhauer (1813: 119) wrote that "matter is throughout pure causality, its essence is action in general".<sup>50</sup> Further contemporary supporters of EP include Armstrong (1978), Ellis (1990: 22), Field (1989: 68), and Strawson (2016). My goal in this section won't be to further argue for EP. Instead, my goal will be to draw out some of the consequences of EP for those who have some antecedent attraction to the principle.

My overall strategy for arguing that the best way to endorse EP is to endorse Modal Idealism will be to argue that Modal Idealism allows the defender of EP to avoid having to posit all sorts of brute necessities. Since EP is crucially about causation, and since philosophical views about causation are inextricably linked to views about laws of nature, I will be considering how EP might be developed according to different views about the nature of causation and laws.

To start, consider a "Humean" view of causation and laws. According to Humeanism, there is a spatiotemporal mosaic that is filled with local, point-sized qualities, and there are no metaphysically necessary connections between the intrinsic state of one spatiotemporal region and any other non-overlapping spatiotemporal region. According to the most influential development of Humeanism by David Lewis, laws of nature are merely simple and informative summaries of the mosaic, and facts about counterfactuals and causation are determined by reference to such laws.<sup>51</sup> The problem with combining Humeanism with EP is that there are metaphysically possible

---

<sup>49</sup> A popular strengthening of EP is that "to be is to have causal powers". I will appeal to this strengthening of EP towards the end of this section.

<sup>50</sup> Strawson (2016) also attributes something like EP to both Plato and Aristotle.

<sup>51</sup> Versions of this "best systems account" of laws are developed and defended by Earman (1986), Lewis (1994), Loewer (2007), Cohen and Callender (2009), and Hall (2015).

mosaics that do not exhibit any simple or informative patterns at all, so such possible mosaics would have no laws at all. However, in the absence of any laws, entities in such a mosaic would not stand in any causal relations, violating EP.<sup>52</sup> In response, the Humean could simply reject the metaphysical possibility of such mosaics, but without any independent reason to do so, such a rejection would be committing to brute constraints on modal space. Moreover, as Cowling (2015) has noted, there might be mosaics where it is *indeterminate* whether there are any laws, because it might be indeterminate whether there are any sufficiently simple and informative regularities in such mosaics. In order to comply with EP, the Humean would either have to say that the space of possible mosaics is itself indeterminate, or else they could admit the possibility of things that “indeterminately exist” (since it is indeterminate whether they stand in causal relations). Neither option is particularly attractive.

Among Non-Humean approaches, some account for causation in terms of laws of nature, and others account for laws of nature in terms of causation. Let’s start by considering the former.

According to law-based views, laws of nature can either be understood as fundamental entities in one’s ontology, or else as relations of “necessitation” between universals.<sup>53</sup> A familiar objection to such views is that the metaphysically necessary connection between their Non-Humean posit (“laws” or “necessitation relations”) and corresponding events in the concrete world is mysterious. Why is it absolutely necessary that if a universal F-ness stands in a certain relation to a universal G-ness, then every F must also be G?<sup>54</sup> However, going beyond this standard objection, in order to comply with EP, such views would have to say that *all possible worlds* have primitive laws or necessitation relations, because in the absence of any such laws, nothing would stand in any causal relations.<sup>55</sup> Given that it seems easily conceivable for there to be worlds that lack these Non-Humean posits, this seems to be a problematic brute necessity. In addition, there not only have to be *some* laws in every world, every world has to have laws that govern *every property* in that world. Otherwise, there could be objects with causally inert properties that are not governed by any corresponding law. It would be better if the defender of EP could do without these brute constraints on modal space.

Third, there are Non-Humean approaches that posit fundamental causal powers.<sup>56</sup> The first problem for this view is one we’ve already seen: while it is familiar to posit causal powers or dispositions that obtain in virtue of underlying categorical facts, fundamental powers are much more controversial. Furthermore, this view faces a similar problem to the previous view: it would

---

<sup>52</sup> There are other versions of Humeanism that do not reduce causation to laws (e.g. see Wilson (2009)), but such views face similar problems.

<sup>53</sup> See Carroll (1994), and Maudlin (2007) for views of the former sort, and see Dretske (1977), Tooley (1977), Armstrong (1983) for views of the latter sort.

<sup>54</sup> For more on this “inference problem”, see van Fraassen (1989), Sider (1992), and Schaffer (2016).

<sup>55</sup> Maybe other views about causation could hold in worlds without laws of nature (e.g. Humeanism). But such a position would then also face the problems faced by other views of causation.

<sup>56</sup> See Mumford (2004), Bird (2007), Chakravarty (2007).



have to be combined with the view that it is *impossible* for there to be fundamental properties that are not powers: otherwise, it seems like something could exist that only possess such non-powerful properties. In the absence of any independent motivation for this modal constraint, this would be a brute necessity that it would be better to avoid.

Let us finally see how Modal Idealism might secure EP. According to EP, everything must have causal powers, but according to Modal Idealism, there are no *fundamental* causal powers. The only fundamental properties are phenomenal properties. So, the combination of EP and Modal Idealism entails that everything must have *non-fundamental* causal powers. This immediately raises a worry about brute modal facts. Facts about the distribution of non-fundamental properties must be necessitated by facts about the distribution of fundamental properties, since non-fundamental facts supervene on fundamental facts. So to avoid brute modal facts, the Modal Idealist must be able to explain why things have the non-fundamental causal powers they do by appealing to facts about the distribution of fundamental phenomenal properties. How could this be done?

The answer is that it can be done by the *Phenomenal Powers* view, which is precisely the view that phenomenal qualities ground corresponding causal powers.<sup>57</sup> The fundamental insight behind the Phenomenal Powers view is that the connection between phenomenal qualities and their corresponding causal powers seems to *make sense*. For example, it is not a mystery why someone who is in pain would try to get rid of that pain: the reason why people try to avoid pain is because of its intrinsically repulsive character. Similarly, it is not a mystery why someone who feels hungry or thirsty would be motivated to try to satisfy their hunger or thirst, or why someone who feels an itch would be motivated to try to scratch the itch, or why someone who entertains an obvious proposition like “2+2=4” would be motivated to endorse it<sup>58</sup>, or why someone who feels exhausted would want to stay in bed, etc. So, the Phenomenal Powers view not only entails that phenomenal qualities ground corresponding causal powers, but it also claims that this grounding relationship is intelligible. In fact, Mørch (2017, 2018, 2019a, 2019b) has argued that it is *inconceivable* that phenomenal properties ground any alternative power to the one that they in fact ground. For example, it is inconceivable that the experience of pain makes someone try to *pursue* further pain in virtue of its phenomenal character.<sup>59</sup>

---

<sup>57</sup> For different defenses of the Phenomenal Powers view, see Langsam (2011), Mørch (2017, 2018, 2019a, 2019b), Builes (2020), and Pallies (2022). The Phenomenal Powers view is an instance of the more general “grounding view of powers”, according to which qualities ground corresponding causal powers. Kimpton-Nye (2021), Builes (2022b, 2023, forthcoming), and Tugby (2022) all defend the grounding view of powers in ways that do not presuppose the Phenomenal Powers view.

<sup>58</sup> This kind of view is defended by Brentano (1933: 55-56).

<sup>59</sup> More specifically, Mørch has argued that phenomenal properties ground certain *mental* effects (e.g. pain grounds the power to *try* to avoid it). One might worry that phenomenal powers cannot account for all of the causal powers in the world because phenomenal powers cannot intelligibly ground *physical* (or non-mental) effects. This kind of worry is often raised in the context of the interaction problem for Dualism, where it’s not clear how mental causes can have physical (or non-mental) effects, if the category of the mental is fundamentally different in kind than the category of the physical (or non-mental). However, while this worry might be plausible with a background Dualist metaphysics, it does not have any force given Modal Idealism, since it impossible for there to be anything non-mental given Modal

Of course, in all of these cases, the connections between one's experiences and their corresponding dispositional roles is defeasible: for example, you might experience a pain that you don't try to get rid of if you have some other motive for enduring the pain (e.g. being at the dentist). However, in the absence of any interfering motives, phenomenal states seem to have at least a "default" corresponding power.<sup>60</sup>

In sum, by appealing to the Phenomenal Powers view, Modal Idealism directly entails EP in a way that avoids any additional *ad hoc* assumptions, and it avoids all of the kinds of brute necessary facts that other views have to commit to in order to abide by EP. It is also important to note that both the Phenomenal Powers view and Modal Idealism are needed to secure EP. Without the Phenomenal Powers view, Modal Idealism is consistent with phenomenal properties not grounding any powers at all, and without Modal Idealism, the Phenomenal Powers view is consistent with there being non-conscious entities that lack any causal powers.

Finally, not only is Modal Idealism beneficial to EP, but EP is also beneficial to Modal Idealism. By appealing to EP, three potential kinds of counterexamples to Modal Idealism can be avoided.

First, there is the case of Edenic qualities, such as Edenic colors. If there could be concrete objects with fundamental Edenic qualities, then Modal Idealism would be false. Here the crucial question becomes: do Edenic qualities intelligibly ground corresponding intrinsic causal powers in the same way that phenomenal qualities do? If the answer is "no", then the possibility of Edenic qualities is in tension with EP, since an object whose only fundamental properties are Edenic qualities would lack any corresponding intrinsic causal powers.

I think there are good reasons for thinking the answer is no. As we saw in section 5, the plausibility of an Edenic quality possibly existing independent of experience crucially turns on that quality *not* having any intrinsic causal powers. One reason why it is implausible that Edenic pain is possible is because of the intrinsically motivating force that pain seems to have. One reason why it is more plausible that Edenic colors are possible is because it might seem like colors lack any such intrinsically motivating force. For example, insofar as Edenic colors are intelligible, it seems like we can conceive of a primitively red sphere floating in otherwise empty space doing nothing at all, which would violate EP.

---

Idealism. One might also worry that phenomenal qualities had by a subject can only produce mental effects for *that very subject*, and so phenomenal qualities cannot explain how distinct subjects causally interact. Partly for this reason, I think Modal Idealists should endorse what Chalmers (2019) calls Cosmic Idealism, according to which the only fundamental entity is a single cosmic mind or "universal consciousness" (see Kastrup (2018) and Albahari (2019, 2020) for different versions of Cosmic Idealism).

<sup>60</sup> Another common objection to the claim that pain has a *ceteris paribus* power to make one try to avoid it is the phenomenon of *pain asymbolia*, since people with the condition of pain asymbolia report that they are in pain but don't feel any motivation to get rid of the pain (e.g. see Grahek 2007). However, this would only be an objection to the phenomenal powers view if the phenomenal character of normal pain is the very same as the phenomenal character of asymbolic pain, which is highly controversial (e.g. see Rachels (2000), Bain (2014), and Mørch (2019a)).

In response, perhaps the defender of Edenic colors might say that Edenic colors have the causal power to affect the phenomenal experiences of perceivers who look at them: for example, Edenic redness might have the power to cause phenomenally red experiences when perceived. There are a number of problems for this proposal. For one, even if the actual world was endowed with Edenic colors, it is far from clear that they would causally affect our phenomenal experiences. Our phenomenal experiences are completely causally explained by surface reflectance properties rather than such Edenic properties.<sup>61</sup> Perhaps instead one might say that Edenic colors have the causal power to affect the phenomenal experiences of perceivers *of the right kind*: namely, perceivers who can be “directly acquainted” with the Edenic colors of external objects. There are two major problems with this proposal. First, it is not at all clear that we have an intelligible account of how one could be directly acquainted with external non-mental qualities of physical objects. Naïve realists typically take such an acquaintance relation to be a *sui generis* relation that cannot be understood in any other terms, but one might easily wonder whether such a *sui generis* relation is intelligible.<sup>62</sup> Second, insofar as we can make sense of direct acquaintance with non-mental qualities, it is not clear whether such Edenic qualities would be *causing* our perceptual experiences or whether they would be (partly) *constituting* our perceptual experiences. For example, Chalmers’ (2006) writes that “perfect perception” of Edenic qualities “requires unmediated acquaintance with the object or the property, and perhaps also requires that the object or the property is itself a constituent of one’s perceptual experience” (94). If direct acquaintance is understood in terms of constitution, then Edenic qualities might only constitutively contribute, rather than causally contribute, to the phenomenal character of perceptual experiences in cases of “perfect perception”.

In sum, it is at least far from clear that Edenic qualities are capable of intelligibly grounding intrinsic causal powers in the way that phenomenal qualities can, and if they cannot, then EP entails that Edenic qualities are impossible, in conformity with Modal Idealism.

Other potential counterexamples to Modal Idealism can be handled with a popular strengthening of EP, which is also entailed by Modal Idealism and the Phenomenal Powers view:

EP+: Necessarily, *everything* has causal powers.

Consider, for example, the case of bare particulars. If there could be bare particulars, then Modal Idealism would be false. However, the possibility of bare particulars is in tension with EP+, since bare particulars do not have any intrinsic causal powers.<sup>63</sup> There are some views that could give

---

<sup>61</sup> The defender of Edenic properties could in principle identify (or ground) Edenic colors in surface reflectance properties (e.g. see Campbell (1993) and McGinn (1996)), but such a proposal would face the same “explanatory gap” worries that come with identifying (or grounding) phenomenal experiences in brain states.

<sup>62</sup> Yetter-Chappell (forthcoming) argues against the intelligibility of acquaintance with non-mental qualities. For more on the primitive nature of the acquaintance relation, see Brewer (2011), Soteriou (2013), and French and Phillips (2023).

<sup>63</sup> Note that it is consistent with EP, but not EP+, that there could be abstract objects that are bare particulars (contrary to Modal Idealism).

*extrinsic* causal powers to bare particulars, but there are independent reasons for thinking that such views do not square well with EP. For example, on a Humean view, bare particulars could be said to “cause” things if there are suitably many bare particulars that exhibit appropriately simple and informative regularities. However, as we have already seen, (i) Humean views must reject EP insofar as they are committed to the possibility of Humean mosaics without any simple and informative regularities, and (ii) since it can be vague whether a Humean mosaic has any laws, EP commits the Humean to vagueness about existence and/or modality.<sup>64</sup>

Second, there are bare quiddities. If there could be objects whose only fundamental properties are bare quiddities, Modal Idealism would also be false. Again, however, the possibility of objects whose only fundamental properties are bare quiddities is in tension with EP+ for the very same reason that the possibility of bare particulars is in tension with EP+.

In conclusion, there is a natural harmony between EP (and EP+) and Modal Idealism, together with the Phenomenal Powers view. Anyone who has some sympathy with EP therefore has extra reason to endorse Modal Idealism (together with the Phenomenal Powers view).

### **8. Third Argument: Our Knowledge of Consciousness**

The third argument for Modal Idealism, like the first argument, will assume a background view of non-reductionism about phenomenal consciousness. However, I hope the argument will also be relevant to those who are eliminativists about phenomenal consciousness, since the argument I will be pursuing is closely related to a central motivation for eliminativism.

In broad strokes, the argument is the following. We seem to know that we are phenomenally conscious. But, Chalmers (2018, 2020) has recently developed an argument that attempts to “debunk” our beliefs about our own conscious states.<sup>65</sup> The third argument for Modal Idealism will be that it helps to respond to Chalmers’ debunking argument. In other words, Modal Idealism helps us secure our knowledge of our own phenomenally conscious states.

In order to state the debunking argument, let the phrase “phenomenal intuitions” pick out our judgments about our own states of phenomenal consciousness (e.g. “I am conscious” or “I am in

---

<sup>64</sup> Alternatively, one could have a Non-Humean view in which there are external governing laws that give causal powers to bare particulars. However, there is no independent reason for thinking that all possible worlds with bare particulars must also include Non-Humean laws that govern all bare particulars. In the absence of any such independent reason, such Non-Humean views must swallow brute necessary connections between the existence of bare particulars and the existence of corresponding governing laws to comply with EP.

<sup>65</sup> Although I will be focusing on Chalmers’ development of this debunking argument, similar issues arise in Kirk (2008), as well as in Frankish’s (2016) discussion of the “illusion problem” (also see Kammerer (2018)).

pain”), where “judgements” are understood in purely functional terms (e.g. dispositions to report and behave in appropriate ways). Chalmers’ presents his debunking argument as follows:

1. There is an explanation of our phenomenal intuitions that is independent of consciousness.
2. If there is an explanation of our phenomenal intuitions that is independent of consciousness, and our phenomenal intuitions are correct, their correctness is a coincidence.
3. If our phenomenal intuitions are correct, their correctness is not a coincidence.
4. Therefore, our phenomenal intuitions are not correct.

If this argument is sound, it would imply that none of us is conscious. So, anyone who believes that we *are* phenomenally conscious must reject one of the premises.<sup>66</sup>

The motivation for premise 3 is straightforward: other things being equal, it is better for a theory to avoid coincidences. Moreover, if it is a mere coincidence that our phenomenal intuitions are correct, that might naturally be taken to undermine our justification in our belief that we are phenomenally conscious.

The motivation for premises 1 and 2 crucially turns on what is meant by “independent”. One sense of independence is “descriptive independence”. On this sense, an explanation of our phenomenal intuitions is independent of consciousness if it never explicitly *mentions* any conscious states. On this reading, premise 1 is plausible: it seems like we can give a complete “structural” explanation of our phenomenal intuitions that never mentions consciousness, but rather only appeals to facts about the structure and dynamics of our brain. However, on this reading of “independence”, premise 2 is clearly false. For example, there might be brain-based explanations of our judgements about *cats* that never explicitly mention cats, but that does not make our (correct) judgements about cats a coincidence. This is because cats are still playing a *causal* role in bringing about the relevant brain states. Similarly, there might also be a physics-based explanations of our judgements about cats that involve massively complex arrangements of particles-arranged-cat-wise, but so long as those particles *constitute* cats, it again seems like our judgements about cats are not coincidental.

For this reason, Chalmers argues that the best response to this debunking argument involves a strategy he calls “realizationism”, according to which the physical structures in our brain that explain our phenomenal intuitions are themselves realized by consciousness, so that “brain-based” explanations of our phenomenal intuitions still allow for consciousness to be causally and

---

<sup>66</sup> One could also run the argument in terms of “beliefs” instead of (functionally construed) “phenomenal intuitions”. This would raise subtle issues about whether beliefs are themselves constituted by phenomenal consciousness (e.g. see Chalmers (2003b), Yetter-Chappell (2022). and Duncan (forthcoming)). However, even if our beliefs might be justified by the fact that they are constituted by consciousness itself, one can still ask whether the correctness of our phenomenal intuitions is a mere coincidence.

constitutively involved in explaining our phenomenal intuitions (much like the “cat” case above). For example, according to realizationism, if I were to make a judgement that I am in pain in ordinary circumstances, then the structures in my brain responsible for my judgement would be at least partly realized by the corresponding phenomenology of pain that my judgement is about.

However, one could still worry that realizationism does not completely remove the threat of coincidence. Even if we grant that the physical structures in our brain that explain our phenomenal intuitions are realized by the phenomenal qualities that our phenomenal intuitions are about, isn’t it possible that the *very same* physical structures could be (i) realized by totally different phenomenal qualities that do not correspond to the relevant phenomenal intuitions or (ii) realized by something entirely non-phenomenal?

If either (i) or (ii) are possible, then structural explanations for our phenomenal intuitions would still be *modally* independent of the relevant phenomenal states: in the sense that the very same structural explanation could have obtained without the relevant phenomenal states. It could have been realized by totally different phenomenal states, or it could have realized by something wholly non-phenomenal. Given this modal independence, however, it can still seem to be a coincidence that our phenomenal intuitions are correct. It would just be a matter of luck that we happened to have the right realizers that cause our phenomenal intuitions. In other words, substituting “independent” for “modally independent” in the debunking argument still poses a significant challenge for the realizationist response.

According to Chalmers, the best response to (i) involves commitment to the Phenomenal Powers view developed by Mørch (2020), where phenomenal states necessarily have specific corresponding causal powers. On this view, it is not the case that phenomenal states can be “modally recombined” to play any causal role; rather, phenomenal states necessarily play particular causal roles whenever they are instantiated.<sup>67</sup> For example, following an idea by Langsam (2011), Mørch suggests that perhaps phenomenal states have a *ceteris paribus* power to cause judgements that we are in the relevant states, at least under suitable background conditions of sufficiently attending to our phenomenal states. For example, suppose your visual field is green on the left-half and red on the right-half, and you judge that there is a phenomenological difference between the left-half and right-half of your visual field. On the relevant kind of Phenomenal Powers view, the actual phenomenal contrast in your visual field (partly) causally explains why you made the relevant judgement, and you wouldn’t have made the same judgement if you had a uniformly colored visual field, or if you were blind and had no visual field at all, because those different phenomenal states (necessarily) have different powers that would (*ceteris paribus*) causally bring about different phenomenal intuitions. Although I am sympathetic to this response,

---

<sup>67</sup> A weaker view is that it is *nominally*, but not metaphysically, necessary that phenomenal states have specific causal powers. Such a view is developed by Saad (2019).

I won't be pursuing it any further here, since whether it is successful is independent of the viability of Modal Idealism.

Modal Idealism becomes relevant in responding to (ii). Even if the Phenomenal Powers view successfully responds to (i), there's still a worry that the physical structures in our brains that explain our phenomenal intuitions could have existed without being realized by any phenomenal qualities at all. For example, there might be a "zombie world" that is structurally just like ours but where the structure of our brain is realized by wholly non-experiential qualities. In that zombie world, there would be a structural-isomorph of each of us that has the very same phenomenal intuitions, but they would all be massively mistaken. Alternatively, there might be a zombie world that is structurally identical to ours but where the structure of our brain isn't realized by *any qualities at all*. For example, such a "purely structural" world might consist of various bare particulars standing in spatiotemporal relations to one another.

Is it just a coincidence that we inhabit a world where the structure of our brain is realized by *phenomenal* qualities, rather than a world where the structure of our brain is realized by non-phenomenal qualities, or a world devoid of any qualities at all? Not according to Modal Idealism. According to Modal Idealism, the structure of our brain *must* be realized by underlying phenomenal qualities. Modal Idealism therefore removes an important threat to realizationism, and therefore helps secure our justification and knowledge of our own phenomenal states.

### **9. Fourth Argument: Theoretical Fruitfulness**

My final argument for Modal Idealism, unlike the previous three, is amenable to every philosopher, regardless of their background philosophical views. The argument is simply this: Modal Idealism is theoretically fruitful. There are a variety of thorny metaphysical problems that philosophers have wrestled with for a very long time, and Modal Idealism helps us make progress on these problems in illuminating ways. This gives us some reason to take Modal Idealism seriously.

We've already seen some examples of the metaphysical work that Modal Idealism does. For example, the question that we started with is a metaphysical problem that everyone faces:

*Question:* What is the space of all metaphysically possible qualities?

Modal Idealism gives a simple and elegant solution to this problem. Similarly, insofar as one wants to build a metaphysics on the basis of the Eleatic Principle, Modal Idealism is also theoretically fruitful.

For the remainder of this section, I'll describe four other examples of Modal Idealism at work.

### 9.1. *The Structure of Objects and Properties*

Consider the metaphysical dispute about the relationship between “objects” (i.e. things that have or instantiate properties but cannot themselves be “had” or “instantiated”) and “properties”. According to one popular view, which is sometimes called the “substratum theory”, objects and properties both exist and occupy fundamentally different ontological categories. Objects function as the underlying “substratum” that are the bearers of properties. According to a rival view, which is sometimes called the “bundle theory”, there really are only properties. What we think of as “objects” are really just properties that are “bundled” together by a primitive relation of “compreence”.<sup>68</sup> Lastly, in other work, I have defended a view where there is no real distinction between an object and its corresponding properties.<sup>69</sup> In particular, I’ve argued that we should start by endorsing a kind of “property monism”, where any fundamental entity should be thought of as only having a single fundamental property. However, instead of endorsing a two-category ontology where there is fundamental entity  $x$  and a distinct fundamental property  $F$  such that “ $x$  is  $F$ ” (where “is” is the is of predication), we should instead collapse the distinction between  $x$  and  $F$  and say that “ $x$  is  $F$ -ness” (where “is” is the is of identity rather than predication).

How should we decide between these views? Well, it turns out that there is an exactly similar debate in the philosophy of mind about the structure of conscious experience. What is the relationship between the subject of experience (i.e. the thing that “has” phenomenal properties) and the corresponding phenomenal properties that it has? According to one popular view, which is analogous to the substratum theory, the subject of experience and its corresponding phenomenal properties both exist and occupy different ontological categories. According to a rival view, which is analogous to the bundle theory, there really is no “subject of experience”. There really are only phenomenal properties that are “bundled” together by a primitive relation of “co-consciousness”. Lastly, Strawson (2009) has defended the view that there is no real distinction between a subject of experience and the corresponding phenomenal properties that it “has”. Instead, we should think that the subject of experience is *identical* to the experience that it is having.

According to Modal Idealism, these debates are, as a matter of necessity, collapsed into one. The view that there is an underlying substratum that is ontologically distinct from its properties *just is* the view that there is an underlying subject of experience that is ontologically distinct from its phenomenal properties. The view that there is no underlying substratum, and instead there are only properties that are bundled together, *just is* the view that there is no underlying subject of experience, and instead there are only phenomenal properties that are bundled together. The view that there is no real distinction between an object and its corresponding properties *just is* the view

---

<sup>68</sup> There are eliminativist versions of the bundle theory that do not ontologically commit to the existence of “bundles” as distinct from their constituent properties, and there are reductionist versions where bundles exist but are grounded in the properties that constitute them. For an introduction to debates about the substratum theory and the bundle theory, see Loux and Crisp (2017: 82-117).

<sup>69</sup> See Builes (2021). Strawson (2021) defends the same view, attributing it to Descartes, Spinoza, and Kant as well.



that there is no real distinction between a subject of experience and its corresponding phenomenal properties. By collapsing these debates, Modal Idealism reduces two philosophical problems into one. Furthermore, one can “carry over” all of the arguments in one debate to the other. For example, insofar as one thinks that there is no real distinction between a subject of experience and the corresponding phenomenal properties that it has, then one should also think that there is no real distinction between an object and the corresponding properties that it has.

Lastly, “property monism” – the view that all fundamental entities only have a single fundamental property – also has an analog in the philosophy of mind. In particular, many philosophers have been led to endorse the analog of property monism with respect to consciousness by virtue of the “unity of consciousness”. According to Bayne and Chalmers (2003), we should say that experiences are “unified” just in case they are “aspects of a single encompassing state of consciousness”. Such a view has many defenders. For example, Searle (2002) argues that we have a “single, unified conscious field containing visual, auditory, and other aspects” and that “there is no such thing as a separate visual consciousness” (54). Tye (2003) also endorses what he calls ‘the one-experience view’. In considering the different aspects of our experience he writes, “There are not five different . . . experiences somehow combined together to produce a new unified experience.” Rather, “there is just one experience here” (27). If one rejects this kind of holistic view with respect to consciousness, one faces the awkward question of saying *exactly how many* basic phenomenal qualities somehow combine to make up one’s total experiential state (e.g. is there supposed to be a basic phenomenal quality for every “pixel” of one’s visual field?).

As before, Modal Idealism collapses the general metaphysical question of property monism into the question of whether global conscious states are prior to their experiential parts. Any reasons one has for endorsing or rejecting one of these views will carry over to apply to the other view.

## 9.2. *Fundamental Abstract Entities*

Should we include abstract entities, like numbers or propositions, into our fundamental ontology? Metaphysicians sharply disagree on this question.<sup>70</sup> Moreover, many have argued that it is difficult to see how we could have a justified opinion on the matter, given that any abstract entities would be causally inert and isolated from us.<sup>71</sup>

Fortunately, Modal Idealism immediately resolves this dispute. There cannot be abstract objects like numbers in our fundamental ontology because there cannot be *any* fundamental entities that are not conscious. Abstract objects are (by definition) non-mental entities, so they cannot exist.

---

<sup>70</sup> For an introductory survey of debates about abstract entities, see Cowling (2017).

<sup>71</sup> See Warren (2017).

If we were to unpack this kind of argument, we could start by asking: what would abstract objects like numbers be like if they existed? If they aren't "bare particulars" (which there are independent reasons to be skeptical of), then they would have to possess some quality. But what qualities should we think that they possess? An increasingly popular "structuralist" position in the philosophy of mathematics is that mathematics only tells us about the *relations* that abstract objects like numbers stand in, rather than about any qualities that they possess.<sup>72</sup> So, mathematics seems to leave us completely in the dark about what qualities they possess. According to Modal Idealism, however, the only possible qualities are fundamental phenomenal properties. Given that numbers aren't supposed to be conscious, it follows that they can't possess any qualities at all. Instead of believing in a Platonic realm consisting of a plenitude of bare particulars, we should instead conclude that there is no Platonic realm at all.<sup>73</sup>

### 9.3. *Fundamental Concrete Entities*

Metaphysicians also disagree about what *concrete* entities to admit into our fundamental ontology. One important choice point is between Monistic theories, according to which the universe as a whole is part of our fundamental ontology, and theories according to which the "smallest" entities – such as particles or space-time points – are fundamental entities.<sup>74</sup>

How are we to decide between these views? Prima facie, it might seem like such views are empirically equivalent to one another, so one might wonder how we can decide between them. Some philosophers have even expressed skepticism about whether there is an objectively correct answer about how the concrete world should be "carved up" into fundamental entities.<sup>75</sup> However, given Modal Idealism, these views have clear differences. For example, Monistic theories imply that the universe as a whole is conscious, whereas theories that posit particles or space-time points as fundamental are committed to thinking that such point-sized entities are conscious. Moreover, many philosophers have argued that the project of grounding our ordinary "macroscopic" conscious states in the conscious states of fundamental point-sized entities is very different than the project of grounding our macroscopic conscious states in the conscious state of the world as a whole. In particular, many philosophers have argued that grounding our ordinary conscious states in the conscious states of the world as a whole is a much more promising approach.<sup>76</sup> If these philosophers are right, then Modal Idealism gives us extra reasons to endorse Monism.

---

<sup>72</sup> For an overview of structuralist approaches to mathematics, see Reck and Schiemer (2020).

<sup>73</sup> I elaborate on this argument, without the help of Modal Idealism, in Builes (2022c). I also give other independent reasons to reject the existence of abstract objects in Builes (2022a). For different philosophies of mathematics that do not rely on the existence of abstract objects, see Hellman (1989), Azzouni (2004), and Balaguer (2009).

<sup>74</sup> For defenses of Monism, see Schaffer (2007, 2010a, 2010b, 2010c, 2013), Horgan and Potrč (2008), Ismael and Schaffer (2020), Perry (2017), Builes (2021), and Builes and Teitel (2022). For arguments against Monism, see Sider (2008) and Baron and Tallant (2016).

<sup>75</sup> See Hirsch (2011) and Balaguer (2018).

<sup>76</sup> See Goff (2017), Shani and Keppler (2018), Kastrop (2018), and Albahari (2020).

#### 9.4. *The Temporal Structure of Reality*

Philosophers of mind disagree about the temporal structure of conscious experience. Dainton (2021) describes one popular school of thought as follows:

[A]ll forms of consciousness, from the most complex to the simplest possible, are essentially temporal: all possess experienced flow. Experienced duration necessarily possesses some temporal depth, and as such cannot exist in a durationless instant. (22)

Views of this kind has been endorsed by William James, Henri Bergson, F. H. Bradley, Edmund Husserl, and more recently by Strawson (2008a: 388-402).<sup>77</sup> If this view is right, then it has important consequences for which fundamental properties could possibly be instantiated. In particular, it implies that no possible fundamental property can be instantiated in a durationless instant.<sup>78</sup> On the other hand, philosophers such as St. Augustine and Thomas Reid, and more recently Chuard (2011) and Builes and Impagnatiello (forthcoming-b), have argued that our most basic conscious experiences are confined to the present moment.

If we look to our best theories in physics, fundamental physical properties seem to be instantiated at durationless instants, rather than over temporally extended intervals. For example, the properties of having a particular mass or electric charge are typically thought of as being instantiated at a particular instant, rather than over an extended temporal interval.<sup>79</sup> In our more advanced quantum theories, the wave function of the universe is also supposed to describe the state of the universe at a single moment of time, rather than over an extended temporal interval.

If Modal Idealism is correct, then one's views about the essential temporal structure of phenomenology should correspond to one's views about the temporal structure of fundamental physical properties.<sup>80</sup> By drawing this correspondence, Modal Idealism lets our views about physics inform our views about phenomenology, and vice versa. For example, insofar as our best theories in physics keep positing instantaneous fundamental physical properties, then Modal

---

<sup>77</sup> For an overview of the views of these philosophers with respect to temporal experience, see Dainton (2022).

<sup>78</sup> It also seems to imply that *Presentism* – the view that only the present moment exists – is false, because no fundamental properties can be instantiated at the present moment. For a recent defense of Presentism, see Builes and Impagnatiello (forthcoming-a).

<sup>79</sup> One might think that *velocity* or *momentum*, or more generally properties that are defined in terms of temporal derivatives of other properties, are examples of properties in physics that cannot be instantiated at durationless instants. However, typically such properties are reduced to the properties that they are temporal derivatives of: for example, according to the “at-at” theory of velocity, instantaneous velocity at a time is reduced to positions at nearby times. A reductionist view of this kind implies that such properties are not fundamental properties. Some philosophers have argued for non-reductionist views about quantities like velocity, but such non-reductionist views typically imply that the relevant property *is* instantiated at a durationless instant. For more on this debate, see Tooley (1998), Arntzenius (2000), Lange (2005), and Builes and Teitel (2020).

<sup>80</sup> This is compatible with a structuralist view of physics, where physics is silent on the underlying *qualities* of matter, but nonetheless physics tells us a lot of important information about the *structure* of the physical world.

Idealism should make us more confident that phenomenal properties are not essentially temporally extended.

## 10. Conclusion

I have argued that Modal Idealism can be supported in at least four ways:

- 1) It is the best answer to the question of what the space of all possible qualities is like.
- 2) It is the best way to implement a metaphysics based on the Eleatic Principle.
- 3) It is the best way to secure our knowledge of our own conscious states.
- 4) It is theoretically fruitful: it gives us substantial insight into a variety of important and perennial metaphysical questions.

However, none of these four arguments even attempt to show that Modal Idealism is, in Bradley's (1893: 144) words, "evident at once". Might there be some relatively simple *a priori* insight that reveals why Modal Idealism is (allegedly) evident?

I'm not sure if there is, but in some moods, I think there might be. Here is a (somewhat silly) syllogism:

- 1) For x to *be*, x must be *like* something.

The intuitive content of this premise is just that there can't be bare particulars. If something is to exist at all, it must have some positive, intrinsic nature to it. Now consider the following:

- 2) For x to be like something, there must be something it's like to be x.

This gets us Modal Idealism, more or less:

- 3) For x to be, there must be something it's like to be x.

In certain moods, reflecting on 2) gives me a feeling of insight. How can x be intrinsically like something if there's nothing it's like to be x? For x to be like something, there must be something it's like *for* x. Sometimes philosophers describe the absence of experience by saying that "all is dark inside".<sup>81</sup> But if "all is dark inside" for x, then it seems like x isn't positively like anything, contrary to 1).

---

<sup>81</sup> See Chalmers (1996: 96).

In a way, what these intuitions are trading on is that there seems to be a close connection between *intrinsicity* and *subjectivity*. Talk of what things are like “inside” is often used to characterize both intrinsicity and subjectivity. What something is like “from the outside” are its extrinsic features that do not characterize what it’s like to be that thing, and what something is like “from the inside” are its intrinsic features that do characterize what it’s like to be that thing.

In asking about something’s intrinsic states, we are asking a *what-is-it-like?*-question. In asking about something’s subjective states, we are asking a *what-is-it-like-to-be?*-question. Modal Idealists recognize that there’s a conceptual distinction we can draw between intrinsicity and subjectivity, but they nevertheless think that these categories are necessarily co-extensive (just as there is a conceptual distinction between *triangularity* and *trilaterality*, even though these categories are necessarily co-extensive).<sup>82</sup>

If you want a test for how “intuitive” Modal Idealism strikes you, then ask yourself whether there seems to be a genuine difference between a world in which “all is dark inside”, and a completely empty world, which contains nothing at all.<sup>83</sup>

---

<sup>82</sup> See Adams (2007: 46-47) for a similar intuition.

<sup>83</sup> Thanks to Miri Albahari, Matt Duncan, Jack Himmelright, Uriah Kriegel, Andrew Lee, Hedda Mørch, Adam Pautz, Galen Strawson, and Helen Yetter-Chappell for their helpful feedback.

### Appendix: Pure Modal Idealism

In the main text, I argued for Impure Modal Idealism, which is the thesis that it is necessary that: (i) every fundamental entity is conscious and (ii) every fundamental (one-place) property is a phenomenal property. The purpose of this appendix is to further argue for Pure Modal Idealism, which supplements Impure Modal Idealism with the claim that every fundamental property *and relation* is a phenomenal property or relation.

Perhaps the most salient counterexamples to Pure Modal Idealism include the possibility of fundamental *spatiotemporal* relations, *causal* relations, and *mathematical* relations (such as the membership relation between sets and the successor relation between natural numbers).

There are two ways to defend Pure Modal Idealism in the face of these kinds of examples. First, one could give general arguments against the possibility of any fundamental (non-phenomenal) relation. Second, one could argue against specific alleged counterexamples to Pure Modal Idealism, by arguing that such alleged non-phenomenal relations are not (or cannot be) fundamental. I'll begin by giving three general arguments of the first kind, after which I'll give three specific arguments of the second kind. Needless to say, there is much more that can be said about the nature of relations than can be covered here.<sup>84</sup> My goal will simply be to give an initial case in favor of Pure Modal Idealism, which complements the discussion in the main text.

The first general argument is that the very same reasons for favoring the Unity Hypothesis for fundamental (one-place) properties generalize to favor the Unity Hypothesis for fundamental relations. Just as it's hard to see how there could be an explanation for why there are (say) exactly seventeen fundamentally different kinds of (one-place) properties, it's hard to see how there could be an explanation for why there are (say) exactly seventeen fundamentally different kinds of relations. For the space of qualities to be intelligible, it must be unified. Similarly, for the space of possible fundamental relations to be intelligible, it must be unified.

On its own, the Unity Hypothesis does not immediately rule out all potential counterexamples to Pure Modal Idealism. It only implies that there can be at most one fundamental kind of relation, which (for all we've said so far) might be a non-phenomenal kind of relation. One way to bridge this gap is to argue that there is a fundamental kind of *phenomenal* relation, and since phenomenal and non-phenomenal relations would be fundamentally different in kind, the Unity Hypothesis would imply that there cannot also be fundamental non-phenomenal relations. Perhaps the most plausible candidate for a fundamental phenomenal relation is the *co-consciousness* relation, which is the relation that experiences stand in when they are experienced "together". Some philosophers

---

<sup>84</sup> For a recent introductory survey on the metaphysics of relations, see Heil (2021). Lowe (2007) argues that there are no fundamental relations. For a recent idealist case against fundamental physical spatiotemporal relations, see Robinson (2022: 187-206).

have argued that the co-consciousness relation plays a central role in accounting for the unity of consciousness, and others have argued that it could play the role of the “phenomenal bonding” relation, which accounts for how distinct subjects of experience might combine to form a new subject of experience.<sup>85</sup>

Another way to (partially) bridge the gap from the Unity Hypothesis to Pure Modal Idealism is to argue that certain alleged kinds of fundamental non-phenomenal relations would not satisfy the Unity Hypothesis. For example, it’s not clear whether the space of all possible mathematical relations is appropriately unified: *prima facie*, the membership relation between sets and the successor relation between natural numbers do not seem appropriately unified. So, it is unclear whether the space of all possible fundamental mathematical relations would satisfy the Unity Hypothesis. Furthermore, it is also unclear whether the space of all possible spatiotemporal relations is appropriately unified. Spatiotemporal structure involves many different kinds of structure: including topological, affine, metrical, and differential structure. Moreover, it is unclear what kinds of structural constraints need to be met in order for some relations to count as “spatiotemporal” in the first place. This is most clear when considering various potential candidate theories of Quantum Gravity, which posit fundamental physical structures that are in some ways “approximately” spatiotemporal. Baron and Le Bihan (2022) have recently argued for a version of “quietism” with respect to the status of spacetime in Quantum Gravity, according to which there is no precise and non-arbitrary way to delineate which kinds of physical structures are genuinely “spatiotemporal”:

In the context of quantum gravity...we don’t need to argue about what spacetime is in any deep sense, since it doesn’t matter. Nothing much seems to be lost by simply conceding that the term ‘spacetime’ has escaped semantic control, and now picks out a hodgepodge of different things, which don’t bear much, if anything, in common. (173)

Such a “hodgepodge” view of spacetime is deeply at odds with the Unity Hypothesis.

The final two general arguments against the possibility of fundamental (non-phenomenal) relations both assume that fundamental relations must correspond to fundamental entities in one’s ontology (either as tropes or universals). Many of the same reasons for positing fundamental *properties* in one’s ontology can be given for positing fundamental relations in one’s ontology. For example, one might accept a truthmaking principle, according to which relational truths require relational truthmakers, and relational truthmakers require the existence of relations.<sup>86</sup> To take another example, a popular way to mark the distinction between (perfectly) natural predicates (e.g. green) and other kinds of gerrymandered predicates (e.g. grue) is to posit the existence of corresponding

---

<sup>85</sup> For more on the co-consciousness relation, see Dainton (2000) and Miller (2017). For more on the phenomenal bonding relation, see Goff (2016).

<sup>86</sup> For an introduction to truthmaker theory, see Cameron (2018, 2021).

properties for (perfectly) natural predicates (but not for gerrymandered predicates). Similar reasons apply in the case of relations. Not *every* arbitrary set of ordered pairs corresponds to a (perfectly) natural relation. For example, there is no fundamental relation whose extension consists of {(Mars, Earth), (The Statue of Liberty, The Eiffel Tower)}. If one thinks that the distinction between (perfectly) natural and gerrymandered properties should correspond to a distinction in one's ontology, then one should also think that the distinction between (perfectly) natural and gerrymandered relations should correspond to a distinction in one's ontology.

However, given an ontology of fundamental relations, then many have argued that one is faced with Bradley's Regress. Bradley's Regress can be formulated in many ways, but here is one formulation.<sup>87</sup> Suppose there is a fundamental relation  $R$  that relates individuals  $a$  and  $b$ . Well, the mere existence of  $R$ ,  $a$ , and  $b$  doesn't seem to adequately account for the fact that  $R$  relates  $a$  to  $b$ . After all, it could be that  $R$  exists and relates some other things distinct from  $a$  and  $b$ . So, in order for  $R$  to relate  $a$  and  $b$ ,  $R$  must stand in an appropriate relation to  $a$  and  $b$ . So, there must be some other relation  $R^*$  that appropriately relates  $R$  to  $a$  and  $b$ . However, the mere existence of  $R^*$  doesn't seem to adequately account for the fact that  $R$  is related to  $a$  and  $b$  by  $R^*$ . It must be that  $R^*$  is appropriately *related* to  $R$ ,  $a$ , and  $b$ . So, there must be some other relation  $R^{**}$  that relates  $R^*$  to  $R$ ,  $a$ , and  $b$ . This kind of reasoning leads to an infinite regress, and many philosophers have argued that this kind of infinite regress shows that there cannot be fundamental relations.<sup>88</sup>

There is also a much quicker general argument against the possibility of fundamental non-phenomenal relations if one believes that fundamental relations should be construed as entities in one's ontology. According to Impure Modal Idealism, every fundamental entity is conscious. So, if fundamental non-phenomenal relations exist, then they would have to be conscious! After all, such entities should not be construed as *bare particulars*: they must have a qualitative nature to them. However, Impure Modal Idealism says that the only qualities there could possibly be are phenomenal qualities, so any fundamental non-phenomenal relations would have to be conscious. However, it is absurd to think that fundamental non-phenomenal relations (e.g. "being seven meters away from") are conscious. There is nothing it is like to be a distance relation (if there *was* something it's like to be a distance relation, then it's unclear why the distance relation would count as a "non-phenomenal" relation in the first place).

Having seen these three general arguments that take us from Impure Modal Idealism to Pure Modal Idealism, let us now turn to specific arguments for thinking that putative counterexamples to Pure Modal Idealism should be resisted.

---

<sup>87</sup> The following is a modal formulation of Bradley's Regress, which some philosophers have responded by appealing to certain kinds of relational tropes (e.g. see Maurin (2010)). For a non-modal formulation of Bradley's Regress that is responsive to this objection from relational tropes, see Hakkarainen and Keinänen (2022).

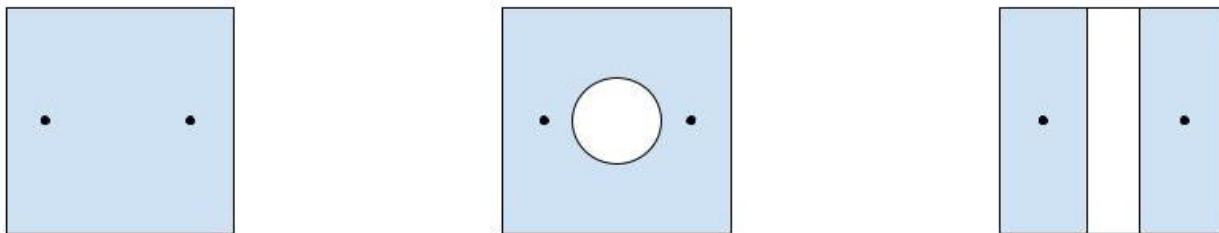
<sup>88</sup> See Maurin (2012) for a survey of different responses to Bradley's Regress.



First, take the case of fundamental mathematical relations, such as the membership relation between sets or the successor relation between numbers. If there were fundamental mathematical relations, then there would have to be mathematical entities that are related by such relations. However, in section 9.2, I argued that Impure Modal Idealism entails the impossibility of mathematical entities. Therefore, Impure Modal Idealism entails that fundamental mathematical relations are impossible.

Second, take the case of fundamental causal relations. There are a variety of metaphysical views that account for causal facts without appeal to fundamental causal relations. For example, Non-Humean views that appeal to fundamental laws, Non-Humean views that appeal to intrinsic causal powers (that explain the causal relations that things stand in), and Humean views that reduce all causal/nomic facts to categorical facts all avoid positing fundamental causal relations. Moreover, certain views in the metaphysics of time are also incompatible with the existence of fundamental causal relations. For example, given the standard view that fundamental causal relations hold between an earlier event (or object) and a later event (or object), then *Presentist* views, according to which only present entities exist, are incompatible with the existence of fundamental causal relations. Lastly, anyone who is wary of fundamental causal powers that do not have any underlying categorical grounding should be similarly skeptical of fundamental causal relations that do not have any underlying categorical grounding. Both kinds of posits involve a kind of primitive necessity that is not explicable in terms of underlying non-modal facts.

Lastly, take the case of fundamental spatiotemporal relations. As we've already seen, according to many theories of Quantum Gravity, and certain interpretations of quantum theories in general, spatiotemporal structure is not fundamental. Moreover, as we've seen earlier in this section, many theories of Quantum Gravity suggest that it is unclear what counts as "spatiotemporal structure" in the first place. This makes the (epistemic) possibility that the space of possible fundamental relations corresponds to the space of possible spatiotemporal relations in tension with the Unity Hypothesis. However, beyond these general points, one might still wonder whether anything specific can be said about why there couldn't be (say) fundamental distance relations in worlds that operate according to classical physical laws in a background space-time. One reason to be skeptical of such a possibility is that our best physical theories define spatiotemporal distance in a way that makes it constitutively depend on the entire spatiotemporal manifold. In particular, it is standard to define the distance between two points as the *minimum path length* of all possible paths throughout the spatiotemporal manifold that begin at the first point and end at the second. To see this definition at work, consider what would happen to the distance between two points if we were to remove some of the space between them:



On the right hand side, there is *no path at all* between the relevant two points, because the two points inhabit entirely disconnected spatial regions, analogous to Lewisian “island universes”. So, according to the minimal path conception of distance, the two points on the right hand side do not stand in any distance relation at all. The only reason that the points might seem to be at some fixed distance apart is due to the artifact that these pictures are themselves drawn on (or embedded within) a unified spatial region that is this page. However, these pictures are meant to represent the universe as a whole, which is *not* embedded in any wider spatial arena.

Schaffer (2009: 135) uses the fact that distance relations (as well as other spatiotemporal notions such as topological connectedness and handedness) make implicit reference to the entire spatiotemporal manifold to motivate a Monistic view of spacetime, according to which the spatiotemporal manifold as a whole is fundamental.<sup>89</sup> Such a Monistic view implies that there are no fundamental relations, since there is only a single fundamental entity in the first place. Historically, such a Monistic conception of spacetime has also been defended by Descartes, Spinoza, Leibniz, and Kant.<sup>90</sup>

However, putting aside Monism, the way that distance relations (as well as many other spatiotemporal properties and relations) are typically determined is by appealing to the *metric* on spacetime, where the metric is represented by a mathematical function that takes different values on every point in spacetime. How the metric should be interpreted metaphysically remains an open question in the philosophy of physics. Some have argued that the metric should be construed as an ordinary physical field akin to the electromagnetic field, which assigns intrinsic properties to points (e.g. see Earman and Norton (1987)). On a monistic view, such a field might be thought of as an intrinsic “distributional property” of the universe as a whole (e.g. see Parsons (2004)). Others have argued that the metric should be construed as assigning intrinsic properties to infinitesimal regions rather than to points (e.g. see Bricker (1993)). These interpretational matters are still a

<sup>89</sup> Schaffer also argues that certain views (e.g. metric essentialism and moderate structural realism) that imply that the *parts* of spacetime are individuated by their place in the *whole* of spacetime support Monism (e.g. see Maudlin (1989) and Esfeld and Lam (2008)). Perry (2017) also argues for a Monistic conception of space-time.

<sup>90</sup> For the case of Descartes, see Carrero (2002: 53). For the case of Spinoza, see Bennett (1984: 86). For the case of Leibniz, see Adams (1994: 232-234). For the case of Kant, see Schaffer (2009: 136).

matter of debate, but it is at least far from clear that the best analysis of the spacetime metric appeals to any kind of fundamental relation, in conformity with Pure Modal Idealism.<sup>91</sup>

In sum, I have given three general arguments against the possibility of fundamental non-phenomenal relations, and I have argued against three specific alleged counterexamples to Pure Modal Idealism. I conclude that Impure Modal Idealists should plausibly go all the way and endorse Pure Modal Idealism.

### References

- Aasen, Solvieg. 2018. Spatial Aspects of Olfactory Experience. *Canadian Journal of Philosophy*. 49, no. 8: 1041-1061.
- Adams, Robert. 1994. *Leibniz: Determinist, Theist, Idealist*. New York: Oxford University Press.
- Adams, Robert. 2007. Idealism Vindicated. In *Persons: Human and Divine*, edited by Peter van Inwagen and Dean Zimmerman, 35-54. Oxford: Oxford University Press.
- Albahari, Miri. 2019. Perennial Idealism: A Mystical Solution to the Mind-Body Problem. *Philosophers' Imprint* 19, no. 44: 1-37.
- Albahari, Miri. 2020. Beyond cosmopsychism and the great I am: How the world might be grounded in universal 'advaitic' consciousness. In *The Routledge Handbook of Panpsychism*, edited by William Seager, 119-130. New York: Routledge.
- Armstrong, David. 1978. *Universals and Scientific Realism*. Cambridge: Cambridge University Press.
- Armstrong, David. 1983. *What Is a Law of Nature?* Cambridge: Cambridge University Press.
- Armstrong, David. 1997. Against "Ostrich Nominalism": A Reply to Michael Devitt. In *Properties*, edited by D.H. Mellor and Alex Oliver, 101-111. New York: Oxford University Press.
- Arntzenius, Frank. 2000. Are There Really Instantaneous Velocities? *The Monist* 83, no. 2: 187-208.

---

<sup>91</sup> For a much more throughout treatment of the metaphysics underlying modern spacetime theories, see Dorr and Arntzenius (2012).

- Arntzenius, Frank and Cian Dorr. 2012. Calculus as Geometry. In *Space, Time, and Stuff*, edited by Frank Arntzenius, 213-278. Oxford: Oxford University Press.
- Audi, Paul. 2012. Grounding: Toward a Theory of the In-Virtue-Of Relation. *Journal of Philosophy* 109, no. 12: 685-711.
- Azzouni, Jody. 2004. *Deflating Existential Consequence: A Case for Nominalism*. New York: Oxford University Press.
- Bailey, Andrew. 2012. No Bare Particulars. *Philosophical Studies*. 158: 31-34.
- Bain, David. 2014. Pains That Don't Hurt. *Australasian Journal of Philosophy* 92, no. 2: 305-320.
- Balaguer, Mark. 2009. Fictionalism, theft, and the story of mathematics. *Philosophia Mathematica* 17, no. 2: 131-162.
- Balaguer, Mark. 2018. Why the debate about composition is factually empty. *Synthese* 195, no. 9: 3975-4008.
- Balaguer, Mark. 2021. *Metaphysics, Sophistry, and Illusion: Toward a Widespread Non-Factualism*. Oxford: Oxford University Press.
- Balog, Katalin. 2012. In Defense of the Phenomenal Concept Strategy. *Philosophy and Phenomenological Research* 84, no. 1: 1-23.
- Banissy, Michael., Clare Jonas, and Roi Cohen Kadosh. 2014. Synesthesia: an introduction. *Frontiers in psychology* 5: 1414.
- Barker, Stephen and Benjamin Smart. 2012. The Ultimate Argument Against Dispositional Monist Accounts of Laws. *Analysis* 72, no. 4: 714-722.
- Barker, Stephen. 2013. The Emperor's New Metaphysics of Powers. *Mind* 122, no. 487: 605-653.
- Barnes, Elizabeth. 2010. Arguments Against Metaphysical Indeterminacy and Vagueness. *Philosophy Compass* 5, no. 11: 953-964.
- Baron, Sam and Jonathan Tallant. 2016. Monism: The Islands of Plurality. *Philosophy and Phenomenological Research* 93, no. 3: 583-606.

- Baron, Sam and Baptiste Le Bihan. 2022. Spacetime Quietism in Quantum Gravity. In *The Foundations of Spacetime Physics: Philosophical Perspectives*, edited by Antonio Vassallo, 155-175. New York: Routledge.
- Bayne, Tim and David Chalmers. 2003. What is the Unity of Consciousness? In *The Unity of Consciousness*, edited by Axel Cleeremans. Oxford: Oxford University Press.
- Bayne, Tim. 2010. *The unity of consciousness*. New York: Oxford University Press.
- Bennett, Jonathan. 1984. *A Study of Spinoza's Ethics*. Indianapolis: Hackett Publishing Company.
- Bird, Alexander. 2007. *Nature's Metaphysics: Laws and Properties*. Oxford: Oxford University Press.
- Black, Robert. 2000. Against Quidditism. *Australasian Journal of Philosophy* 78, no. 1: 87-104.
- Bradley, Francis. 1893. *Appearance and Reality: A Metaphysical Essay*. London: Oxford University Press.
- Brewer, Bill. 2011. *Perception and Its Objects*. Oxford: Oxford University Press.
- Bricker, Phillip. 1993. The Fabric of Space: Intrinsic vs. Extrinsic Distance Relations. *Midwest Studies in Philosophy* 18, no. 1: 271-294.
- Builes, David. 2020. Derivatives and Consciousness. *Journal of Consciousness Studies* 27, no. 9-10: 87-103.
- Builes, David. 2021. The World Just Is The Way It Is. *The Monist* 104, no. 1: 1-27.
- Builes, David. 2022a. Ontology and Arbitrariness. *Australasian Journal of Philosophy* 100, no. 3: 485-495.
- Builes, David. 2022b. The Ineffability of Induction. *Philosophy and Phenomenological Research* 104, no. 1: 129-149.
- Builes, David. 2022c. Why Can't There Be Numbers? *The Philosophical Quarterly* 72, no. 1: 65-76.
- Builes, David. 2023. A Humean Non-Humeanism. *Philosophical Studies*.  
<https://doi.org/10.1007/s11098-023-01927-5>.

- Builes, David. Forthcoming. How to Ground Powers. *Analysis*.
- Builes, David and Michele Odisseas Impagnatiello. Forthcoming-a. An Empirical Argument for Presentism. In *Oxford Studies in Metaphysics Volume 14*, edited by Karen Bennett and Dean Zimmerman. Oxford: Oxford University Press.
- Builes, David and Michele Odisseas Impagnatiello. Forthcoming-b. Experience and Time: A Metaphysical Approach. *Analytic Philosophy*.
- Builes, David and Trevor Teitel. 2020. A puzzle about rates of change. *Philosophical Studies* 177, no. 10: 3155-3169.
- Builes, David and Trevor Teitel. 2022. Lawful Persistence. *Philosophical Perspectives*: 1-26. <https://doi.org/10.1111/phpe.12171>.
- Builes, David and Jessica Wilson. 2022. In defense of Countabilism. *Philosophical Studies* 179, no. 7: 2199-2236.
- Cameron, Ross. 2018. Truthmakers. In *The Oxford Handbook of Truth*, edited by Michael Glanzberg, 333-354. Oxford: Oxford University Press.
- Cameron, Ross. 2021. Truthmaking and metametaphysics. In *The Routledge Handbook of Metametaphysics*, edited by Ricki Bliss and J. T. M. Miller, 233-244. New York: Routledge.
- Campbell, John. 1993. A Simple View of Color. In *Reality, Representation, and Projection*, edited by John Haldane and Crispin Wright, 257-268. Oxford: Oxford University Press.
- Carriero, John. 2002. Monism in Spinoza. In *Spinoza: Metaphysical themes*, edited by Olli Koistinen and John Biro, 38-59. Oxford: Oxford University Press.
- Carroll, John. 1994. *Laws of Nature*. Cambridge: Cambridge University Press.
- Carruthers, Peter. 2018. Valence and value. *Philosophy and Phenomenological Research* 97, no. 3: 658-680.
- Chakravartty, Anjan. 2007. *A Metaphysics for Scientific Realism: Knowing the Unobservable*. Cambridge: Cambridge University Press.
- Chalmers, David. 1996. *The Conscious Mind: In Search of a Fundamental Theory*. Oxford

University Press.

- Chalmers, David. 2002. Does conceivability entail possibility? In *Conceivability and Possibility*, edited by Tamar Gendler and John Hawthorne, 145-200. Oxford University Press.
- Chalmers, David. 2003a. Consciousness and its place in nature. In *Blackwell Guide to the Philosophy of Mind*, edited by Stephen Stich and Ted Warfield, 102-142. Oxford: Blackwell.
- Chalmers, David. 2003b. The content and epistemology of phenomenal belief. In *Consciousness; New philosophical perspectives*, edited by Quentin Smith and Aleksandar Jokic. Oxford: Oxford University Press.
- Chalmers, David. 2006. Perception and the fall from Eden. In *Perceptual Experience*, edited by Tamar S. Gendler and John Hawthorne, 49-125. Oxford: Oxford University Press.
- Chalmers, David. 2013. Panpsychism and Panprotopsychism. Amherst Lecture in Philosophy 8.
- Chalmers, David. 2018. The Meta-Problem of Consciousness. *Journal of Consciousness Studies* 25, no. 9-10: 6-61.
- Chalmers, David. 2019. Idealism and the Mind-Body Problem. In *The Routledge Handbook of Panpsychism*, edited by William Seager, 353-373. New York: Routledge.
- Chalmers, David. 2020. Debunking Arguments for Illusionism about Consciousness. *Journal of Consciousness Studies* 27, no. 5-6: 258-281.
- Chalmers, David. 2021. Finding Space in a Nonspatial World. In *Philosophy Beyond Spacetime*, edited by Christian Wüthrich, Baptiste Le Bihan, and Nick Huggett, 154-181. Oxford: Oxford University Press.
- Chuard, Philippe. 2011. Temporal Experiences and Their Parts. *Philosophers' Imprint* 11, no. 11: 1-28.
- Clarke-Doane, Justin. 2019. Metaphysical and absolute possibility. *Synthese* 198: 1861-1872.
- Coates, Ashley. 2020. Making Sense of Powerful Qualities. *Synthese* 198, no. 9: 8347-8363.
- Cohen, Jonathan and Craig Callender. 2009. A Better Best System Account of Lawhood. *Philosophical Studies* 145: 1-34.

- Coleman, Sam. 2017. Panpsychism and neutral monism: How to make up one's mind. In *Panpsychism: Contemporary perspectives*, edited by Godehard Brüntrup and Ludwig Jaskolla, 518–596. New York: Oxford University Press.
- Colyvan, Mark. 1998. Can the Eleatic Principle be Justified? *Canadian Journal of Philosophy* 28, no. 3: 313-335.
- Correia, Fabrice. 2005. *Existential Dependence and Cognate Notions*. Munich: Philosophia Verlag.
- Cowling, Sam. 2015. Advice for Eleatics. In *The Palgrave Handbook of Philosophical Methods*, edited by Chris Daly, 306-330. London: Palgrave Macmillan London.
- Cowling, Sam. 2017. *Abstract Entities*. New York: Routledge.
- Cutter, Brian. 2022. The mind-body problem and the color-body problem. *Philosophical Studies*. <https://doi-org/ezproxy.princeton.edu/10.1007/s11098-022-01875-6>.
- Dainton, Barry. 2020. *Stream of Consciousness: Unity and Continuity in Conscious Experience*. New York: Routledge.
- Dainton, Barry. 2021. The Silence of Physics. *Erkenntnis*: 1-35.
- Dainton, Barry. 2022. Temporal Consciousness. In *The Stanford Encyclopedia of Philosophy* (Summer 2022 Edition), edited by Edward Zalta. <https://plato.stanford.edu/archives/sum2022/entries/consciousness-temporal/>
- Dasgupta, Shamik. 2009. Individuals: An Essay in Revisionary Metaphysics. *Philosophical Studies* 145, no. 1: 35-67.
- Dasgupta, Shamik. 2017. Can We Do Without Fundamental Individuals? Yes. In *Current Controversies in Metaphysics*, edited by Elizabeth Barnes, 7-23. New York: Routledge.
- De Vignemont, Frederique. 2023. Fifty Shades of Affective Colouring of Perception. *Australasian Journal of Philosophy* 101, no. 1: 1-15.
- Dretske, Fred. 1977. Laws of Nature. *Philosophy of Science* 44, no. 2: 248–268.
- Dorr, Cian. 2016. To Be F Is To Be G. *Philosophical Perspectives* 30, no. 1: 39-134.



- Duncan, Matt. Forthcoming. How You Know You're Conscious: Illusionism and Knowledge of Things. *Review of Philosophy and Psychology*: 1-21.
- Earman, John. 1986. *A Primer on Determinism*. Dordrecht: Reidel.
- Earman, John and John Norton. 1987. What price spacetime substantivalism? The hole story. *British Journal for the Philosophy of Science* 38, no. 4: 515-525.
- Ellis, Brian. 1990. *Truth and Objectivity*. Oxford: Blackwell.
- Esfeld, Michael, and Vincent Lam. 2008. Moderate structural realism about space-time. *Synthese* 160, no. 1: 27-46.
- Faller, August. Forthcoming. Grounding and Properties. *Inquiry*.
- Farkas, Katalin. 2021. Closing (or at least narrowing) the explanatory gap. In *Armstrong's Materialist Theory of Mind*, edited by David Braddon-Mitchell and Peter Anstey, 125-142.
- Field, Hartry. 1989. *Realism, Mathematics, and Modality*. Oxford: Blackwell.
- Frankish, Keith. 2016. Illusionism as a Theory of Consciousness. *Journal of Consciousness Studies* 23, no. 11-12 11-39.
- French, Craig and Ian Phillips. 2023. In *Contemporary Debates in the Philosophy of Mind* (2nd edition), edited by Brian McLaughlin and Jonathan Cohen, 363-383. Oxford: Wiley-Blackwell.
- Foster, John. 1982. *The Case for Idealism*. London: Routledge.
- Fulkerson, Matthew. 2020. Emotional Perception. *Australasian Journal of Philosophy* 98, no. 1: 16-30.
- Glazier, Martin. 2021. The difference between epistemic and metaphysical necessity. *Synthese* 198: 1409-1424.
- Giberman, Daniel. 2012. Against Zero-Dimensional Material Objects (and Other Bare Particulars). *Philosophical Studies* 160: 305-321.
- Grahek, Nikola. 2007. *Feeling Pain and Being in Pain*. Cambridge, MA: MIT Press.

- Goff, Philip. 2016. The Phenomenal Bonding Solution to the Combination Problem. In *Panpsychism: Contemporary Perspectives*, edited by Godehard Bruntrup and Ludwig Jaskolla, 283-302. Oxford: Oxford University Press.
- Goff, Philip. 2017. *Consciousness and Fundamental Reality*. New York: Oxford University Press.
- Goff, Philip. 2019. Essentialist modal rationalism. *Synthese* 198: 2019-2027.
- Hakkarainen, Jani and Markku Keinänen. 2022. Bradley's Relation Regress and the Inadequacy of the Relata-Specific Answer. *Acta Analytica*. <https://doi.org/10.1007/s12136-022-00516-1>.
- Heil, John. 2021. *Relations*. New York: Cambridge University Press.
- Heil, John. 2010. Powerful Qualities. In *The Metaphysics of Powers: Their Grounding and Their Manifestations*, edited by Anna Marmodoro, 58-72. New York: Routledge.
- Hildebrand, Tyler. 2016. Two Types of Quidditism. *Australasian Journal of Philosophy* 94, no. 3: 516-532.
- Hirsch, Eli. 2011. *Quantifier Variance and Realism: Essays in Metaontology*. Oxford: Oxford University Press.
- Hall, Ned. 2015. Humean Reductionism about Laws of Nature. In *The Blackwell Companion to David Lewis*, edited by Barry Loewer and Jonathan Schaffer, 262-77. Oxford: Blackwell.
- Hellman, Geoffrey. 1989. *Mathematics without Numbers: Towards a Modal-Structural Interpretation*. Oxford: Clarendon Press.
- Horgan, Terence, and Matjaž Potrč. 2008. *Austere Realism: Contextual Semantics Meets Minimal Ontology*. MIT Press.
- Huggett, Nick. 2021. Spacetime "Emergence". In *The Routledge Companion to Philosophy of Physics*, edited by Eleanor Knox and Alistair Wilson, 374-385. New York: Routledge.
- Ismael, Jenann and Jonathan Schaffer. 2020. Quantum holism: nonseparability as common ground. *Synthese* 197, no. 10: 4131-4160.
- Jaag, Siegfried. 2014. Dispositional essentialism and the grounding of natural modality.

- Philosophers' Imprint* 14, no. 34: 1-21.
- Kammerer, François. 2018. Can you believe it? Illusionism and the illusion meta-problem. *Philosophical Psychology* 31, no. 1: 44-67.
- Kammerer, François. 2022. How can you be so sure? Illusionism and the obviousness of phenomenal consciousness. *Philosophical Studies* 179, no. 9: 2845-2867.
- Kastrup, Bernardo. 2018. The Universe in Consciousness. *Journal of Consciousness Studies* 25, no. 5-6: 125-155.
- Kimpton-Nye, Samuel. 2021. Reconsidering the Dispositional Essentialist Canon. *Philosophical Studies* 178, no. 10: 3421-3441.
- Kirk, Robert. 2008. The inconceivability of zombies. *Philosophical Studies* 139, no. 1: 73-89.
- Kriegel, Uriah and Dan Zahavi. 2015. For-me-ness: What it is and what it is not. In *Philosophy of Mind and Phenomenology: Conceptual and Empirical Approaches*, edited by Daniel Dahlstorm, Andreas Elpidorou, and Walter Hopp, 36-53. New York: Routledge.
- Lange, Marc. 2005. How Can Instantaneous Velocity Fulfill Its Causal Role? *Philosophical Review* 114, no. 4: 433-468.
- Lam, Vincent and Christian Wüthrich. 2018. Spacetime is as spacetime does. *Studies in History and Philosophy of Modern Physics* 64: 39-51.
- Langsam, Harold. 2011. *The Wonder of Consciousness: Understanding the Mind Through Philosophical Reflection*. MIT Press.
- Lee, Andrew. 2019. The Microstructure of Experience. *Journal of the American Philosophical Association* 5, no. 3: 286-305.
- Lee, Andrew. Forthcoming. Knowing What It's Like. *Philosophical Perspectives*.
- Lee, Andrew. MS. Consciousness and Continuity.
- Leibniz, Gottfried. 1714/1965. *Monadology: And Other Philosophical Essays*. Translated by Paul Schrecker and Anne Martin Schreker. Indianapolis: Bobbs-Merrill
- Lewis, David. 1986. *On the Plurality of Worlds*. Basil Blackwell.

- Lewis, David. 1994. Humean supervenience debugged. *Mind* 103, no. 412: 473-490.
- Litland, John. 2022. Grounding and defining identity. *Noûs*: 1-27.  
<https://doi.org/10.1111/nous.12430>.
- Locke, John. 1689/1997. *An Essay Concerning Human Understanding*, edited by Roger Woolhouse. London: Penguin Books.
- Loewer, Barry. 2007. Laws and Natural Properties. *Philosophical Topics* 35: 313-328.
- Loux, Michael and Thomas Crisp. 2017. *Metaphysics: A Contemporary Introduction 4th Edition*. New York: Routledge.
- Lowe, Edward. 2003. Individuation. In *The Oxford Handbook of Metaphysics*, edited by Michael Loux and Dean Zimmerman, 75-95. New York: Oxford University Press.
- Lowe, Edward. 2016. There are (Probably) No Relations. In *The Metaphysics of Relations*, edited by Anna Marmodoro and David Yates, 100-112. Oxford: Oxford University Press.
- Martin, C. B. 2008. *The Mind in Nature*. Oxford: Oxford University Press.
- Maudlin, Tim. 1989. The essence of space-time. In *Proceedings of the 1988 Biennial Meeting of the Philosophy of Science Association*: 82-91.
- Maudlin, Tim. 2007. *The Metaphysics Within Physics*. Oxford: Oxford University Press.
- Maurin, Anna-Sofia. 2010. Trope theory and the Bradley regress. *Synthese* 175, no. 3: 311-326.
- Maurin, Anna-Sofia. 2012. Bradley's Regress. *Philosophy Compass* 7, no. 11: 794-807.
- McGinn, Colin. 1996. Another Look at Color. *Journal of Philosophy* 93: 537-553.
- Mertz, Donald. 2003. Against Bare Particulars: A Response to Moreland and Pickavance. *Australasian Journal of Philosophy* 81: 14-20.
- Mihálik, Jakub. 2022. Panqualityism, Awareness and the Explanatory Gap. *Erkenntnis* 87: 1423–1445.
- Miller, Gregory. 2017. Forming a Positive Concept of the Phenomenal Bonding Relation for Constitutive Panpsychism. *Dialectica* 71, no. 4: 541-562.

- Mørch, Hedda Hassel. 2017. The Evolutionary Argument for Phenomenal Powers. *Philosophical Perspectives* 31: 293–316.
- Mørch, Hedda Hassel. 2018. Does Dispositionalism Entail Panpsychism? *Topoi* 39, no. 5: 1073–1088.
- Mørch, Hedda Hassel. 2019a. Phenomenal Knowledge Why: The Explanatory Knowledge Argument Against Physicalism. In *The Knowledge Argument*, edited by Sam Coleman, 233–253. Cambridge University Press.
- Mørch, Hedda Hassel. 2019b. The Argument for Panpsychism From Experience of Causation. In *The Routledge Handbook of Panpsychism*, edited by William Seager. Routledge.
- Mørch, Hedda. 2020. The Phenomenal Powers View and the Meta-Problem of Consciousness. *Journal of Consciousness Studies* 27, no. 5–6: 131–142.
- Mumford, Stephen. 2004. *Laws in Nature*. New York: Routledge.
- Munkres, James. 2013. *Topology: Pearson New International Edition*. Englewood Cliffs, NJ: Pearson.
- Pallies, Daniel. 2022. The Pleasure Problem and the Spriggean Solution. *Journal of the American Philosophical Association* 8, no. 4: 665–684.
- Papineau, David. 2002. *Thinking About Consciousness*. Oxford: Oxford University Press.
- Parsons, John. 2004. Distributional Properties. In *Lewisian Themes: The Philosophy of David K. Lewis*, edited by Frank Jackson and Graham Priest, 173–180. Oxford: Clarendon Press.
- Perry, Zee R. 2017. How to Be a Substantivalist Without Getting Shifty About It. *Philosophical Issues* 27, no. 1: 223–249.
- Plate, Jan. 2022. Qualitative properties and relations. *Philosophical Studies* 179, no. 4: 1297–1322.
- Rachels, Stuart. 2000. Is unpleasantness intrinsic to unpleasant experiences? *Philosophical Studies* 99, no. 2: 187–210.
- Reck, Erich. and Schiemer, Georg. 2020. Structuralism in the Philosophy of Mathematics. In *The Stanford Encyclopedia of Philosophy* (Spring 2020 Edition), edited by Edward Zalta and

Uri Nodelman.

<https://plato.stanford.edu/archives/spr2023/entries/structuralism-mathematics/>

Robinson, Howard. 2022. *Perception and Idealism: An Essay on How the World Manifests Itself to Us, and How It (Probably) Is in Itself*. Oxford: Oxford University Press.

Rosen, Gideon. 2006. The Limits of Contingency. In *Identity and Modality*, edited by Fraser MacBride, 13-39. Oxford: Oxford University Press.

Rosen, Gideon. 2010. Metaphysical Dependence: Grounding and Reduction. In *Modality: Metaphysics, Logic, and Epistemology*, edited by Bob Hale and Aviv Hoffman, 109-136. Oxford: Oxford University Press.

Rubenstein, Ezra. 2023. Grounding Identity in Existence. *Philosophy and Phenomenological Research*: 1-21. <https://doi-org.ezproxy.princeton.edu/10.1111/phpr.12949>.

Russell, Bertrand. 1996. *An Inquiry Into Meaning and Truth*, 2<sup>nd</sup> edition. London: Routledge.

Saad, Brad. 2019. A Teleological Strategy for Solving the Meta-Problem of Consciousness. *Journal of Consciousness Studies* 26, no. 9-10: 205-216.

Schaffer, Jonathan. 2007. From Nihilism to Monism. *Australasian Journal of Philosophy* 85, no. 2: 175–191.

Schaffer, Jonathan. 2009. Spacetime the one substance. *Philosophical Studies* 145, no. 1: 131-148.

Schaffer, Jonathan. 2010a. Monism: The Priority of the Whole. *Philosophical Review* 119, no. 1: 31–76.

Schaffer, Jonathan. 2010b. The Internal Relatedness of All Things. *Mind* 119, no. 474: 341–376.

Schaffer, Jonathan. 2010c. The Least Discerning and Most Promiscuous Truthmaker. *Philosophical Quarterly* 60: 307–324.

Schaffer, Jonathan. 2013. The Action of the Whole. *Aristotelian Society Supplementary Volume* 87, no. 1: 67–87.

Schaffer, Jonathan. 2016. It is the Business of Laws to Govern. *Dialectica* 70: 577-588.

- Schopenhauer, Arthur. 1813/1974. *On the Fourfold Root of the Principle of Sufficient Reason*. Translated by E. F. J. Payne. LaSalle: Open Court Publishing Co.
- Searle, John R. 2002. *Consciousness and Language*. Cambridge: Cambridge University Press.
- Shani, Itay and Joachim Keppler. 2018. Beyond Combination: How Cosmic Consciousness Grounds Ordinary Experience. *Journal of the American Philosophical Association* 4, no. 3: 390-410.
- Sider, Theodore. 1992. Tooley's Solution to the Inference Problem. *Philosophical Studies* 67: 261-275.
- Sider, Theodore. 2006. 'Bare Particulars'. *Philosophical Perspectives* 20: 387-397.
- Sider, Theodore. 2008. Monism and statespace structure. *Royal Institute of Philosophy Supplement* 62: 129-150.
- Sider, Theodore. 2011. *Writing the Book of the World*. Oxford: Oxford University Press.
- Skiles, Alexander. 2015. Against Grounding Necessitarianism. *Erkenntnis* 80, no. 4: 717-751.
- Smithies, Declan. 2013. The Nature of Cognitive Phenomenology. *Philosophy Compass* 8, no. 8: 744-754.
- Soteriou, Matthew. 2013. *The Mind's Construction: The Ontology of Mind and Mental Action*. Oxford: Oxford University Press.
- Stoljar, Daniel. 2006. *Ignorance and Imagination: The Epistemic Origin of the Problem of Consciousness*. Oxford: Oxford University Press.
- Strawson, Galen. 2006. Realistic Monism: Why Physicalism Entails Panpsychism. *Journal of Consciousness Studies* 13, no. 10-11: 3-31.
- Strawson Galen. 2008a. *Selves: An essay in revisionary metaphysics*. Oxford: Oxford University Press.
- Strawson, Galen. 2008b. The Identity of the Categorical and the Dispositional. *Analysis* 68, no. 4: 271-282.
- Strawson, Galen. 2014. *The Secret Connexion: Causation, Realism, and David Hume: Revised*

- Edition*. Oxford: Oxford University Press UK.
- Strawson, Galen. 2016. Mind and Being: The Primacy of Panpsychism. In *Panpsychism: Contemporary Perspectives*, edited by Godehard Brüntrup and Ludwig Jaskolla, 75-112. Oxford: Oxford University Press.
- Strawson, Galen. 2017. *The Subject of Experience*. New York: Oxford University Press.
- Strawson, Galen. 2021. Identity Metaphysics. *The Monist* 104: 60-90
- Swinburne, Richard. 2013. *Mind, Brain, and Free Will*. Oxford: Oxford University Press.
- Tooley, Michael. 1977. The Nature of Laws. *Canadian Journal of Philosophy* 7, no. 4: 667–98.
- Tooley, Michael. 1988. In Defense of the Existence of States of Motion. *Philosophical topics* 16: 225-254.
- Tugby, Matthew. 2022. *Putting Properties First*. Oxford: Oxford University Press.
- Turner, Jason. Forthcoming. On Doing Without Ontology: Feautre-Placing on a Global Scale. In *The Question of Ontology*, edited by Javier Cumpa. Oxford: Oxford University Press.
- Tye, Michael. 2003. *Consciousness and Persons: Unity and Identity*. MIT Press.
- Uzquiano, Gabriel. 2015. Varieties of Indefinite Extensibility. *Notre Dame Journal of Formal Logic* 56, no. 1: 147-166.
- Van Cleve, James. 2018. Brute necessity. *Philosophy Compass* 13, no. 9: e12516.
- Van Fraassen, Bas. 1989. *Laws and Symmetry*. Oxford: Clarendon Press.
- Warren, Jared. 2017. Epistemology Versus Non-Causal Realism. *Synthese* 194: 1643-1662.
- Williamson, Timothy. 2016. Modal Science. *Canadian Journal of Philosophy* 46, no. 4-5: 453-492.
- Wilson, Jessica. 2009. Resemblance-based resources for reductive singularism (or: How to be a Humean singularist about causation). *The Monist* 92, no. 1: 153-190.
- Wilson, Jessica. 2016. The unity and priority arguments for Grounding. In *Scientific*



*Composition and Metaphysical Ground*, edited by Ken Aizawa and Carl Gillett, 171-204. Basingstoke: Palgrave MacMillan.

Wilson, Keith. Forthcoming. The Auditory Field: The Spatial Character of Auditory Experience. *Ergo*.

Yetter-Chappell, Helen. 2022. Dualism all the way down: why there is no paradox of phenomenal judgement. *Synthese* 200, no. 2: 1-24.

Yetter-Chappell, Helen. Forthcoming. Get Acquainted with Naïve Idealism. In *The Roles of Representations in Visual Perception*, edited by Robert French and Berit Brogaard. Synthese Book Series.