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# What is Russellian Monism

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## *What is Russellian Monism?*

**Abstract:** *Russellian monism offers a distinctive perspective on the relationship between the physical and the phenomenal. For example, on one version of the view, phenomenal properties are the categorical bases of fundamental physical properties, such as mass and charge, which are dispositional. Russellian monism has prominent supporters, such as Bertrand Russell, Grover Maxwell, Michael Lockwood, and David Chalmers. But its strengths and shortcomings are often misunderstood. In this paper we try to eliminate confusions about the view and defend it from criticisms. We present its core and distinguish different versions of it. We then compare these versions with traditional theories, such as physicalism, dualism, and idealism. We also argue that the knowledge argument and the conceivability argument are consistent with Russellian monism and that existing arguments against the view, such as the argument from weirdness, are not decisive. We conclude that Russellian monism is an attractive view that deserves serious consideration.*

### Introduction

Russellian monism is a view about phenomenal consciousness, the physical world, and the relationship between them.<sup>1</sup> On this view, the phenomenal and the physical are deeply intertwined — more so, at least, than traditional interactionist dualism allows. But there is no attempt to reduce the phenomenal to the physical, at least not in the manner of traditional versions of physicalism (or materialism). Instead, on Russellian monism phenomenal consciousness fills a gap in the picture of nature painted by physics. For example, on one well-

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[1] A mental state is *phenomenally conscious* if there is something it is like to be in that state. See Nagel (1974).

known version of the view, phenomenal properties are the categorical bases of fundamental physical properties, such as mass and charge, which are dispositional.<sup>2</sup>

In this paper, we provide some background on Russellian monism (sections 1–2); specify what we take to be the core of the view (section 3); distinguish its main variations and examine the central concepts it employs (sections 4–6); explain how it relates to traditional theories (section 7) and to the conceivability and knowledge arguments against physicalism (section 8); and discuss the main arguments for and against Russellian monism (sections 9 and 10).

To the extent that this paper is an overview, it is a decidedly opinionated one. We are neutral on certain issues, such as which version of Russellian monism is the most plausible. But on other issues we take stands. For example, the general formulation of Russellian monism that we propose in section 3 differs from others in the literature. We explain our reasons for doing so, but not all will find those reasons sufficient.

## 1. Monism

Ontological monism comes in at least two varieties: token and type.<sup>3</sup> Token monism says roughly that there is (ultimately) only one object. Historically, this view is associated with Spinoza and Parmenides, among others. There are also contemporary versions. Terence Horgan and Matjaž Potrč (2000) defend existence monism, according to which there is only one concrete object, which they call ‘the blobject’.<sup>4</sup> And Jonathan Schaffer (2010) defends priority monism, according to which there is only one *basic* object, the whole cosmos.

Where token monism tends to concern objects specifically, type monism tends to concern entities more generally construed — objects, properties, tropes, etc. Type monism says that there is (ultimately) only one type of entity. Examples of type monism include physicalism, which says that all entities are ultimately of the physical type, and idealism, which says that all entities are ultimately of the mental type. Russellian monism is a version of type monism, not token monism.

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- [2] For examples of traditional dualism and traditional physicalism, see R. Descartes (1641) and D.M. Armstrong (1968), respectively.
- [3] We qualify ‘monism’ with ‘ontological’ because the former is sometimes used to name views that apply outside ontology. For example, value monism says that there is only one value, such as hedonic pleasure.
- [4] One might think that existence monism is clearly false because, for example, you have two distinct hands. In response, Horgan and Potrč would argue that, although the blobject has spatiotemporal and structural complexity, hands are neither concrete particulars nor genuine parts of the blobject.

More precisely, Russellian monism is a version of type monism in so far as it is a version of monism. As we will explain (section 7), some versions of Russellian monism posit more than one type of entity and thus are monistic in name only.<sup>5</sup>

## 2. Russell

Bertrand Russell's writings have inspired most, if not all, contemporary versions of Russellian monism. David J. Chalmers (1996), Michael Lockwood (1992), Grover Maxwell (1978), and others trace the view specifically to *The Analysis of Matter* (Russell, 1927a). There Russell describes his position as neutral monism, a version of type monism on which the one type of entity that ultimately exists is intrinsically neither of the mental nor physical type (Stubenberg, 2005/2010). However, neutral monism is but one version of Russellian monism (see below, section 5). We do not intend 'Russellian monism' to abbreviate 'the version of monism Russell held'.<sup>6</sup>

Even so, it will be instructive to see how Russellian monism emerges from two views Russell expressed in *The Analysis of Matter*. One is structuralism about physics. According to structuralism, physics describes its basic entities in highly abstract, purely structural/relational terms. For example, a particle's mass and charge are characterized as a propensity to be accelerated in a certain way by certain forces — by relations to other entities within a spatiotemporal structure. Those other entities are characterized by further such relations, which in turn are characterized by yet further such relations, and so on. So, for Russell, physics describes the structure of the universe in great detail but is silent on what, if anything, has the structure in itself. That is, physics does not characterize the intrinsic nature of basic physical entities — the relata that stand in basic physical relations.<sup>7</sup>

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- [5] In contemporary philosophy of mind, it is common to apply the type/token distinction to mental and physical states (or events). That application should not be confused with our application to kinds of monism.
- [6] The definite description would be improper in any case. Russell adopted different versions of the view over the years (Stubenberg, 2005/2010). Given that Russellian monism does not necessarily represent Russell's view and that Russellian monism can be seen as a form of dualism, one might think that Russellian monism is analogous to the Holy Roman Empire, which is neither holy, Roman, nor an empire. Thanks to an anonymous referee for this observation.
- [7] Pure structuralism, on which every term in physical theory is defined structurally, faces a well-known difficulty, first raised by Newman (1928): the theory can be satisfied by any set of the appropriate cardinality and thus seems vacuous (or nearly so). However, the problem can be avoided by allowing certain primitives that are not defined structurally. For example, 'cause' and 'law' might refer to causation and lawhood independently of any

What are these relata, if such there be? According to Russell (1927a, p. 402), ‘Percepts are the only part of the physical world that we know otherwise than abstractly’. That claim can be taken to suggest the view that we know phenomenal properties by their intrinsic phenomenal natures. And the idea that phenomenal properties have intrinsic natures with which we are familiar — natures not exhausted by extrinsic, structural features — makes them natural candidates for the relata that stand in basic physical relations. This identification results in a version of Russellian monism.<sup>8</sup> Thus, we are led to Russellian monism by combining Russell’s structuralism about physics with a view he held about knowledge and perception.

### 3. General formulation

There are many distinct versions of Russellian monism but it would be useful to have a general formulation of the view: one that expresses its main components, which are common to all versions. In this section, we will attempt to provide such a general formulation, inspired by the Russellian reasoning traced in the preceding section.

First, however, it will be convenient to introduce some terminology. We will refer to properties (if such there be) that ground the physical structure/relations physics describes as *inscrutables* (Montero, forthcoming). By definition, inscrutables have natures that are not fully characterized by structural/relational descriptions.<sup>9</sup> We will also refer to *protophenomenal properties* — properties that, though not themselves phenomenal, result in phenomenal properties when combined in certain ways (Chalmers, 1996, pp. 126–7).

We are now in a position to specify the main components of Russellian monism. We propose that Russellian monism be understood as a conjunction of three claims:

*Structuralism about physics*: the basic properties physics describes are structural/relational properties.

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structural roles played by causation and lawhood. Russell (1951, p. 271) responded to Newman in roughly this way, where the primitive he assumed was ‘spacio-temporal continuity with the world of percepts...’ Note that even on such impure versions of structuralism, the question of what, if anything, has the structure physics describes still arises.

- [8] This version of Russellian monism does not, however, imply neutral monism, which Russell favoured. But it is consistent with neutral monism given the further assumption that phenomenal properties are or reduce to neutral properties.
- [9] We use ‘inscrutables’ simply as a name for the properties we have described. The term is not ideal, because it has epistemic connotations we do not intend, e.g. that knowledge about such properties is difficult or impossible to acquire. We hope this does not mislead.

*Realism about inscrutables*: there are inscrutables, the natures of which are not wholly structural/relational.  
*(Proto)phenomenal foundationalism*: at least some inscrutables are either phenomenal or protophenomenal properties.

Russellian monism implies additional claims that we leave implicit, e.g. that there are physical properties; and that these properties are indeed structural, as descriptions in physics imply. We isolate structuralism about physics, realism about inscrutables, and (proto)phenomenal foundationalism because we believe they are the most central and most distinctive claims that Russellian monism makes.

So, on our formulation Russellian monism says that there are both structural properties, which physics describes, and inscrutables — and that the latter ground the former. Our formulation differs from some others in the literature. Derk Pereboom writes:

...Russellian monism is any view that combines (1) *categorical ignorance*, the claim that physics, or at least current physics, leaves us ignorant of certain categorical bases of physical dispositional properties, with (2) *consciousness- or experience-relevance*, the proposal that these categorical properties have a significant role in explaining consciousness or experience.<sup>10</sup> (Pereboom, 2011, p. 89)

Pereboom's formulation is in many ways consonant with ours. However, his has an epistemic orientation that ours lacks. In particular, ours does not mention categorical ignorance.<sup>11</sup> It is understandable that Pereboom's does; proponents of Russellian monism often emphasize categorical ignorance. However, categorical ignorance is an *epistemic* claim. But as we understand Russellian monism, it is supposed to be a theory in the same category as dualism and physicalism, namely, *metaphysical*. Such theories primarily concern the nature of the mental and its (metaphysical) relationship to the physical world. Of course, such theories tend to have epistemic commitments. But today those are usually regarded as consequences rather than basic

[10] Compare Chalmers (2003), Stoljar (2001a,b; 2006), Montero (forthcoming). Pereboom (2011) advances this characterization of Russellian monism only provisionally, and refines some of its key concepts in useful ways. However, he does not expressly reject the epistemic orientation of his provisional characterization.

[11] Clause (2) in Pereboom's formulation also has an epistemic orientation, if the intended notion of explanation is epistemic. But this may not be his intention.

tenets of these theories.<sup>12</sup> We believe that the same attitude should be taken toward Russellian monism.<sup>13</sup>

Our formulation is schematic in certain respects. In particular, much is left open about: the relationship between physical properties and the inscrutables; what the inscrutables are; and the relationship between the inscrutables and phenomenal properties. We will address these matters in turn.

#### 4. Physical properties and the inscrutables

Central to Russellian monism is the idea that there is a substantial distinction between the properties found in physics and inscrutables. Call this *the central distinction*. In this section, we will discuss the main ways the central distinction has been explicated.

Explications typically involve the following contrasts:

- (i) extrinsic vs. intrinsic properties
- (ii) dispositional vs. categorical properties
- (iii) relational vs. non-relational properties
- (iv) structural-and-dynamic vs. non-structural-and-non-dynamic properties.<sup>14</sup>

Differences between these contrasts are not much emphasized in the literature on Russellian monism, and some of the terms are often used

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[12] This was not always the case. For example, in chapter one of his influential work, *The Concept of Mind*, Gilbert Ryle (1949) characterizes Cartesian dualism partly in epistemic terms.

[13] The nature of Russellian monism's epistemic commitments is a topic for another essay. But a few points can be made concisely. First, Pereboom's view that Russellian monism implies categorical ignorance is plausible, whether or not it should be included in a definition of Russellian monism. Second, some versions of Russellian monism may imply that we know phenomenal properties in a distinctive way, a way in which we know nothing else. Witness Russell's claim, quoted in section 2, about percepts being the only aspects of the physical world that we know otherwise than abstractly. Third, Russellian monism may have implications concerning Ramseyan Humility, the doctrine that 'we are irremediably ignorant about the identities of the fundamental properties that figure in the actual realization of the true final theory [of reality]' (Lewis, 2009, p. 214). Ramseyan Humility assumes a metaphysical framework in which there are what we call inscrutables. So, Russellian monism involves a Humility-friendly metaphysical framework. Moreover, according to some versions of Russellian monism — namely, all versions except those that identify the inscrutables with phenomenal properties (see section 5 below) — we do not know much about inscrutables, and our ignorance will not be removed by acquiring more of the sort of information physics provides. The latter sort of ignorance falls short of Ramseyan Humility, which says that our ignorance is incurable. But the subject matter of both ignorance claims is the same.

[14] Sometimes explications of the central distinction also invoke epistemic contrasts, e.g. that between properties we know and properties about which we are ignorant (Stoljar, 2006). See section 7 below.

interchangeably (especially ‘relational/non-relational’ and ‘extrinsic/intrinsic’).

However, distinctive controversies surround each of the four contrasts. For example, consider the dispositional/categorical contrast. Sydney Shoemaker (1980) argues that all properties are dispositional, and David Armstrong *et al.* (1996) argue that dispositional properties should be identified with their categorical bases. Either conclusion would complicate the use of the dispositional/categorical contrast in explicating the central distinction. Shoemaker’s and Armstrong’s arguments are disputed (see Fara, 2006). But it is not clear that one should have to take a stand on those particular disputes in order to endorse at least some versions of Russellian monism (*cf.* Stoljar, 2006, chapter 6). Similar considerations apply to the other three contrasts.

Let us therefore stipulate that the general formulation of Russellian monism proposed in the preceding section is neutral on how the central distinction is explicated. References to structural/relational properties should be regarded as mere examples. Thus, structuralism about physics need not strictly involve claims about structure *per se*. A more precise statement of structuralism would be the following: the basic properties physics describes are structural (or structural-and-dynamic) or relational or extrinsic or dispositional. Realism about inscrutables and (proto)phenomenal foundationalism should likewise be regarded as neutral in this respect.

At least three problems arise in connection to how the central distinction is explicated. We will refer to them as *impurity*, *relativity*, and *vagueness*, and address them in turn.

### *Impurity*

Proponents of Russellian monism sometimes describe inscrutables as intrinsic and properties found in physics as extrinsic. But as Pereboom observes, extrinsic properties can have intrinsic aspects:

...*being wise* is an extrinsic property of Sophie since it involves a relation to a comparison class. But *being wise* also includes an intrinsic aspect — having a certain type and level of intelligence. *Being wise* is therefore a complex property that has at least one extrinsic and one intrinsic aspect... (Pereboom, 2011, pp. 92–3)

This leads Pereboom to define a *purely* extrinsic property of a thing X as an extrinsic property of X that has no intrinsic aspects. *Being one of many* is a clear example of a purely extrinsic property. When proponents of Russellian monism characterize properties found in physics as extrinsic, they likely mean not that those properties are purely



extrinsic but rather that physics describes only their extrinsic aspects.<sup>15</sup> And when these philosophers characterize inscrutables as intrinsic, they likely mean not that inscrutables lack extrinsic aspects altogether but only that such properties have intrinsic aspects. Likewise for the other three contrasts in play.<sup>16</sup>

Failing to recognize this point can cause confusion. For example, it is sometimes noted that phenomenal properties have structure and dynamics. The series of auditory phenomenal properties typically caused by hearing a musical scale plausibly has a structure corresponding to the scale. And your headache might become more intense over time. At first glance, such simple observations might seem to create problems for Russellian monism (Stoljar, 2006, pp. 144–9). But the point made in the previous paragraph shows that this concern is unfounded. The relevant claim is not that phenomenal properties lack structure or dynamics, but only that phenomenal properties are not merely structural or dynamic (Alter, 2009).

### *Relativity*

Proponents of Russellian monism sometimes describe inscrutables as categorical and properties found in physics as dispositional. The implication is that categorical properties are not found in physics. But this seems wrong. A typical example of a categorical property is an object's shape, e.g. the roundness of a ball. Yet shapes are described in physics.

However, proponents of Russellian monism need not deny that shape is categorical in a sense. The ball's round shape helps explain its tendency to roll. Proponents of Russellian monism will thus agree that its shape is categorical *relative to* its tendency to roll. But they will argue that its shape is not *absolutely* categorical, in the sense that this property can be analysed in purely dispositional terms. Simon Blackburn expresses this idea in a frequently cited passage:

When we think of categorical grounds, we are apt to think of spatial configurations of things — hard, massy, shaped things, resisting penetration and displacement by others of their kind. But the categorical credentials of any item on this list are poor. Resistance is *par excellence*

- [15] The latter claim should not be confused with the stronger claim, to which Russellian monists are not committed, that the properties found in physics have no intrinsic aspects.
- [16] On this line of reasoning, it might be the case that *both* the inscrutables and the properties found in physics have intrinsic and extrinsic aspects. But there is an important difference. Inscrutables are intrinsic properties that might or might not have extrinsic aspects. By contrast, the properties found in physics are extrinsic properties that might or might not have intrinsic aspects. In other words, the inscrutables are purely or impurely intrinsic, whereas the properties found in physics are purely or impurely extrinsic.

dispositional; extension is only of use, as Leibniz insisted, if there is some other property whose instancing defines the boundaries; hardness goes with resistance, and mass is knowable only by its dynamical effects. Turn up the magnification and we find things like an electrical charge at a point, or rather varying over a region, but the magnitude of a field at a region is known only through its effects on other things in spatial relations to that region. A region with charge is very different from a region without: perhaps different enough to explain all we could ever know about nature. It differs precisely in its dispositions or powers. But science finds only dispositions all the way down. (Blackburn, 1990, pp. 60–2)<sup>17</sup>

Similar points apply to the other three contrasts. For example, the ball's roundness can be said to be intrinsic to the ball because it may seem that the ball is round independently of its relation to other objects. But proponents of Russellian monism will argue that its roundness is not *absolutely* intrinsic, in the sense that this property can be analysed in purely extrinsic terms — more specifically, in terms of the extrinsic properties of its parts, such as their spatial arrangement (van Cleve, 1988; Pereboom, 2011, p. 93).

### *Vagueness*

At least some of the concepts used to explicate the central distinction are vague in potentially objectionable ways (Stoljar, 2006, pp. 144–53; 2009). Perhaps the clearest example is the concept of *structure*. Consider the Russellian monist claim that basic physical properties are structural and dynamic. What is implied by 'structural'? One might suggest that a structural property is one that can be defined using only relational terms, indexicals, and logical and mathematical vocabulary. But this will not do. At least, there would have to be constraints on which relational terms are allowed. The term 'standing next to someone who is in pain' is relational, and proponents of Russellian monism will reject the idea that the property expressed by that term is merely structural (Alter, 2009).

In response, one might suggest stipulating that the terms used to define structural properties do not refer to phenomenal properties. But that would be dialectically unacceptable. Proponents of Russellian monism wish to *argue* that the structural/dynamic truths physics discovers are incomplete — that there are truths involving phenomenal

[17] For a similar view, see Holden (2004, p. 272). Blackburn's argument, though influential, does not settle the matter. For one thing, consider his statement, 'mass is knowable only by its dynamical effects'. That claim is epistemic: it concerns how mass can be known, not what mass is. Even if true, it does not follow that mass is dispositional. For critical discussion of Blackburn's argument, see Pereboom (2011, pp. 90–1).

properties that are not entailed by any structural/dynamic truths (see section 8 below). That is supposed to be a substantial claim, not a trivial consequence of a stipulation.<sup>18</sup> Further, the proposed stipulation would do little to clarify the relevant notion of structure.

There is a more promising suggestion. For the purposes of Russellian monism, we propose that ‘structure’ be understood to refer specifically to nomic (or causal) spatiotemporal structure.<sup>19</sup> This seems to be what at least some leading proponents of Russellian monism (e.g. Maxwell, 1978; Chalmers, 1996; 2003) have in mind.

Daniel Stoljar, who raises (what we call) the vagueness concern, considers and rejects that suggestion (which he attributes to Chalmers). But his basis for rejecting it seems to us inadequate. He writes, ‘some possible physical truths are clearly not about causal and spatiotemporal structure’ (Stoljar, 2009, p. 778). However, this is not really so clear. Familiar physical truths, at least those found in physics, would appear to concern precisely (and only) nomic spatiotemporal structure. If there are exceptions, this would need to be shown. In any event, Stoljar does not elaborate, and so his objection is hard to assess.

Stoljar gives a second objection to treating structure as nomic spatiotemporal structure for the purposes of Russellian monism:

...there are phenomenal truths that are causal or spatio-temporal — e.g. the sense of agency is presumably causal in one good sense but contributes according to many philosophers to the overall phenomenal state of the subject. (*Ibid.*, p. 778)

But this is beside the point. Proponents of Russellian monism do not deny that there are phenomenal truths that are — in part — about causal spatiotemporal structure. Their claim (on the current suggestion) is rather that there are phenomenal truths that are not exhausted by truths about nomic spatiotemporal structure.

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[18] Strictly, the stipulation alone does not establish the conclusion, if only because the conclusion rests on the additional claim that there are truths involving phenomenal properties. But this is plainly beside the point.

[19] It might be possible to define structural-and-dynamic truths as those that can be fully represented in the form of a Ramsey sentence whose O-terms include only nomic and spatiotemporal expressions (in addition to indexicals and logical and mathematical terms). For the notions of a Ramsey sentence and O-terms, see Lewis (2009). Thanks to David Chalmers for this suggestion (in correspondence).

### 5. What are the inscrutables?

Proponents of Russellian monism differ on what the inscrutables are. In this section, we discuss the four main candidates.

*Proposal one: the inscrutables are phenomenal properties*

Proponents of proposal one include Adams (2007), Bolender (2001), Foster (1982), Griffin (1998), Rosenberg (2004), Russell (1927a), Strawson (2006a), and various others. This proposal is a natural one for Russellian monists to consider. Phenomenal properties appear to have natures that are not fully captured by the sorts of truths found in physics.<sup>20</sup> Additionally, identifying the inscrutables as phenomenal properties allows for precisely the sort of integration between phenomenal and physical properties that Russellian monism is designed to achieve.

If the inscrutables are construed as phenomenal properties and the inscrutables are assumed to be everywhere, then Russellian monism seems to entail panpsychism — the view that mind, or at any rate phenomenality, is everywhere.<sup>21</sup> The argument here is straightforward. Basic physical properties are ubiquitous: they are instantiated throughout the universe. By definition, the inscrutables ground basic physical properties. So, if the inscrutables are phenomenal properties, then phenomenal properties too must be instantiated everywhere.

Few contemporary philosophers accept panpsychism, and some find it repugnant. This is understandable. Panpsychism seems to imply that there is something it is like to be a thermometer, a rock, and even an electron. Such claims are at least highly surprising, and some (Searle, 1997) regard them as obviously false. But they do not appear to be incoherent, and they have been defended (Chalmers, 1996, chapter 8; Rosenberg, 2004; Strawson, 2006a,b). Some attribute resistance to panpsychism to assumptions that panpsychists need not make. One of these is the assumption that the phenomenality associated with rocks and thermometers would have to strongly resemble the phenomenality with which we are familiar — strongly enough so that we could *imagine* what it is like to be a rock or a thermometer. Additionally, defenders of panpsychism note that the alternative also has a

[20] This point is vividly illustrated by various thought experiments used in standard anti-physicalist arguments, such as Frank Jackson's (1982) Mary case. See section 8 below.

[21] Rosenberg (2004, p. 91) prefers the terms 'panexperientialism' introduced by Griffin (1998) partly on the grounds that 'panpsychism' suggests the ubiquity of mind, whereas the view in question implies only the ubiquity of phenomenality. Chalmers (1996, pp. 298–9) raises the same concern (plus two others) about 'panpsychism'.

counter-intuitive consequence: that phenomenal consciousness would either have to ‘wink in’ at a certain level of complexity, or that it is sometimes indeterminate whether a system is conscious. Even so, panpsychism is a consequence many philosophers otherwise sympathetic to Russellian monism would prefer to avoid.<sup>22</sup> That result is achieved by a second proposal.

*Proposal two: the inscrutables are protophenomenal properties*

Again, protophenomenal properties are non-phenomenal properties the combination of which results in phenomenality (Chalmers, 1996; 2003). On this proposal, Russellian monism seems to entail not panpsychism but pan*pro*psychism, the weaker claim that the components of phenomenality pervade the physical world. On pan*pro*psychism, if there is nothing it is like to be a rock, then this is only because the protophenomenal properties underlying the basic physical properties instantiated in the rock are not combined in the right way. Chalmers writes:

[P]erhaps there is some *other* class of novel fundamental properties from which phenomenal properties are derived... [T]hese cannot be physical properties, but perhaps they are nonphysical properties of a new variety, on which phenomenal properties are logically supervenient. Such properties would be related to experience in the same way that basic physical properties are related to nonbasic properties such as [the] temperature [of a gas]. We could call these properties *protophenomenal* properties, as they are not themselves phenomenal but together they can yield the phenomenal. (Chalmers, 1996, pp. 126–7)

The crucial question here is what exactly protophenomenal properties are if they are not themselves phenomenal.

*Proposal three: the inscrutables are neutral properties, properties that are neither physical nor mental*

This proposal is associated with neutral monism. It entails neutral monism if combined with three other assumptions: the assumption that neutral properties ground not only basic physical properties (as all inscrutables do, by definition) but also phenomenal properties; the assumption that physical and phenomenal properties are nothing over and above neutral properties; and the assumption that there are no further properties that are over and above neutral, physical, and mental

[22] For further discussion of the costs and benefits of panpsychism, see Chalmers (1996); Rosenberg (2004); Alter (2004); and Freeman (2006).

properties.<sup>23</sup> Thomas Nagel (1986; 1998) suggests a view roughly along these lines (see also Feigl, 1958/1967).<sup>24</sup>

*Proposal four: the inscrutables are physical properties of a special sort*

Such physical properties would be special in that they would have natures that are not exhausted by the sorts of properties found in physics. At first glance, that condition might seem relatively weak. Biological properties such as *being a cell* might seem to satisfy it: this property has no place in fundamental physics, and yet it seems to be a physical property *par excellence*. However, it does not follow that it has a nature that is not exhausted by the sorts of properties found in physics. On the contrary, it seems plausible that biological properties have no such natures. This is reflected by a claim that is defended by Chalmers and Jackson (2001): that (roughly put) there are no truths about such properties that fail to be *a priori* deducible from the complete microphysical truth (the latter includes all and only truths found in fundamental microphysics).<sup>25</sup> So, by having natures that are not similarly exhausted by the sorts of properties found in physics, physical inscrutables would indeed be special.

Proposal four is suggested by Papineau (2002, pp. 22–3), Stoljar (2001a,b), Montero (forthcoming), and Pereboom (2011). Pereboom considers two candidates for what specific sorts of physical properties the inscrutables might be: Aristotelian prime materiality; and absolute (or perfect) solidity, the notion of which he attributes to Locke and Newton. The former is notoriously obscure, but Pereboom implies that the latter should be regarded as a serious option. If absolute solidity is to qualify as an inscrutable, then it would have to differ from ordinary solidity, which seems manifestly dispositional. Whether we can make sense of this idea is not entirely clear. Also, absolute solidity would have to do what Russellian monism requires of inscrutables, namely, it would have to ground basic physical properties and account

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- [23] The conjunction of the first assumption and the third proposal seems to entail the second proposal, that the inscrutables are protophenomenal properties.
- [24] This version of Russellian monism could be conceived roughly as a type analogue of Spinoza's dual-aspect theory about tokens. On Spinoza's theory there is only one token entity with two (physical and mental) aspects, and on this version of Russellian monism there is only one type of entity with two aspects.
- [25] This simplifies a bit. For example, the deduction base should include the complete indexical truth (Chalmers and Jackson, 2001, section 2.2). Such complications do not affect the point we are making here, concerning the way in which the relevant physical properties would have to be special.

for phenomenal consciousness. Whether it (or any other physical property) can satisfy those conditions is an open question.

The four proposals do not all exclude each other. Proposal one (the inscrutables are phenomenal) is incompatible with proposal two (the inscrutables are protophenomenal) and proposal three (the inscrutables are neutral). Proposal three is incompatible with proposal one and proposal four (the inscrutables are physical). But depending on how the notion of the physical is explicated, proposals one and four may be compatible, and proposal two may be compatible with proposals three and four.<sup>26</sup> It is also possible to devise hybrid views, by allowing that there is variation among the inscrutables. For example, one might propose that the inscrutables include both non-phenomenal (protophenomenal, neutral, or physical) and phenomenal properties (Holman, 2008).

### 6. The inscrutables and phenomenal properties

What relations obtain between the inscrutables and phenomenal properties? Once again, there are multiple options. Here are three:

- (a) Identity: the inscrutables are identical to phenomenal properties.
- (b) Constitution: the inscrutables constitute phenomenal properties.
- (c) Necessitation/supervenience: phenomenal properties are necessitated by/supervene on the inscrutables; more precisely, all phenomenal truths (truths involving phenomenal properties) are necessitated by/supervene on inscrutable truths (truths involving the inscrutables).<sup>27</sup>

[26] In his 1996 book Chalmers rejects the claim that protophenomenal properties are physical properties. He writes: ‘Some people will think that the view [Russellian monism] should count as a version of materialism rather than dualism, because it posits such a strong lawful dependence of the phenomenal facts on the physical facts, and because the physical domain remains autonomous. Of course there is little point arguing over a name, but it seems to me that the existence of further contingent facts over and above the physical facts is a significant enough modification to the received materialist world view to deserve a different label’ (Chalmers, 1996, p. 126).

[27] The necessitation/supervenience relation to which we here refer is metaphysical, as opposed to epistemic or nomological. We do not mean to deny that the latter relations obtain between inscrutable and phenomenal truths. They well might. Chalmers describes (1996, pp. 126–7) protophenomenal properties as properties on which phenomenal properties would logically supervene — by which he means that phenomenal truths would be *a priori* deducible from protophenomenal truths (truths involving protophenomenal properties).

(b) and (c) are compatible with any of the four proposals discussed in the previous section, concerning the nature of the inscrutables. But (a) seems compatible only with proposal one, that the inscrutables are phenomenal properties.<sup>28</sup>

A fourth option may be

- (d) Causation: the inscrutables cause phenomenal properties, or more precisely, the instantiation of inscrutables causes the instantiation of phenomenal properties.

(d) is compatible with proposals two, three, and four. Whether (d) is compatible with proposal one (that the inscrutables are identical with phenomenal properties) depends on whether, in property causation, causes and effects must be distinct.

However, it is unclear whether proponents of Russellian monism should consider (d) an option. (d) is compatible with the three main components of Russellian monism: structuralism about physics, realism about inscrutables, and (proto)phenomenal foundationalism. However, many consider Russellian monism's implication that phenomenality is deeply integrated into the natural order as one of the theory's principal virtues. Construing the inscrutable/phenomenal relation as merely causal threatens to undermine that virtue. Those with this concern might therefore insist that, if Russellian monism is true, then the inscrutables must relate to phenomenal properties in a more intimate way, such as by identity, constitution, or necessitation/supervenience.<sup>29</sup>

## 7. Traditional theories

How does Russellian monism relate to other theories concerning consciousness and the physical world? This depends on how the details are filled in. In section 5 above, we noted that Russellian monism becomes a version of neutral monism if the inscrutables are construed as neutral properties (given a few further assumptions, such as the assumption that the inscrutables ground phenomenal properties). In this section, we will explain how filling in the details in other ways

[28] (a) entails proposal one, but the reverse entailment does not strictly hold. One might maintain that the inscrutables *are* phenomenal properties in the sense that the latter *constitute* the former. But so construing proposal one would make it hard to distinguish from proposal two, that the inscrutables are protophenomenal properties. So, we set this construal aside.

[29] In theory, proponents of Russellian monism might reject options (a) through (d) and instead hold that the relevant relations — identity, constitution, supervenience, or causation — obtain between the inscrutables and *combinations* of phenomenal properties and properties found in physics. But we are not aware of proponents of Russellian monism who endorse, or even consider, this option.



yields versions of the three main traditional theories: physicalism, dualism, and idealism.

Turning Russellian monism into a version of physicalism may seem simple: we need merely construe the inscrutables as physical properties of a special sort (Montero, forthcoming; Strawson, 2006a; Papineau, 2002, pp. 22–3; Pereboom, 2011). In that case, it seems, everything would be physical. But this is misleading. On traditional versions of physicalism, physics (or perhaps objective science more generally conceived) catalogues all the fundamental properties there are. Traditional theories leave no room for any further properties (or perhaps more precisely: any further property instantiations). Yet so-called physicalist versions of Russellian monism do posit further properties, namely, the inscrutables. As we explained above (section 5), even if these are construed as physical properties, they would be unlike physical properties as traditionally conceived, such as prime materiality or absolute solidity. So, if there are physicalist versions of Russellian monism, they are non-traditional physicalist theories.

Russellian monism can become a version of dualism if two assumptions are made. The first is that the inscrutables are phenomenal properties. The second is that the properties found in physics (or at least the basic ones) are not constituted by (and do not supervene on) relations among the inscrutables. Given these assumptions, Russellian monism seems to posit a dualism of the phenomenal and the physical (Rosenberg, 2004). But this version of dualism encourages a tighter connection between the phenomenal and the physical than traditional versions of dualism, such as interactionism, posit. Traditional versions tend to construe that connection as merely causal. On Russellian monism, the connection is conceived as being closer than that. For example, on some versions phenomenal properties are categorical bases of physical, dispositional properties. That is a significant departure from traditional versions of dualism.

Russellian monism can become a version of idealism too. Here we again assume that the inscrutables are phenomenal properties. But this time we assume that the properties found in physics (and all properties other than the inscrutables) *are* constituted by relations among the inscrutables. The result is a view that posits only the inscrutables and what they constitute. So, we have a Russellian monist version of idealism (Adams, 2007; Bolender, 2001; Chalmers, forthcoming; Foster, 1982).

So, Russellian monism would seem to be compatible with neutral monism, physicalism, dualism, and idealism. Russellian monism can also be construed such that it does not fit neatly into any of those four

categories. Suppose, for example, that we assume that the inscrutables are neutral but also that phenomenal properties are over and above neutral properties. The resulting version of Russellian monism posits two basic sorts of properties, which seems to imply that it is not a version of neutral monism, physicalism, or idealism. But it is also not a version of mental-physical dualism, because the physical is accorded a derivative status. The view could be described as a hybrid view: neutral-phenomenal dualism. But even where there is substantial overlap with traditional theories, Russellian monism provides a distinctive perspective on consciousness, the world as revealed by physical science, and the relationship between the two.

### 8. The conceivability argument and the knowledge argument

Recent philosophical treatment of consciousness tends to centre on two powerful arguments against physicalism: the conceivability argument and the knowledge argument. In this section we consider how Russellian monism fits into this discussion. Following Chalmers (2003), we will argue that neither argument threatens Russellian monism.

The conceivability argument usually begins with a thought experiment, such as the case of zombies — creatures that lack (phenomenal) consciousness but are physically identical to ordinary human beings.<sup>30</sup> The argument runs roughly as follows. Intuitively, zombies would seem to be conceivable. Moreover, the apparent conceivability of zombies does not seem to disappear upon further reflection. As Chalmers (2002; 2010) suggests, this is so even on ideal reflection. No *a priori* reasoning whatsoever would reveal any inconsistency (or incoherence of any sort) in the zombie hypothesis. Not even a thinker with limitless reasoning abilities would detect any such inconsistency. But if zombies are, as Chalmers puts it, *ideally conceivable*, then they are metaphysically possible, i.e. then zombies could have existed. This indicates that the complete physical truth about the world is incomplete. For example, consider the visual experience you are now having. The complete physical truth — including all the physical truth about your brain and body — does not distinguish between you and your zombie twin, who experiences nothing whatsoever. In other words, there are truths about consciousness that are not necessitated

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[30] The conceivability argument can also begin with other thought experiments, such as inverted spectrum cases (Chalmers, 1996).

by the complete physical truth. If so, then it seems to follow that physicalism is false.

To summarize:

1. It is ideally conceivable that there be zombies.
2. If it is ideally conceivable that there be zombies, then it is metaphysically possible that there be zombies.
3. If it is metaphysically possible that there be zombies, then physicalism is false.
4. Therefore, physicalism is false.<sup>31</sup>

The knowledge argument was introduced by Frank Jackson (1982; 1986), who reasons as follows. Imagine Mary, who was raised in an entirely black-and-white environment. She has never seen colours. Nevertheless, she learns everything physics can teach — not just the physics of today, but *completed* physics. She acquires all such information by watching lectures on black-and-white television. If physicalism were true, her complete scientific knowledge would amount to complete knowledge *simpliciter*. But there are truths that she does not know. To see this, suppose she leaves her room and looks at, say, a ripe tomato for the first time. When this happens, she will learn something new, namely, what it is like to see red. Therefore, physicalism is false.<sup>32</sup>

The knowledge argument's general form can be represented in a way that parallels the above summary of the conceivability argument, as follows:

1. There are truths about consciousness that cannot be deduced from the complete physical truth (that is why Mary learns something when she leaves the room).
2. If there are truths about consciousness that cannot be deduced from the complete physical truth, then there are truths about consciousness that are not necessitated by the complete physical truth.
3. If there are truths about consciousness that are not necessitated by the complete physical truth, then physicalism is false.

[31] Both premises 1 and 2 are disputed. See Gendler and Hawthorne (2002). The link between conceivability and possibility is especially controversial, and even defenders of premise 2 such as Chalmers (2002) reject the unqualified thesis that if *p* is ideally conceivable then *p* is metaphysically possible.

[32] Jackson (1998; 2003; 2007) now rejects the knowledge argument. For criticisms of his rejection, see Alter (2007); Robinson (2002); and Robinson (2008).

4. So, physicalism is false.<sup>33</sup>

Like the conceivability argument, the knowledge argument uses a thought experiment to establish an epistemic gap between the physical and the phenomenal — though here the gap is expressed in terms of non-deducibility rather than conceivability (Chalmers, 2003). Also like the conceivability argument, the knowledge argument then proceeds to infer a corresponding metaphysical gap, from which the falsity of physicalism is in turn inferred.

Russellian monists have at least three options for responding to the conceivability and knowledge arguments. Russellian monists who reject physicalism can, of course, accept the anti-physicalist conclusion. But those more sympathetic to physicalism have at least two other options.

Jackson assumes that the truths discovered by ideal physics exhaust the complete physical truth. Russellian monists might reject that assumption on the grounds that the truths discovered by physics do not include one class of physical truths, namely, the truths about the inscrutables. On this view, the black-and-white lectures Mary watches while still in the room would leave out part of the complete physical truth (Stoljar, 2001a). Her pre-release physical knowledge would therefore be incomplete. And if her physical knowledge *were* complete, then she presumably would be able to deduce what it is like to see red — because, on this view, the truths about inscrutables are or ground phenomenal truths, including the truths about what it is like to see red. For these reasons, Russellian monists could reject premise 1 of the knowledge argument (which says that there are truths about consciousness that cannot be deduced from the complete physical truth).

Alternatively, Russellian monists might reject premise 2 of the knowledge argument (which says that if there are truths about consciousness that cannot be deduced from the complete physical truth, then there are truths about consciousness that are not necessitated by the complete physical truth). Here is the reasoning. The reason some phenomenal truths cannot be deduced from the complete physical truth is that the former are or are grounded in truths that physics does not describe, namely, truths about inscrutables. Nevertheless, the truths that physics does describe completely determine the truth about

[33] Both arguments involve some simplification. For example, references to the complete physical truth in the knowledge argument should instead refer to a conjunction of the complete physical truth, a second-order 'that's all' claim, and the complete indexical truth. See Chalmers (2010). But these details do not matter much here.

inscrutables — just not in a way that can be discerned by *a priori* reflection. Thus, the physical necessitates the phenomenal despite the impossibility of deducing phenomenal truths from physical truths.<sup>34</sup>

Parallel points apply to the conceivability argument. Russellian monists could accept its anti-physicalist conclusion. Alternatively, they could reject that argument's first premise, arguing that zombies seem conceivable only because we ignore the parts of the physical world that concern the inscrutables. Duplicating the complete physical world, Russellian monists could argue, would require duplicating all the truths about inscrutables which, on their view, includes (or *a priori* implies) the truths about consciousness (Stoljar, 2001b). Also, Russellian monists could dispute the conceivability argument's second premise, arguing that although the complete physical truth necessitates all truths about consciousness this cannot be discerned by *a priori* reflection alone.

Thus, the conceivability and knowledge arguments do not threaten Russellian monism. This is not surprising, for at least two reasons. First, those arguments are directed against traditional versions of physicalism, which do not emphasize the central distinction between the properties found by physics and inscrutables. Second, the relevant thought experiments, such as the zombie and Mary cases, can all be seen as simply vivid illustrations of a general principle that arguably constitutes the foundation of both arguments. This is *the structure-and-dynamics thesis*: the claim that there are truths about consciousness that are not *a priori* deducible from truths solely about structure and dynamics (Chalmers, 2003). For example, the reason pre-release Mary cannot figure out what it is like to see red while still in the room is that what this experience is like includes more than just structural and dynamic information, and yet the latter sort of information is all that the science lectures convey. But the structure-and-dynamics thesis fits well with Russellian monism. Indeed, Russellian monism would appear to assume the thesis. Such considerations suggest that the target of the conceivability and knowledge arguments is not physicalism *per se* but rather physicalist views that are not also versions of Russellian monism.<sup>35</sup>

[34] This move could be based on the semantic view that basic physical terms such as 'mass' and 'charge' rigidly refer to the inscrutables but not in a way that can be discovered by *a priori* reflection on the meanings of those terms. See Chalmers (2003; 2010).

[35] Chalmers (2010) expresses this idea by saying that the arguments' conclusion should be presented not as 'physicalism is false' but instead as 'physicalism is false or Russellian monism is true'.

## 9. Arguments for Russellian monism

That Russellian monism comports well with the conceivability and knowledge arguments will for some constitute an argument for Russellian monism, or at least a reason to take the view seriously. In this section, we will present two further arguments for Russellian monism.

### *A. A comparative argument*

It can be argued that Russellian monism retains strengths of traditional versions of physicalism and dualism, while overcoming their weaknesses. Consider traditional physicalism first. As we noted above in section 1, physicalism is a version of monism, and as such it has the advantage of ontological parsimony. However, traditional physicalism has trouble accommodating a claim that many take to be obvious, namely, the claim that consciousness is fundamentally distinct from any property found in physics. This is, for those philosophers, a substantial drawback. To be sure, there are versions of traditional physicalism that go to considerable lengths to try to accommodate the uniqueness of consciousness. These are the views that Chalmers (2003) classifies as type-B physicalism: views that accept a deep epistemic gap between the physical and the phenomenal but deny a corresponding metaphysical gap (e.g. Papineau, 2007; Block, 2007). However, many think that these views face serious objections (which we do not have space to explain); see Chalmers (2007; 2010).

Consider now traditional dualism. Some philosophers are attracted to this view because it affirms the uniqueness of consciousness. However, traditional dualism is not parsimonious, in comparison to monist views. Moreover, it has trouble accommodating a claim that many take to be obvious, namely, the claim that consciousness is a fundamentally natural phenomenon — a phenomenon that is fully integrated into the physical world. Traditional dualist views tend to make the physical-phenomenal connection appear accidental and arbitrary, and many naturalistically inclined philosophers find that consequence implausible. For example, traditional interactionist dualism says that the physical and the phenomenal affect each other. But it can seem mysterious as to how they could affect each other if, as this view maintains, the two are fundamentally different (Kim, 2005, chapter 3). Traditional interactionist dualism also threatens to violate the widely held view that the physical domain is causally closed (Papineau, 2002). Epiphenomenalist versions of dualism avoid the latter problem by maintaining that consciousness has no physical effects. But epiphen-

omenalism retains the problem of making it mysterious how the physical can affect the phenomenal. And by denying that the phenomenal affects the physical, epiphenomenalism arguably does even worse than interactionist dualism with respect to integrating consciousness into nature.

It can be argued that Russellian monism retains the strengths of these traditional theories while avoiding their weaknesses. Monist versions of Russellian monism share the ontological elegance of physicalism. And like traditional dualism, all versions of Russellian monism succeed in affirming the uniqueness of consciousness. Yet Russellian monism allows consciousness to be integrated into nature in a much more substantial way than does traditional dualism. The causal roles phenomenal properties play on Russellian monism are not necessarily those that folk wisdom ascribes to consciousness. For example, folk wisdom has it that a sharp pain can cause you to flinch. Although Russellian monism does not exclude the possibility that pain causes flinching, the causal roles some versions of Russellian monism ascribe to phenomenal properties do not necessarily support such claims. Instead, Russellian monism says (on some versions) that phenomenal or protophenomenal properties constitute categorical bases for fundamental physical dispositions. Nevertheless, Russellian monism does support a naturalistic perspective on consciousness, according to which consciousness (or its components) fits crucially into the causal nexus. Further, unlike traditional versions of dualism, an intimate physical-phenomenal connection is built into Russellian monism from the start.

### *B. The 'solving two problems at once' argument*

Another argument for Russellian monism is that it provides a unified solution to two basic philosophical problems that may be closely related. Chalmers (1996) presents this argument and attributes it to Russell.<sup>36</sup>

In the philosophy of science, there is a problem of a lack of meta-physical grounding. All fundamental physics gives us is nomic spatio-temporal structure. That is, it gives us little more than structure without any underlying non-structural properties. Some believe that what we should conclude from this is that nature consists in nothing but structure (Ladyman and Ross, 2007). But Russell and others think

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[36] Russell does not present the argument explicitly, but comes close. See Russell (1927a and 1927b, p. 116).

that we must look outside of physics for properties that ground the network of causes and effects that physics describes.<sup>37</sup>

In the philosophy of mind, there is a problem about integrating consciousness into nature. There are powerful arguments — principally the knowledge argument and the conceivability argument — that indicate that the truth about consciousness is not exhausted by the sorts of truths we find in physics. But many who are sympathetic to that conclusion are concerned that accepting it creates a serious integration problem. As we noted above, many find traditional versions of dualism, to which proponents of the knowledge argument and the conceivability argument often subscribe, unattractive precisely because these views fail to adequately integrate consciousness into nature.

At first glance, these problems may seem to have nothing to do with each other. But on reflection, they might be related. The philosophy of science problem could be described as a help-wanted problem. Physics wants to hire help: it wants to employ something outside its purview to ground the structure it so elegantly describes. The philosophy of mind problem could likewise be described as a job-seeking problem. Consciousness wants a job: it wants to be integrated into nature by playing a role in the causal nexus known as the cosmos. Seen in this way, a unified solution suggests itself: consciousness can be employed to ground fundamental physical relations — which is what Russellian monism says, with the one qualification that on some versions of Russellian monism it is not consciousness itself but its components (protophenomenal properties) that ground the properties found in physics. So, Russellian monism provides what seems on reflection to be a natural solution to two significant philosophical problems. This speaks in favour of the view.<sup>38</sup>

## 10. Arguments against Russellian monism

We have seen two arguments for Russellian monism in the previous section. In this section we will consider two arguments that have been advanced *against* Russellian monism. We will argue that neither is decisive but that the second identifies a serious challenge for Russellian monism.

[37] Jennifer McKittrick (2003) argues that there *could* be pure dispositions, dispositions without categorical bases. Russellian monists can agree but argue that in fact basic physical properties have categorical bases. *Cf.* Chalmers (2003, p. 131).

[38] We hope it is not too pedantic to mention that our talk of what physics and consciousness ‘want’ is metaphorical. We risk pedantry here only because we have discussed panpsychism, which is sometimes taken to imply that inanimate entities literally have such things as desires. Russellian monist versions of panpsychism have no such implication.



### A. *The argument from weirdness*

Perhaps the most common reaction to Russellian monism is that it is weird or highly counter-intuitive. This reaction tends to be particularly strong when Russellian monism is formulated as a version of panpsychism, which says that phenomenal consciousness is ubiquitous. For example, John Searle (1997) attributes panpsychism to Chalmers and describes the view as ‘absurd’. Searle ridicules (what he takes to be) Chalmers’ acceptance of panpsychism as follows: ‘when faced with a *reductio ad absurdum* argument [Chalmers] just accepts the absurdity... It is as if someone got the result that  $2 + 2 = 7$  and said, “Well, maybe 2 plus 2 does equal 7”’ (Searle, 1997, p. 156).<sup>39</sup>

But Searle’s arithmetic analogy is questionable. We know that  $2 + 2$  does not equal 7. There is no serious disagreement about the falsity of that equation. By contrast, it is an open question which theory best describes the relationship between consciousness and the physical world. Moreover, on reflection it is not surprising that we end up with a weird theory of the physical-phenomenal relationship. From the perspective of objective science, consciousness seems fundamentally different from every other natural phenomenon; from that perspective, its very existence can seem bizarre.<sup>40</sup> In any event, if Russellian monism’s weirdness provides a reason to reject Russellian monism, the reason is hardly compelling. If weirdness were a compelling reason to reject a theory about the fundamental nature of the world, then we would be rationally compelled to reject counter-intuitive theories in physics, such as string theory and, on some interpretations (such as the many-worlds interpretation), quantum mechanics. But we are not so compelled.

### B. *The combination problem*

Despite the shortcomings of the argument from weirdness, there is a serious problem in the vicinity. Familiar experiences present themselves as smooth, continuous, and unified. And they seem to belong to a single subject. To be sure, they have various aspects. But these aspects have an underlying homogeneity. In summary, our experience seems to have a specific, homogeneous character. Now, according to Russellian monism, familiar phenomenal properties result from combinations of inscrutables. But how is this supposed to work? It is hard

[39] In fact, as he notes in his response to Searle, Chalmers (1996; 1997, p. 166) does not endorse panpsychism but rather claims only that it is ‘not as unreasonable as is often supposed’.

[40] See Campbell (1970) and Jackson (1982).

to see how phenomenal or protophenomenal properties of micro-physical systems could somehow add up to the phenomenal properties with which we are familiar — properties with the specific, homogeneous character with which we are all acquainted.

This is a version of *the combination problem* for panpsychism (James, 1890, chapter 6; Chalmers, 2003), which is also known as *the grain problem* (Sellars, 1965). The problem is substantial. Chalmers writes, ‘It is certainly the hardest problem for any sort of Russellian view’ (Chalmers, 1996, p. 307). (‘Any’ might be too strong; the problem might not arise for versions of the view that identify the inscrutables with familiar phenomenal properties.) Some disagree. For example, Stoljar suggests that the grain problem rests on a mistaken assumption. He considers Maxwell’s claim that a visual experience of red is smooth and continuous and writes,

...the answer [to the combination problem] emerges when we focus on what precisely it is in Maxwell’s example that is supposed to be smooth and continuous. It seems plausible to say that it is the expanse that is smooth and continuous, and also that the expanse is something that we represent in visual experience, i.e., Maxwell’s example is an example in which we are having an experience which represents an expanse as being smooth and continuous. But of course, it does not follow from this that the experience *itself* is smooth and continuous. Consider: an experience of red represents something as being red, but it itself is not red. So the answer to the grain problem is that it gets the phenomenology wrong and mislocates the absence of grain: absence of grain is not a feature of experiences, but a feature of something that experiences represent. (Stoljar, 2001a, p. 276)

However, many will find this response unconvincing, at least as an answer to the combination problem. Experience itself seems at least much more smooth and continuous than what one would expect based on panprotopsychoism. There is a striking discrepancy between how experience presents itself and how it is construed by panprotopsychoism. It is not clear that this discrepancy can be explained adequately in terms of misattributing a property of what is represented (such as an expanse in physical space) to that which does the representing (an experience).<sup>41</sup>

[41] In response to this sort of objection, Stoljar appeals to the doctrine, popular among representationalists (e.g. Tye, 2000), that experience is diaphanousness — the doctrine that, as Stoljar puts it, ‘introspection reveals the intentional objects of experiences to us, but not the experiences themselves’ (Stoljar, 2001a, p. 276). However, the diaphanousness doctrine is controversial (see Kind, 2003). Russellian monists tend to accept that experience itself is at least dissimilar enough from protophenomenal properties to give rise to a serious combination problem.

Even so, similar problems arise for at least some competing theories. Wilfred Sellars (1965) develops a version for traditional physicalism. More importantly, the problem should properly be seen not as a refutation of Russellian monism but instead as a challenge to develop a concept that is central to the theory: the concept of (proto) phenomenal composition (*cf.* Chalmers, 2003). We understand how physical composition works, but this notion does not readily apply to the phenomenal realm. Russellian monism will not become a mature, complete account until a theory of (proto)phenomenal composition that yields a plausible solution to the combination problem is devised.<sup>42</sup>

## 11. Conclusion

Russellian monism is at once strange and appealing. It is strange because it requires reconceiving of the relationship between the physical and the phenomenal in surprising ways. For example, on some versions of the view phenomenal properties are instantiated in inanimate, microphysical systems such as photons and quarks. That consequence can be avoided by construing the inscrutables posited by the view as protophenomenal properties. But there would still be implications, such as panprotopsychism, that are foreign to mainstream conceptions of the phenomenal-physical relationship. Russellian monism is appealing largely because it provides an elegant way of integrating phenomenal consciousness into the natural order without disregarding or distorting the phenomenon's distinctive features. Many philosophers would agree that that result is both desirable and not delivered by traditional theories in the philosophy of mind. Further, there appear to be no decisive arguments against the view. We believe further development and examination of it is well justified.<sup>43</sup>

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- [42] For discussions of the combination problem, see Chalmers (1996, pp. 306–8; 2003, pp. 136–7); Lockwood (1992); Maxwell (1978); Goff (2006); and Strawson (2006b, pp. 246–56).
- [43] For constructive comments and helpful suggestions, we would like to thank David Chalmers, Alyssa Ney, Derk Pereboom, Leopold Stubenberg, and two anonymous referees for the *Journal of Consciousness Studies*.

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