

Consciousness, Physicalism, and Absolutely Intrinsic Properties

in *Russellian Monism*, Torin Alter and Yujin Nagawasa, eds., New York: Oxford University Press,
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Penultimate version

There's a fairly widespread consensus that it's initially reasonable to believe that consciousness is not a fundamental phenomenon, and that there are thus more fundamental features of reality that underlie and explain it. Contemporary physics encourages the hypothesis that the fundamental features of reality are physical; candidates include particles, forces, and quantum fields. But at the same time, there are serious considerations, such as the conceivability argument (explained below) that count against the view that anything physical of the sort we can now understand accounts for consciousness. This situation gives rise to the hypothesis that the account must consist at least in part in presently unknown fundamental features of reality. Add to this that the history of philosophy has witnessed a strong predilection for ontological monism, that is, for thinking that the world has fundamental features only of a single sort – materialism and idealism are cases in point. These motivations give rise to a proposal in which both consciousness and the physical features encountered in contemporary physics are grounded in presently unknown fundamental features of a single kind. This view is known as Russellian Monism, named for one of its proponents, Bertrand

Russell.¹

One specific Russellian Monist proposal involves the notions of dispositional and categorical properties. Dispositional properties are essentially tendencies to produce certain effects, and while categorical properties may have powers to produce effects, they are not essentially tendencies to produce them. Fragility and flammability are clear examples of dispositional properties; shape and size are often cited as paradigmatic categorical properties. Many find it intuitive that categorical properties are required to account for dispositional properties. For instance, a ball's disposition to roll requires an explanation, and it is provided by its categorical properties of spherical shape and rigidity.² The more specific Russellian monist proposal then is this: the most basic properties contemporary physics reveals are all dispositional, and thus it leaves us ignorant of the categorical properties needed to explain them. But these unknown categorical properties account for consciousness. An electron's negative charge is one of those basic physical properties, and it is a disposition to repel other particles with negative charge and to attract particles with positive charge. This dispositional

¹ Bertrand Russell, *The Analysis of Matter* (London: Kegan Paul, 1927); the classic passage is on p. 384.

² Michael Fara, "Dispositions," *The Stanford Encyclopedia of Philosophy* (Summer 2009 edition), ed. Edward N. Zalta, at <http://plato.stanford.edu/archives/sum2009/entries/dispositions/>

property must have a categorical basis, and it, the Russellian Monist hypothesizes, is the sort of feature that can also account for our consciousness. Russellian Monists have proposed a range of such more fundamental but yet undiscovered properties – from conscious properties, of, for instance, microphysical particles, to properties similar enough to paradigmatic physical properties to qualify as physical themselves, to properties unlike any we’ve ever encountered, but capable of explaining consciousness.

According to the version of Russellian Monism that I set out in *Consciousness and the Prospects of Physicalism*, the yet-to-be discovered properties crucial to explaining consciousness are of the second sort, close enough in kind to our paradigmatic physical properties to count as physical.³ What distinguishes this version is that these currently unknown properties are not only categorical but also intrinsic – that, is, non-relational – in a certain demanding sense. In what follows I explain and defend my proposal.⁴

³ Derk Pereboom, *Consciousness and the Prospects of Physicalism* (New York: Oxford University Press, 2011), pp. 85-122.

⁴ For valuable characterizations of Russellian Monism that differ from mine in some respects, see Alter, Torin, and Yujin Nagasawa. “What is Russellian Monism?” *Journal of Consciousness Studies* 19, n. 9-10, (2012), pp. 67-95, and Daniel Stoljar, “Four Kinds of Russellian Monism,” *Current Controversies in Philosophy of Mind*, Uriah Kriegel, ed., London: Routledge, 2012, pp. 17-39.

Russellian Monism and Chalmers's Conceivability Argument

First, what reason do we have to believe that the kinds of physical properties that are revealed by current physics cannot account for consciousness? Historically, the most prominent justification for anti-physicalist views of this sort is provided by conceivability arguments against physicalism. Conceivability arguments, advanced by René Descartes and more recently by Saul Kripke and David Chalmers, propose first that certain mental truths can be conceived absent relevant physical truths or that relevant physical truths can be conceived without certain mental truths, then derive from this that such situations are metaphysically possible, and conclude that physicalism is false.⁵ Such arguments assume that if physicalism is true, the

⁵ René Descartes, *Meditations on First Philosophy*, in *The Philosophical Writings of Descartes*, vol. 2, p. 54 (AT VII 78); "Fourth Replies," in *The Philosophical Writings of Descartes*, vol. 2, pp. 154–62 (AT VII 219–31); Saul Kripke, *Naming and Necessity*, (Cambridge, MA: Harvard University Press, 1980), pp. 144–53; George Bealer, "Modal Epistemology and the Rationalist Renaissance," in *Conceivability and Possibility*, ed. Tamar Szabó Gendler and John Hawthorne, (Oxford: Oxford University Press, 2002), pp. 77–125. For an exposition of Descartes's argument, see Margaret Wilson, *Descartes*, (London: Routledge, 1978); Stephen Yablo, "The Real Distinction between Mind and Body," *Canadian Journal of Philosophy* 16 (1991), pp. 149–201; Marleen Rozemond, *Descartes's Dualism* (Cambridge, MA: Harvard University Press, 1998); Joseph Almog, *What Am I? Descartes and the Mind-Body Problem*, (New York: Oxford University Press, 2002).

complete physical truth will metaphysically necessitate all the mental truths, and this assumption is generally accepted by all parties. Thus if the conceived situations are indeed shown to be metaphysically possible, it will be generally accepted that physicalism is false.

Chalmers's influential version focuses on the phenomenal aspect of consciousness, the paradigm case of which is a subject's being in a sensory state, such as sensing red, where there is something it is like for that subject to be in that state.⁶ In short, Chalmers's argument hinges on the claim that it is conceivable, in an appropriately sophisticated way, that a world that is (nothing but) an exact physical duplicate of the actual world features no phenomenal consciousness. From this premise, the argument reasons to the conclusion that the complete physical truth does not necessitate the complete phenomenal truth, or even any phenomenal truth, and that therefore physicalism is false. But a notable feature of Chalmers's version of the argument is that it allows for Russellian Monism as a potential escape from its anti-physicalist conclusion, and for this reason it is especially pertinent to our discussion.

A factor that gives rise to complexity in Chalmers's argument is that not all conceivable situations are metaphysically possible. Sometimes a subject can conceive a situation only because he is deficient in reasoning, as when someone conceives of a right triangle the square of whose hypotenuse is not equal to the sum of the squares of each of the two sides.⁷ Such

⁶ Thomas Nagel, "What is it Like to Be a Bat," *Philosophical Review* 83 (1974), pp. 435–50.

⁷ This is the example Antoine Arnauld directs at Descartes's conceivability argument for

dualism; "Fourth Objections," in *The Philosophical Writings of Descartes*, vol. 2, p. 142

conceiving is less than ideal. Or else, as Saul Kripke contends, it may be that what is really being conceived is mischaracterized, for example when someone reports that she is conceiving of water that is not H₂O but is really conceiving of something that merely appears to be water or only has the evident causal role water has in our world. Chalmers aims to ensure that none of the available ways of explaining how deficiency in conceivability fails to establish metaphysical possibility applies to the conceivability of a physical duplicate of the actual world without phenomenal consciousness, and that his argument therefore features sound reasoning to the conclusion that such a world is metaphysically possible.

Chalmers's argument involves the following elements: 'P' is a statement that details the complete microphysical truth about the actual world; 'T' is a "that's all" provision, so that 'PT' specifies all the physical truths about the actual world with the stipulation that there are no further truths (that is, other than those entailed by those physical truths); and 'Q' is an arbitrary phenomenal truth – let's suppose it's 'Mary senses red at time t'. Statement S is ideally conceivable when it is conceivable on ideal rational reflection. S is primarily possible just in case it is true in some world considered as actual, and S is secondarily possible just in case S is true in some world considered as counterfactual. Accordingly, S is primarily conceivable just in case S can be conceived as true in some world considered as actual, or alternatively, since considering-as-actual is an a priori matter, S is primarily conceivable just in case the subject can't rule out S a priori.

With these elements in place, we can now state the argument:

- (1) 'PT and \sim Q' is ideally primarily conceivable.
- (2) If 'PT and \sim Q' is ideally primarily conceivable, then 'PT and \sim Q' is primarily possible.
- (3) If 'PT and \sim Q' is primarily possible, then 'PT and \sim Q' is secondarily possible or Russellian monism is true.
- (4) If 'PT and \sim Q' is secondarily possible, materialism is false.

(C) Materialism is false or Russellian monism is true.⁸

It's a crucial feature of the argument as Chalmers sees it is that 'PT and \sim Q' is primarily conceivable for a subject just in case she can't rule it out a priori. Further, in his view, a subject can rule 'PT and \sim Q' out a priori just in case she can a priori derive 'Q' from 'PT.' Chalmers's Russellian Monist thought is that a subject can ideally primarily conceive 'PT and \sim Q' (that is, conceive it as true in some world considered as actual) only because she is conceiving just dispositional properties on the physical side. If 'P' were replaced with an embellished 'P*' that includes concepts that allow for direct representation of the natures of the currently unknown categorical properties, the resulting 'P*T and \sim Q' would not be ideally primarily conceivable. For although 'Q' – 'Mary senses red at time t' – is not a priori derivable from 'PT,' this claim

⁸ David Chalmers, "Does Conceivability Entail Possibility?" in *Conceivability and Possibility*, ed.

Tamar Gendler and John Hawthorne, Oxford: Oxford University Press, 2002, pp. 145–200.

about Mary's phenomenal experience would be a priori derivable from 'P*.'⁹

Absolutely Intrinsic Properties

Let me now outline the version of Russellian Monism I develop in *Consciousness and the Prospects of Physicalism*. It's a historical story that begins with Leibniz and features the contrast between intrinsic/nonrelational and extrinsic/relational properties.¹⁰ Leibniz contends that a conception of the physical world that does not include intrinsic properties of a certain fundamental sort is in an important sense incomplete.¹¹ In his view, an examination of

⁹ The idea is that the a priori derivability of 'Mary senses red at time t' from 'P*T' will be on a par with the a priori derivability of 'there is water' from 'PT.' As a result, just as 'PT and there is no water' is not ideally primarily conceivable, 'P*T and Mary does not sense red at t' will not be ideally primarily conceivable. For more on this idea, see Torin Alter and Yujin Nagasawa, "What is Russellian Monism?" pp. 85-6.

¹⁰ There is considerable literature on how to characterize intrinsic and extrinsic properties more exactly. For comprehensive discussions, see Lloyd Humberstone, "Intrinsic/Extrinsic," *Synthese* 105 (1996), pp. 205–67, and Brian Weatherson and Dan Marshall, "Intrinsic vs. Extrinsic Properties", *The Stanford Encyclopedia of Philosophy* (Spring 2013 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/spr2013/entries/intrinsic-extrinsic/>.

¹¹ The material in this section is a revision of the account I set out in Derk Pereboom, "Is Kant's

Descartes's theory of matter, according to which the essence of matter is just extension in three spatial dimensions, reveals why this is so.¹² Leibniz contends that this theory is unsatisfactory for the reason that extension is in an important sense an extrinsic property, and that any real thing cannot feature only properties that are extrinsic in this way, but must possess intrinsic properties as well: "there is no denomination so extrinsic that it does not have an intrinsic denomination at its basis. This is itself one of my important doctrines."¹³

Leibniz's contention indicates that he assumes that properties can be more and less extrinsic. Note first that it's plausible that extrinsic properties can have intrinsic components. For example, *being wise* is an extrinsic property of Sophie because it involves a relation to a comparison class: she is wiser than Bill, Jane, and so on. But *being wise* also includes an intrinsic component—having a certain type and level of intelligence. Thus *being wise* is a complex

Transcendental Philosophy Inconsistent?" *History of Philosophy Quarterly* 8 (1991), pp. 357–71, and in "Kant's Amphiboly," *Archiv für Geschichte der Philosophie*, 73 (1991), pp. 50–70.

¹² René Descartes, *Principles of Philosophy*, Part II, 1–22, in *The Philosophical Writings of Descartes*, pp. 223–32 (AT VIII, 40–52).

¹³ Leibniz to deVolder, April 1702, in G. W. Leibniz, *Philosophical Papers and Letters*, ed. L. E. Loemker (Dordrecht, The Netherlands: D. Reidel, 1969), (hereafter: Loemker), pp. 526–27; Gottfried Wilhelm Leibniz, *G. W. Leibniz, Die philosophischen Schriften*, ed. C. I. Gerhard, 7 vols. (Hildesheim, Germany: Olms, 1965), (hereafter: Gerhardt II), p. 240.

property that has at least one extrinsic and one intrinsic component. It is therefore not a *purely* extrinsic property, which might be defined in this way:

P is a *purely extrinsic property* of X just in case P is an extrinsic property of X and P has no intrinsic components.

Being one among many is a credible example of a purely extrinsic property – of a point in space, for instance.

To Leibniz's charge against Descartes, one might reply that properties like *having such-and-such an extension* and *being spherical* are paradigmatically intrinsic properties of things. But Leibniz has in mind that a sphere's extension is not intrinsic to it in a more demanding sense. He maintains that there is a respect in which the extension of a thing is extrinsic:¹⁴

Nor do I think that extension can be conceived in itself, but I consider it an analyzable and relative concept, for it can be resolved into plurality, continuity, and coexistence or the existence of parts at one and the same time.¹⁵

The extension of the sphere can be analyzed as, or reduces to, the plurality, continuity, and coexistence of parts of the sphere. Properties of each of these three sorts are purely extrinsic properties of these parts. *Being one of several things, being spatially continuous with other*

¹⁴ Alyssa Ney makes this point in "Physicalism and Our Knowledge of Intrinsic Properties,"

Australasian Journal of Philosophy 85 (2007), pp. 41–60, at p. 50. She also suggests that the next move to make is to define a more fundamental notion of intrinsic property.

¹⁵ Leibniz to De Volder, April 1699, Loemker, p. 516 = Gerhardt II, pp. 169–70.

things, and *coexisting temporally with other things* are all purely extrinsic properties of their bearers. Thus it may be that P is an intrinsic property of X, while P is not in a sense fundamentally intrinsic to X, or, as James van Cleve points out, in Kant's terminology, *absolutely* intrinsic to X.¹⁶ This is the case when X's having P can be analyzed as, or reduces to, X's parts having properties Q, R, S . . . , and these properties are purely extrinsic properties of these parts. Correlatively, when P *can* be analyzed as or reduces to purely extrinsic properties of these parts, it is instead, in Kant's vocabulary, merely *comparatively* intrinsic. But it's best to avoid the notions of analysis and reduction in characterizing these properties. Even if for general reasons supporting anti-reductionism, properties of a whole fail to be analyzable in terms of or to reduce to properties of its parts, an intrinsic property of the whole could still be merely comparatively intrinsic.¹⁷ We can instead appeal to the notion of (upward) necessitation in setting out these notions:

¹⁶ Immanuel Kant, *Critique of Pure Reason*, A277/B333, translations by Norman Kemp Smith (London: Macmillan, 1929) and by Paul Guyer and Allen Wood (Cambridge: Cambridge University Press, 1987). James van Cleve, "Inner States and Outer Relations: Kant and the Case for Monadism," in *Doing Philosophy Historically*, ed. Peter H. Hare (Buffalo, NY: Prometheus, 1988), pp. 231–47.

¹⁷ Chase Wrenn made this point in conversation, and as a result the definitions that follow are revised from those in *Consciousness and the Prospects of Physicalism*, pp. 93-94. Thanks also to Ralf Bader and Nico Silins for suggestions that occasioned these revisions.

P is an *absolutely intrinsic* property of X just in case P is an intrinsic property of X, and P is not necessitated by purely extrinsic properties of parts of X.

By contrast,

P is a *comparatively intrinsic* property of X just in case P is an intrinsic property of X, and P is necessitated by purely extrinsic properties of parts of X.

Leibniz then argues, in effect, that every substantial entity has at least one absolutely intrinsic property, and thus, contrary to Descartes's proposal, extension alone is implausibly constitutive of material substance. One component of Russellian Monism can be explained along the same lines: the properties that contemporary physics reveals to us are all extrinsic or only comparatively intrinsic, and thus there must be presently unknown absolutely intrinsic properties that accompany them.¹⁸

¹⁸ The notions of absolutely and comparatively intrinsic properties might also be expressed in terms of a priori derivability, although since these notions are metaphysical such epistemic characterizations will be less fundamental:

P is an *absolutely intrinsic* property of X just in case P is an intrinsic property of X, and the proposition that X has P is not a priori derivable from R, a proposition that details all the purely extrinsic properties of X's parts.

P is a *comparatively intrinsic* property of X just in case P is an intrinsic property of X, and the proposition that X has P is a priori derivable from R.

James van Cleve, in his "Inner States and Outer Relations: Kant and the Case for

Thus the extension of a Cartesian sphere turns out to be a comparatively intrinsic property of it. One might object that a Cartesian sphere's extension is not necessitated by the purely extrinsic properties of the parts of the sphere, because the parts have an intrinsic property that supplements their purely extrinsic properties. But in the Cartesian theory of matter, those parts consist just in extension, and the extension of each of these parts is subject to the same metaphysical treatment of the extension of the whole: the extension of each of these parts will be necessitated by the plurality, continuity, and coexistence of their parts. The same holds for the extension of the parts of these parts, on to infinity.

Monadism," proposes alternative definitions of the notions of comparatively and absolutely intrinsic properties:

P is a *monadic* property of X = df it is possible for something x to have P even if no individual *distinct* from x [i.e., not identical with x] exists;

and,

P is *nonrelational* = df it is possible for something x to have P even if no individual *discrete* from x [i.e., having no part in common with x] exists. (p. 235)

He then characterizes absolutely intrinsic properties as nonrelational and monadic, and comparatively intrinsic properties as nonrelational but not monadic. Absolutely intrinsic properties of X are the intrinsic properties of X that X could have if it had no parts, or if the parts it does have did not exist, while the comparatively intrinsic properties of X are the other intrinsic properties of X.

As we've seen, Leibniz thinks that it is not credible that substances have only purely extrinsic properties:

But it would appear from this that something must always be assumed which is continuous or diffused, such as the white in milk, the color, ductility, and weight in gold, and resistance in matter. For by itself, continuity (for extension is nothing but simultaneous continuity) no more constitutes substance than does multitude or number, where something is necessary to be numbered, repeated, and continued.¹⁹

The idea is that there must be some absolutely intrinsic property that confers substantive character on any substantial entity—one might call a property of this sort a *substantial absolutely intrinsic property*—for this substantive character cannot be accounted for by purely extrinsic and merely comparatively intrinsic properties alone. To spell out Leibniz's metaphysical intuition, a mind-independently real substantive thing can't consist just in properties such as *being next to*, *existing at the same time as*, and *being one of several*. Such relational properties need to be accompanied by some absolutely intrinsic property.

In this last passage, Leibniz specifies the absolutely intrinsic property as that which has extension, in the sense that it is that which is continuous. What are the candidates for such an absolutely intrinsic property of a physical substance? Medieval Aristotelians proposed *prime*

¹⁹ Leibniz to De Volder, April 1699, Loemker, p. 516 = Gerhardt II, p. 170; cf. G. W. Leibniz, *Specimen Dynamicum*, Loemker, pp. 435–52 = G. W. Leibniz, *Mathematische Schriften*, ed. C. I. Gerhardt (Berlin and Halle, 1849–56), VI, pp. 234–54.

materiality, the fundamental subject of inherence of positive features, which is in itself just the pure potentiality for inherence of such features. This proposal is rejected by all the major modern philosophers, typically on the grounds of unintelligibility. Locke suggested *solidity*, the categorical basis of impenetrability, as the absolutely intrinsic physical property.²⁰ Leibniz's positive proposal is to ascribe force to matter as the property in question.²¹ But is force adequate to this role? Consider gravitational force. The gravitational force exerted by a sphere on another body is a function of the gravitational force exerted by its parts, but it's not clear that the sphere's force is necessitated by purely extrinsic properties of its parts. So one possibility is that there are properties of type T intrinsic to physical thing X, and while X has property P by virtue of its parts having certain properties, X has P by virtue of its parts having properties precisely of type T itself, and these properties are intrinsic to these parts. Furthermore, these parts have these properties by virtue of *their* parts having intrinsic properties of type T, ad infinitum. If force meets this condition, then a physical thing's having force can be an absolutely intrinsic property of it.

It is important to note that, as the previous reasoning shows, force can be an absolutely intrinsic property even if there is no fundamental level, and thus no fundamental entity has

²⁰ John Locke, *An Essay Concerning Human Understanding*, II, iv.

²¹ Cf. G. W. Leibniz, *Specimen Dynamicum*, Loemker, p. 445 = G. W. Leibniz, *Mathematische Schriften*, VI, p. 246.

force.²² This is a welcome result, because the Leibnizian principle at issue, which I will provisionally formulate as follows:

(Intrinsicness Principle, first pass) Any substantial entity must have at least one substantial absolutely intrinsic property, does not depend for its truth or plausibility on the existence of a fundamental level of reality—although Leibniz did maintain for unrelated reasons that there must be such a level.²³

It's important to note, however, that Leibniz denies that physical force is an absolutely intrinsic property of a physical substance. He calls physical force *derivative*, and he suggests that it is the phenomenal appearance of *primitive* force, which is an intrinsic mental property of a nonphysical soul or monad. Primitive force is a law-governed disposition of a monad to progress from one representation to another.²⁴ For Leibniz, the underlying ground of primitive force is to be found in the representational states of souls or monads, and it is these

²² Jonathan Schaffer, "Is There a Fundamental Level?" *Noûs* 37 (2003), pp. 498–517.

²³ G. W. Leibniz, "On Nature Itself," Loemker, pp. 498–508 = Gerhardt IV, pp. 504–16; Jonathan Schaffer, "Is There a Fundamental Level?" For a reasons to be skeptical about this principle, see Jennifer McKittrick "The Bare Metaphysical Possibility of Bare Dispositions," *Philosophy and Phenomenological Research* 66 (2003), pp. 349–69; James Ladyman, and Don Ross, with David Spurrett and John Collier. *Every Thing Must Go*, Oxford: Oxford University Press, 2007.

²⁴ G. W. Leibniz, Gerhardt II, p. 275.

nonphysical representational states that yield the missing absolutely intrinsic properties. This account features no absolutely intrinsic *physical* properties. For Leibniz, this is part of the explanation for why physical things are not substantial or real in the fundamental mind-independent sense, but rather only well-founded phenomena (*phenomena bene fundata*). The fact that derivative force has an appropriate foundation in absolutely intrinsic properties of a monad nevertheless allows physical things to be substantial in the lower-grade sense in which they are real, as well-founded phenomena. This account is of particular interest given our topic, for this is the first time we see an explicit formulation of the position that the absolutely intrinsic properties of the mind-independently real world are mental.

Kant's reaction to these claims of Leibniz's is first of all to deny that we have knowledge or cognition of any absolutely intrinsic properties of material things:

All that we cognize in matter is nothing but relations. What we call the intrinsic determinations of it are intrinsic only in a comparative sense, but among these relations some are self-subsistent and permanent, and through these we are given a determinate object.²⁵

²⁵ Immanuel Kant, *Critique of Pure Reason*, A285/B341. In a similar vein, David Armstrong

writes: "If we look at the properties of physical objects that physicists are prepared to allow them such as mass, electric charge, or momentum, these show a distressing tendency to dissolve into relations that one object has to another;" see *A Materialist Theory of Mind* (London: Routledge, 1968), pp. 74–75.

In material objects such as trees and houses we discover comparatively intrinsic properties, but never any absolutely intrinsic properties. This is not just an epistemic claim, but also a metaphysical one. For Kant contends that all properties of matter, *substantia phaenomenon*, even its apparently intrinsic properties, are ultimately purely extrinsic: “It is quite otherwise with a *substantia phaenomenon* in space; its intrinsic determinations are nothing but mere relations, and it itself is entirely made up of mere relations.”²⁶ He subsequently specifies force as a feature of matter: “We are acquainted with substance in space only through forces which are active in this and that space, either bringing objects to it (attraction), or preventing them penetrating into it (repulsion and impenetrability).” Thus for Kant force is also ultimately a purely extrinsic property of material things.²⁷ Specifically, in his conception forces are relations between points: attractive forces are by definition causes by which two points approach one another, and repulsive forces are causes by which two points recede from another.²⁸ (Kant might alternatively be interpreted here as contending that force is dispositional, and relational for that reason.)

²⁶ Immanuel Kant, *Critique of Pure Reason*, A265/B321; cf. *Metaphysical Foundations of Natural Science*, tr. Michael Friedman (Cambridge: Cambridge University Press, 2004), Ak IV, p. 543. See Thomas Holden’s exposition of Kant’s position, and also of Roger Boscovich’s similar theory, in *The Architecture of Matter*, Oxford University Press, 2004, pp. 236–63.

²⁷ Immanuel Kant, *Critique of Pure Reason*, A265/B321.

²⁸ Immanuel Kant, *Metaphysical Foundations of Natural Science*, Ak IV, pp. 498–91.

Kant admits that it is initially unintuitive that all properties of matter are ultimately purely extrinsic: “It is certainly startling to hear that a thing is to be taken as consisting wholly of relations.”²⁹ But the sense of implausibility can be explained away: “Such a thing is, however, mere appearance, and cannot be thought through pure categories: what it itself consists in is the mere relation of something in general to the senses.”³⁰ Since matter is only appearance, for Kant it need not have any physical absolutely intrinsic properties. If matter were not merely appearance, but instead a thing in itself, then it would have such absolutely intrinsic properties. In making these claims, Kant indicates that he endorses a version of the Leibnizian idea that extrinsic properties require intrinsic properties. Kant’s contention is that the extrinsic properties of substantial entities that are mind-independent in the sense that they are not dependent for their existence or nature on our perceiving or conceiving them—that is, things in themselves—must be grounded in absolutely intrinsic properties, although in his view we are irremediably ignorant of such properties. This suggests the following formulation of the intuition underlying the demand for absolutely intrinsic properties:

(Intrinsicness Principle) Any mind-independently real substantial entity must have at least one substantial absolutely intrinsic property,

²⁹ Immanuel Kant, *Critique of Pure Reason*, A285/B341; this passage conflicts with Thomas Holden’s claim (*The Architecture of Matter*, p. 261) that Kant was unmoved by the idea that matter must fill space by virtue of an intrinsic property.

³⁰ Immanuel Kant, *Critique of Pure Reason*, A285/B341.

which I think best captures the intuition at play in the views of Leibniz and Kant.

Ignorance of Absolutely Intrinsic Properties

An assumption made by the various Russellian Monist proposals is that we are currently ignorant of the fundamental properties that underlie and explain consciousness. My sense is that it's implausible to account for this ignorance in our lack of acquaintance with such properties.³¹ The H₂O-structural property is an intrinsic property of water, and we arguably understand the complete nature of this property and that it's the essence of water. We have this knowledge despite lacking acquaintance with this property. Our knowledge in this case is instead grounded in best explanation – we know the nature of the H₂O-structural property as the essence of water because we've conceived a model of the unobserved basis of water-dispositions that turned out to be a component of a best explanation. In principle, couldn't we do the same for absolutely intrinsic properties? We might imagine: physics provides a model for

³¹ Kant is arguably the first to claim that we lack knowledge of absolutely intrinsic properties, and he argues that for us this ignorance is irremediable. For expositions of the nature of this ignorance, see James van Cleve, "Inner States and Outer Relations: Kant and the Case for Monadism;" Derk Pereboom, "Is Kant's Transcendental Philosophy Inconsistent?," "Kant's Amphiboly," and *Consciousness and the Prospects of Physicalism*, Chapter 6; Rae Langton, *Kantian Humility: Our Ignorance of Things in Themselves*, Oxford, Oxford University Press, 1998.

the fundamental particles in which their absolutely intrinsic property is prime materiality or categorical solidity.³² A model of this kind turns out to be so explanatorily successful that it yields knowledge that the absolutely intrinsic property is in fact instantiated.

On this abductive model, it is credible that we presently lack knowledge of which absolutely intrinsic properties are instantiated. Several distinct candidates for such properties have been conceived that are not abductively ruled out, and it is open that we have not yet conceived all of the candidates. This will be so on David Lewis's view, according to which different fundamental properties can have had the same causal role – he calls properties of that satisfy this description 'quiddities'.³³ This will also be the case if, following Sydney Shoemaker, quiddities are rejected in favor of a causal structuralist view of properties, according to which the causal role of a property constitutes its individual essence, so that if P1 and P2 have the

³² John Locke, *An Essay Concerning Human Understanding*, ed. P. H. Nidditch, Oxford: Oxford University Press, 1975, Book II, Chapter IV.

³³ David Lewis, "Ramseyan Humility," in *Conceptual Analysis and Philosophical Naturalism*, ed. David Braddon-Mitchell and Robert Nola, Cambridge, MA: MIT Press, 2009, pp. 203-22; Dustin Locke, "A Partial Defense of Ramseyan Humility," pp. 223-41; see also Jonathan Schaffer, "Quiddistic Knowledge" in *Lewisian Themes*, ed. Frank Jackson and Graham Priest, Oxford: Oxford University Press, 2004, pp. 210–30.

same complete causal role, they are ipso facto the same property.³⁴ Shoemaker's causal structuralism does not preclude distinct absolutely intrinsic properties with causal profiles that we are unable to distinguish, either because the distinguishing elements of these causal profiles are uninstantiated³⁵ or because we lack the ability to discern them. Even if we could individuate the instantiated absolutely intrinsic properties by a causal-role specification, we might yet be significantly ignorant of them because such a specification yields only limited knowledge of a property's nature.³⁶

Which candidates for absolutely intrinsic properties have we already conceived? Prime materiality and categorical solidity have already been mentioned, as has Leibniz's model in which the absolute intrinsic properties are mental properties of immaterial entities. In Leibniz's

³⁴ Sydney Shoemaker, "Causality and Properties," in *Time and Change*, ed. P. van Inwagen, Dordrecht, The Netherlands: D. Reidel, 1980, pp. 109-35; reprinted in Sydney Shoemaker, *Identity, Cause, and Mind*, first edition, Cambridge: Cambridge University Press, 1984, pp. 206-33, and in the second, expanded, edition, Oxford: Oxford University Press, 2003, pp. 206-33.

³⁵ John Hawthorne makes this point in "Causal Structuralism," *Philosophical Perspectives* 15 (2001), pp. 361–78.

³⁶ One might think that on Shoemaker's conception all there is to a property is its causal role, but he assures me that this is not so. In his view, properties typically also feature intrinsic aptnesses for the causal roles that individuate them.

conception, every entity has such mental properties, and thus his view is a variety of *panpsychism*. On Galen Strawson's view, the absolutely intrinsic properties are mental properties only of certain kinds of microphysical entities; he calls his position *micropsychism*.³⁷ Robert Adams defends a theistic variant on this mentalistic proposal in which the divine volitions constitute the absolutely intrinsic properties.³⁸ Chalmers specifies a *protophenomenal* alternative according to which the absolutely intrinsic properties are neither conscious properties nor paradigmatically physical properties, but nonetheless ground both phenomenal consciousness and the properties current physical reveals.³⁹ David Armstrong has proposed primitive color as the intrinsic physical property missing from the scientific story, and this proposal might be embellished to include primitive versions of the other secondary qualities.⁴⁰

³⁷ Galen Strawson, "Realistic Monism," in his *Real Materialism and Other Essays* (Oxford: Oxford University Press, 2008), pp. 54–74; cf. Galen Strawson, "Real Materialism," in his *Real Materialism and Other Essays*, pp. 19–51.

³⁸ Robert Adams, "Idealism Vindicated," in *Persons, Human and Divine*, ed. Peter van Inwagen and Dean Zimmerman (Oxford: Oxford University Press, 2007), pp. 35–54.

³⁹ David Chalmers, "Consciousness and its Place in Nature," and "Does Conceivability Entail Possibility."

⁴⁰ David Armstrong, *Perception and the Physical World* (London: Routledge, 1961); Armstrong rejects this proposal in *A Materialist Theory of Mind* (London: Routledge, 1968). A primitive property is (i) one whose entire qualitative nature or essence is revealed in our

One might suspect that a number of these options can be ruled out as too wild to be in play. However, reflection on the strength of the conceivability argument against physicalism suggests that possibilities that initially seem wild remain salient after all. Moreover, it seems far from certain that any proposed candidate that we understand is actually instantiated, and so it may well be that there are possibilities for such properties that we do not comprehend that are also salient alternatives.

In summary, the reason for claiming ignorance about which absolutely intrinsic properties are actually instantiated is that there is a plurality of candidates for such properties, and some of them are not currently understood. More than one of these candidates is in the running for yielding the best explanation of the relevant phenomena. But as things now stand, none of them convincingly meets this standard. The conclusion to this argument is not inevitable and permanent ignorance, but rather a sort that is potentially remediable. It is thus congenial to Chalmers's proto-phenomenal proposal, which leaves it open that we will come to

sensory or introspective representation of it, and thus is not identical to a property with a qualitative nature distinct from what is revealed by the representation, and (ii) one that is metaphysically simple and thus not constituted by a plurality of other properties; Derk Pereboom, *Consciousness and the Prospects of Physicalism*, pp. 16-18; cf. Alex Byrne and David Hilbert, "Color Primitivism," *Erkenntnis* 66 (2007), pp. 73–105.

understand the nature of the relevant intrinsic properties.

How might we assess the various proposals for currently unknown absolutely intrinsic properties as ways of filling out Russellian Monism? If we supplemented 'P' just with putative truths about prime materiality or categorical solidity, the sense that the physical is conceivable without the phenomenal is undiminished. Imagine instead, inspired by David Armstrong's suggestion, that we embellished 'P' just with putative truths about primitive colors or primitive versions of other secondary qualities. Aristotle conceived of such properties as physical, so maybe the result could be a variety of physicalism. But the idea that these are the missing absolute intrinsic properties does not seem plausible, mainly for the reason that they have been dismissed from our scientific picture of reality since the seventeenth century. At this point, we seem to have run out of candidates for the missing absolutely intrinsic physical properties that have been conceived.

What remains are the mental candidates such as panpsychism and micropsychism, proposed by Leibniz and Strawson, and, as Thomas Nagel, David Chalmers, and Colin McGinn suggest, possible candidates that we have not conceived.⁴¹ The most favorable prospect for a resolutely physicalist Russellian Monism would appear to lie in properties whose nature is

⁴¹ Thomas Nagel, *The View from Nowhere*, New York: Oxford University Press, 1986; David Chalmers, "Does Conceivability Entail Possibility?"; Colin McGinn, "What Constitutes the Mind-Body Problem," in his *Consciousness and Its Objects* (Oxford: Oxford University Press, 2004).

currently unconceived. Chalmers's protophenomenalism allows for a view of this sort. The kind of ignorance about the properties at issue that would be in place, together with the fact that the tradition in physics allows for properties not previously conceived as physical to come to count as physical, would seem to render protophenomenalism the physicalist Russellian Monist's best hope. If there are currently unconceived possibilities for physical and protophenomenal absolutely intrinsic properties, they might remain unconceived. More optimistically, as physics develops, we may come to conceive them. Or as Chalmers suggests, phenomenology together with physics might arrive at such a conception.⁴²

Stoljar's challenge

In Chalmers's conception, what underwrites the conceivability argument is the following structure-and-dynamics thesis:

(SDT) There are experiential [or phenomenal] truths that cannot be deduced from truths solely about structure and dynamics.⁴³

Structural and dynamical properties contrast with intrinsic properties. As Daniel Stoljar

⁴² In his presentation on structuralism in physics at the Australian National University, November 2005.

⁴³ This formulation is from Torin Alter, "Does the Ignorance Hypothesis Undermine the Conceivability and Knowledge Arguments?" *Philosophy and Phenomenological Research* 79 (2009), pp. 756–65, at p. 760.

plausibly suggests, structural properties are relational properties, and dynamical properties are changes in structural properties over time.⁴⁴ Chalmers's idea is that because the properties that contemporary physics specifies are exclusively structural and dynamical, and phenomenal properties are intrinsic properties of experiences, we can conclude that experiential truths about phenomenal properties cannot be deduced from current physics, or from any descendent that specifies only structural and dynamical properties.⁴⁵ But Stoljar argues that SDT is in error, and that these experiential truths may be derivable from exclusively structural and dynamical physical truth after all:

The simplest way to see that the from-structure-only-structure thesis is false is to note that one can derive the instantiation of an intrinsic property from a relational one just by shifting what thing you are talking about. For example, being a husband is a relational property of Jack Spratt, and being a wife is a relational property of his wife. But being married is an intrinsic property of the pair (or the sum) of Jack Spratt and his wife. To take a different example, it seems plausible to say that I have the property of having a hand intrinsically, but my having this property obviously follows from a relation between my hand and the rest of my body, and that the truth concerning this is a

⁴⁴ Daniel Stoljar, "Four Kinds of Russellian Monism," in *Current Controversies in Philosophy of Mind*, Uriah Kriegel, ed., London: Routledge, forthcoming.

⁴⁵ David Chalmers, "Does Conceivability Entail Possibility?" p. 197.

relational truth.⁴⁶

Alter agrees that Stoljar has a point: if objects *x* and *y* compose object *z*, then it is possible to deduce intrinsic properties of *z* solely from relational properties of *x* and *y*. However, this observation poses a challenge to the the from-structure-only-structure thesis only if nonstructural/nondynamical properties are identified with intrinsic properties. Alter proposes that this identification is mistaken, for the reason that “the property *being married* is purely structural/dynamic despite being intrinsic to the Spratts. Any structural/dynamical duplicate of the actual world contains a corresponding married pair.”⁴⁷ (A caveat: being married is plausibly extrinsic, since it builds in a relation to civic institutions. Arguably, *being a dancing pair* avoids this problem.)⁴⁸ Alter contends that such examples show not that we should reject the from-structure-only-structure thesis, but rather that it makes sense to resist identifying nonstructural/nondynamical properties with intrinsic properties.

The distinction between comparatively and absolutely intrinsic properties yields a way to vindicate Alter’s claim. While the property of *being a married pair* is intrinsic to the Spratts, it is necessitated by Jack’s purely extrinsic property of *being married to Jill* and Jill’s purely extrinsic property of *being married to Jack*. *Being a married pair* is consequently a

⁴⁶ Daniel Stoljar, *Ignorance and Imagination*, p. 152.

⁴⁷ Torin Alter, “Does the Ignorance Hypothesis Undermine the Conceivability and Knowledge Arguments?” p. 763.

⁴⁸ Thanks to Uriah Kriegel for this point.

comparatively intrinsic property and not an absolutely intrinsic property of the Spratts. We can now propose that all nonstructural/nondynamic properties are absolutely intrinsic properties (and all nonstructural/nondynamic components of properties will be absolutely intrinsic components of properties). Stoljar's counterexample would then fail to undermine the from-structure-only-structure thesis. We can accordingly reformulate the from-structure-only-structure thesis in this way:

(2*) Truths about absolutely intrinsic properties (and absolutely intrinsic aspects of properties), are not necessitated by and cannot be deduced from truths solely about purely extrinsic properties.

And the structure-and-dynamics thesis then becomes:

(SDT*) There are experiential truths that are not necessitated by and cannot be deduced from truths solely about purely extrinsic properties.

The Prospects of AI Russellian Monism

We've seen that Russellian Monism has versions in which the natures of the absolutely intrinsic properties are phenomenal, as in Strawson's micropsychism, or else protophenomenal, as Chalmers advocates. On a phenomenal-micropsychist option, the absolutely intrinsic properties that account for phenomenal consciousness are themselves phenomenal and irreducibly so, while on the protophenomenal alternative they are not phenomenal but are

nonetheless capable of accounting for phenomenal consciousness.⁴⁹ Imagine first that ‘P*’ supplements ‘P’ by adding in the proposed micropsychist truths, statements or propositions about absolutely intrinsic phenomenal properties of fundamental physical entities that specify the natures of those properties. Suppose again that ‘Q’ is a phenomenal truth about Mary’s visual sensory experience of red. Is ‘P*T and ~ Q’ ideally primarily conceivable? We might ask whether there is any less reason to believe that the resulting ‘P*T and ~ Q’ is ideally primarily conceivable than there is to think that ‘PT and ~ Q’ is. Imagine that every fundamental particle has some absolutely intrinsic phenomenal property or other, and that ordinary introspectible phenomenal entities are composed of a significant number of such fundamental particles. Any such array of fundamental particles without phenomenal redness would seem as readily conceivable as any arrangement of conventionally characterized fundamental physical particles without phenomenal redness.

However, in support of the micropsychist we can invoke a misrepresentation thesis of a Leibnizian sort, according to which introspection merely fails to represent phenomenal experience as having features it in fact has.⁵⁰ While Mary’s sensory experience of red is represented introspectively to feature only phenomenal redness, and this occasions the belief

⁴⁹ See Galen Strawson, “Realistic Monism.” There Strawson also defends the stronger view,

panpsychism; cf. Thomas Nagel, “Panpsychism,” in his *Mortal Questions* (Oxford: Oxford University Press, 1979).

⁵⁰ Thanks to Nico Silins for this characterization.

that phenomenal redness is a simple property, it is in fact composed of a complex microphenomenal array that is normally not introspectively discerned. At this point phenomenal-micropsychism might have an advantage over a conventional physicalist proposal for the absolutely intrinsic properties, since it is arguably more plausible that phenomenal redness is composed of a complex microphenomenal array than that it is conventionally physically constituted. Micropsychism requires only that introspection mistakenly represent phenomenal redness as lacking a complex phenomenal composition. The conventional physicalist alternative would seem to demand in addition that phenomenal redness does not have any qualitative phenomenal nature of the general sort that introspection represents it as having.⁵¹

Note that micropsychism would specify that there are laws governing how truths about microphenomenal properties yield truths about macrophenomenal properties such as the phenomenal redness of Mary's experience. These laws would need to be derivable from 'P*T' alone (P*T adds in the micropsychist truths), for 'Q' must be derivable from 'P*T' alone. The credibility of this proposal might be enhanced by analogy with the derivability of certain macrophenomenal properties from their known components, such as phenomenal tastes from the components of sweet, sour, salty, bitter, and umami.⁵² Introspectible phenomenal properties might be similarly derivable from presently unknown microphenomenal absolutely

⁵¹ Derk Pereboom, *Consciousness and the Prospects of Physicalism*, pp. 8-28.

⁵² Thanks to Louis deRosset for this suggestion.

intrinsic properties together with the remainder of the base described by 'P*T.' The laws in play would then also be derivable from, and necessitated by, this base. Despite our tendency to believe that phenomenal tastes are simple properties, the discovery that phenomenal tastes are (partly) structured by sweet, sour, salty, bitter, and umami can convince us that this belief is mistaken. Note that this discovery does not challenge the claim that phenomenal tastes are absolutely intrinsic properties, for the reason that the base for derivation does not consist in purely relational properties. This lesson would apply to the micropsychist proposal more generally.

Still, there is a reason to be skeptical about the prospects of micropsychism. Building on a point developed by Karen Bennett, the worry is that the envisioned phenomenal micropsychism would need to posit brute laws linking microphenomenal absolutely intrinsic properties with the conventional microphysical properties that they underlie, without which the truths about the microphysical properties would not be derivable from the micropsychist truths.⁵³ This yields a reason to think that phenomenal micropsychism is incapable of supplying illuminating explanations of the properties specified by current microphysics. At least *prima facie*, brute laws posit connections without explanatory illumination. It would be theoretically advantageous if the absolutely intrinsic properties did provide illuminating explanations for both phenomenal properties and the entities specified by contemporary microphysics.

Chalmers's protophenomenalist proposal appears better equipped for this twofold task.

⁵³ Karen Bennett, "Why I Am Not a Dualist," ms.

It is silent on the specific nature of the absolutely intrinsic properties, and for this reason it leaves open the possibility that they would count as physical. It is therefore also open that these protophenomenal properties yield explanations for the conventional microphysical properties they underlie without the need for brute laws linking the protophenomenal properties with the microphysical properties. The result is a potential advantage over phenomenal micropsychism. Imagine that 'P*' supplements 'P' by adding in the truths about protophenomenal absolutely intrinsic properties, employing concepts that allow for the accurate representation of the natures of these properties. Would the resulting 'P*T and ~ Q' be ideally primarily conceivable? It would seem epistemically open that there are protophenomenal properties that necessitate the phenomenal properties, and this would preclude the ideal primary conceivability of 'P*T and ~ Q.' At the same time, the resulting explanatory advantage of protophenomenalism over phenomenal micropsychism would be offset by the disadvantage that it proposes properties of which we presently have only a minimal conception.

Might we ever possess concepts that facilitate representation of the natures of protophenomenal properties? Chalmers is cautiously optimistic. Colin McGinn would be skeptical. The existence of protophenomenal properties is consistent with his position on the mind-body problem, but he would deny that concepts representing their natures are available to us. For McGinn, solving the mind-body problem would demand concepts that bridge the gap between conscious properties and conventional physical properties. But for this, we require "a perspective shift, not just a paradigm shift—a shift not merely of world view, but of ways of

apprehending the world. We need to become another type of cognitive being altogether.”⁵⁴ By contrast, for Nagel and Chalmers it is open that our cognitive and imaginative capacities are capable of forming this sort of concept.⁵⁵

What explains McGinn’s reluctance to take this route is that for him any concepts available to us are closely tied to acquaintance. This limit forecloses the possibility of our acquiring concepts of the requisite bridging sort. For Nagel and Chalmers it’s open that we can acquire such concepts by our imagination venturing beyond this limit. McGinn may be right to argue that these concepts cannot arise from acquaintance. What would then be needed is a creative power to form concepts not closely tied to acquaintance. Whether we have such a power is unclear, but if we do have it, what we can presently understand would not rule out our acquiring concepts of protophenomenal absolutely intrinsic properties, whereupon further investigation might also determine whether such properties are actually instantiated.

Summary and conclusion

According to the Russellian Monist option for physicalism I’ve set out, presently unknown absolutely intrinsic properties account for both conventional microphysical properties and for phenomenal consciousness. Absolutely intrinsic properties of things are those that are not necessitated by purely relational properties of their parts. I’ve highlighted a more specific

⁵⁴ Colin McGinn, “What Constitutes the Mind-Body Problem,” p. 24.

⁵⁵ Thomas Nagel, *The View from Nowhere*, pp. 52–53.

protophenomenal version Russellian Monism in which the absolutely intrinsic properties are non-mental and sufficiently similar to paradigmatic properties of current physics to count as physical. An important advantage for this position over other physicalist accounts of consciousness is that it can clearly accept an attractive accuracy claim about phenomenal representation, i.e., that introspection represents phenomenal properties as having qualitative natures that they in fact possess. This accuracy claim supplies the conceivability argument against physicalism with its characteristic force, and thus any physicalism that can unequivocally endorse it is in an advantageous dialectical position.⁵⁶ Absolutely intrinsic properties of this protophenomenal sort are currently at best only minimally conceived, and herein lies the fragility of the proposal. But for anyone with physicalist sympathies who at the same time aspires to preserve the accuracy claim, this Russellian Monism should be a live and attractive option.⁵⁷

⁵⁶ I set out this accuracy claim and explore a physicalist view that denies it in *Consciousness and the Prospects of Physicalism*, pp. 9-84.

⁵⁷ Thanks to Torin Alter, Ralf Bader, Karen Bennett, David Chalmers, Andrew Chignell, Louis deRosset, Tyler Doggett, Uriah Kriegel, Andrew McGonigal, Alyssa Ney, Sydney Shoemaker, Nico Silins, and Daniel Stoljar for valuable comments and discussion.

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