



# Against phenomenalism

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## Abstract

In this commentary, I raise four objections to the view defended in Michael Pelczar's book, *Phenomenalism: A Metaphysics of Chance and Experience*. First, I challenge his claim that physical things are identical to possibilities for experience even if there turns out to be some categorical reality underlying these possibilities. Second, I argue that Pelczar's phenomenalism cannot accommodate the existence of some unobservable entities that we have good scientific reason to accept. Third, I argue that his view threatens to lead to massive indeterminacy about what the physical world is like. Fourth, I argue that phenomenalism fares much worse than its rivals with respect to the theoretical virtue of nomological parsimony, the ideal of keeping the fundamental laws simple.

**Keywords** Phenomenalism · Consciousness · Chance · Laws of nature

## 1 Introduction

Michael Pelczar's excellent book, *Phenomenalism: A Metaphysics of Chance and Experience*, is a valiant attempt to revive the phenomenalist view that physical things are nothing but possibilities for experience. For the phenomenalist, a mountain is a tendency for experiences to occur in certain ways—the ways they do when people perceive a mountain. Pelczar cashes out these experiential tendencies in terms of objective conditional probabilities. Roughly, the existence of the mountain consists in the fact that mountainous experiences are likely to occur conditional on the occurrence of certain other experiences. In Pelczar's grand vision, everything ultimately reduces to two kinds of facts, phenomenal facts, and facts about objective chance. It's a highly heterodox view that some philosophers may regard as a non-starter, but I share enough of Pelczar's sensibilities to be in the target audience. I agree that experience is irreducible and that Humean reductive accounts of chance are unpromising. I've argued that naive realist conceptions of the physical world

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might need to be radically revised in light of modern physics (Cutter, 2021). I would therefore love to buy what Pelczar claims to be selling: a plausible reductive account of the physical world that takes experience and chance as the sole metaphysical primitives.

Unfortunately, the book did not move me from my initially low credence in phenomenalism. This commentary focuses on my criticisms of the project, but let me preface the nay-saying by emphasizing that I thoroughly enjoyed the book and would enthusiastically recommend it for its rich, insightful, and strikingly original discussions of a wide range of issues in general metaphysics, philosophy of mind, and philosophy of science. Here I will raise four objections to Pelczar's project. In §2, I challenge his claim that physical things are identical to phenomenal potentials *even if there turns out to be some categorical reality underlying the phenomenal potentials*. In §3, I argue that Pelczar's phenomenalism can't accommodate the existence of some unobservable entities that we have good scientific reason to accept. In §4, I argue that his view threatens to lead to massive indeterminacy about what the physical world is like. I conclude in §5 with my biggest objection to phenomenalism: that it fares much worse than its rivals with respect to the theoretical virtue of nomological parsimony, the ideal of keeping the fundamental laws simple.

## 2 The objection from categorical spatial properties

Pelczar's central argument for phenomenalism is as follows:

1. The physical world is what explains the regularity of experience.
2. What explains the regularity of experience is that there is a propensity for experiences to occur certain ways.
3. Therefore, the physical world is a propensity for experience to occur certain ways. (Pelczar, 2023: 51)

Premise (1) has some initial plausibility. His argument for (2) proceeds by comparing three explanations for the regularity of experience. Realist accounts say the regularity of experience is explained by "real things," mind-independent things with categorical properties (e.g., shape, size, motion, mass). Kantian accounts say the regularity of experience is explained by "noumena," things with an unknown nature with powers to cause certain experiences. Phenomenalist accounts say the regularity of experience is explained simply by the tendency for experiences to occur in certain ways (without appealing to real things or noumena to serve as the source of this tendency). Pelczar argues that the Kantian account is preferable to the realist account on Ockhamist grounds, as the former's ontological commitments are a proper subset of the latter's. He then argues that the phenomenalist account is preferable to the Kantian account, for the same reason, so the phenomenalist explanation comes out on top.

Two initial quibbles: first, it is not quite true that the phenomenalist's commitments are a proper subset of the realist's. The best explanation of our experiences

will often involve humanly unobservable physical entities like electrons. As we'll see in the next section, this means the phenomenalist will need to accept potentials for certain humanly impossible experiences, including potentials for nomologically impossible experiences. But the realist doesn't need to (and shouldn't, for reasons to be given in §3) accept that there are phenomenal potentials of this kind.

Second quibble: validity requires that "what explains" means "the unique thing that explains" rather than "one thing that explains." But explanation is often promiscuous in a way that renders the uniqueness assumption problematic. One thing that explains the window's breaking is the rock that was thrown at it. Another is its propensity to break when struck. But the rock is not the window's propensity to break when struck. One thing that explains my tomato-ish experience is the tomato. Another is the light the tomato reflects. But the tomato is not the light. True, in some contexts we can speak of the tomato as "what explains," or "the thing that explains," the visual experience. This would be acceptable in contexts where a salient rival explanation is that the experience was produced by the hallucinogens I just took. In other contexts—say, when we are wondering whether visual experience is produced by light *entering* the eye or light *emitted* from the eye—it is acceptable to say that "what explains" my experience is the light reflected from the tomato. Both "what explains" claims can be true, but not in the same context, so we cannot validly infer that the tomato is the light. Similarly, (1) and (2) can each be true in appropriate contexts, but it is doubtful that there is any single context in which both are true.

Pelczar's conclusion is that the physical world is a propensity for experiences to occur in certain ways. Similarly, individual physical things, like rocks, are propensities for experiences to occur in certain ways ("as they do when people perceive a rock"). Furthermore, he holds that it is a serious epistemic possibility, true for all anyone knows, that "nothing grounds, sustains, or otherwise underlies any of these possibilities [for experience], except as the case may be other such possibilities" (*ibid.*: 110). But, he argues, if something *does* underwrite the phenomenal potentials, the physical world should still be identified with the phenomenal potentials. If there is an underlying "something," it is not the physical world, but the reason why there is a physical world. Its relation to the physical world would be like God's relation to the physical world in traditional theism. Descending to the level of individual physical things: if there is some categorical reality underlying the potential for rock-ish experiences, Pelczar's view is that this underlying thing is not the rock, but the reason why there is a rock. I'll give the name "weak phenomenalism" to the claim that physical things are possibilities for experience and "strong phenomenalism" to the conjunction of weak phenomenalism with the claim that there is nothing "underlying" these possibilities for experience. Pelczar's position is that weak phenomenalism is true and strong phenomenalism is a serious epistemic possibility.

We shouldn't accept Pelczar's claim that, even if there is some categorical reality beneath the phenomenal potentials, physical things are the phenomenal potentials rather than the underlying categorical reality. It matters what the underlying categorical reality is like. Suppose there are things with categorical shapes. These might be "edenic shapes," in the language of Chalmers (2006), i.e., the intrinsic, categorical shape properties that figure in the presentational content of perceptual experience. Suppose the explanation for why you and I have cohering experiences

as of a tomato on a wooden table is that there is a categorically round/lumpy object atop a categorically rectangular surface with a woody-textured categorical micro-geometry, propped up by four categorically cylindrical/leg-shaped objects. Here we have two candidates for what the tomato might be: (i) the categorically round/lumpy thing, or (ii) a certain collection of experiential tendencies (e.g., the fact that round-bulgy experiences are likely to occur, conditional on having experiences of walking through the kitchen door). Which of these is the tomato?

It's obvious (isn't it?) that the answer is (i). If there is a categorically round/bulgy thing, that thing is the tomato. It is not merely the reason why there is a tomato, in the way that God is (not a tomato, but) the reason why there is a tomato, according to theism. The general lesson is this: if the relevant phenomenal potentials are underwritten by *the right kind of categorical realities*, then physical things are the underlying categorical realities, not the phenomenal potentials they ground.

This contradicts some of Pelczar's key claims, but it does not refute weak phenomenalism. It only shows that weak phenomenalism is false if there are things with certain categorical shape properties that directly correspond to the ways physical objects appear. Similarly, I claim that weak phenomenalism is false if the phenomenal potentials are underwritten by things with categorical spatial properties that are relevantly structurally analogous to edenic shapes, even if those properties aren't identical to edenic shapes. In that case, it would be plausible to identify physical things with the objects that have the relevant categorical spatial (or quasi-spatial) properties, not the experiential tendencies they ground.

This might be our situation if it turns out that relativistic physics correctly describes the categorical structure of spacetime. While edenic shapes seem to be at home in a classical world, it has been argued that they cannot be instantiated in relativistic worlds (Chalmers, 2012; Cutter, 2021; Pautz, 2021). Still, we can find rough structural analogues of 3D edenic shapes in relativistic spacetime. For example, in Minkowski spacetime, we can use the relativistic interval to define a (frame invariant) analogue of Euclidean sphericity—roughly as the property of having a surface whose points along a shared spacelike hyperplane are at equal interval from a common point (Cutter, 2017). Maybe this property is not identical to edenic sphericity, or sphericity-as-naively-conceived, since the relativistic interval doesn't exactly correspond to our ordinary notion of distance (Saad, 2019). (For one thing, it's not a metric function; it violates triangle inequality and assigns zero interval to some pairs of distinct points (Maudlin, 2012: 71–2).) Still, even in relativistic worlds, we clearly have properties that are closely structurally analogous to shape-as-naively-conceived.

Generalizing, I submit that *if* the phenomenal potentials are underwritten by things with categorical properties that are at least loosely structurally analogous to spatial properties-as-naively-conceived, then physical things should be identified with those underlying categorical realities, not the phenomenal potentials they ground. My bet is that the antecedent is true, so I'm inclined to reject weak phenomenalism. However, there are serious proposals out there, motivated by exotic ideas in modern physics, that would cast doubt on the antecedent. David Albert (2015) tells us that material reality is constituted by a single point particle (“the marvelous point”) moving through a massively high-dimensional space, pushed around by a

complex-valued field described by the wave function. If this is the correct account of the ultimate categorical reality underlying familiar phenomenal potentials, it would be tempting to say that the world includes no categorical entity that is even a half decent candidate for being “the tomato.” (Albert’s own attempt to recover the structural profile of an ordinary 3D tomato, by projecting the marvelous point onto appropriately chosen subspaces within the high-dimensional space, is arguably a bit too “cooked up.”) In that case—and, I think, *only* in that case—it is plausible that the *best* candidate for being the tomato is a collection of experiential tendencies. If so, the phenomenalist identification of tomatoes with experiential tendencies should be taken seriously. (But the phenomenalist would still need to win an uphill battle against the tomato eliminativist, who will argue that, in this scenario, the best candidate isn’t good enough (Pautz, 2024). By analogy, if the best candidates for being ghosts are ordinary humans draped in white sheets, we should conclude that there are no ghosts, not that ghosts are sheet-draped humans.)

If I’m right, then we can’t establish weak phenomenism without establishing that the phenomenal potentials either have no underlying basis (strong phenomenism) or have a basis that is so bizarre that it doesn’t feature any remotely plausible candidates for being rocks, tomatoes, and so forth (say, because it doesn’t feature properties that are even loosely structurally analogous to spatial-properties-as-naively-conceived). This suggests an alternative line of argument for (weak) phenomenism:

1. If something underlies the relevant phenomenal potentials, the current state of fundamental physics (alternatively: the credibility of the simulation hypothesis (Bostrom, 2003)) makes it likely that the underlying “something” diverges from the manifest image so radically that it does not include any decent candidates for being rocks, tomatoes, etc.
2. If there are no categorical realities underlying the phenomenal potentials that are decent candidates for being rocks, tomatoes, etc., then we should identify rocks, tomatoes, etc. with phenomenal potentials.
3. Therefore, we should identify rocks, tomatoes, etc. with phenomenal potentials.

For my money, this is the strongest argument for weak phenomenism (although I have serious doubts about both premises).

### 3 The objection from unobservable entities

If physical things are potentials for experience, how can we accommodate unobservable entities like atoms and neutrinos? Pelczar’s preferred answer is to identify such things with potentials for *humanly impossible* experiences. In his summary of the book, he hints that they might even be potentials for *nomologically impossible* experiences. Indeed, an appeal to nomologically impossible experiences seems unavoidable. Consider an individual hydrogen atom jostling violently inside the sun. For the phenomenalist, the existence of a violently jostling hydrogen atom inside the

sun consists in the potential for experiences as of a violently jostling hydrogen atom inside the sun. But presumably it is nomologically impossible for any creature to perceive such an event. Conditions inside the sun tend to be inhospitable to creatures with complex nervous systems, to say nothing of exquisitely sensitive nervous systems that can detect the presence and movements of an individual hydrogen atom. Thus, if individual hydrogen atoms in the sun are “possibilities for experience,” they are possibilities for nomologically impossible experiences.

But this is hard to square with Pelczar’s account of what “possibility for experience” means in the slogan “physical things are possibilities for experience.” Very roughly, Pelczar’s proposal is that for there to be a possibility for (say) a rock-ish visual experience is for there to be a high objective chance that a rock-ish visual experience will occur, conditional on certain other experiences occurring. Similarly, for there to be a potential for an experience as of a hydrogen atom jostling violently in the sun is for there to be a high objective chance of that experience occurring conditional on the occurrence of certain other experiences. But if A is nomologically impossible, the objective chance that A will obtain is zero or undefined. For example, while there is a positive objective chance that this radium atom will decay before sundown, there is no positive objective chance it will fly away faster than the speed of light. Similarly, if A is nomologically impossible, then the objective chance of A, conditional on any nomologically possible state of affairs, is zero or undefined. For example, the objective chance that three of the radium atoms in the box will transmute into angels, conditional on there being 10 radium atoms in the box at noon, is zero or undefined.

Maybe we can hope for a non-zero conditional objective chance if we condition on a nomologically impossible scenario? (This will involve conditioning on a zero-probability event, so we’ll need to reject the standard ratio definition of conditional probability, but let’s waive this technical difficulty.<sup>1</sup>) The problem is that, in general, we shouldn’t expect there to be well-defined (and positive) conditional objective chances of this kind. The laws may yield determinate answers to a question like, “What is the chance that five radium atoms in the box will decay before 1:00 pm conditional on there being ten radium atoms in the box at noon?” I’m no physicist, but I doubt the laws will supply answers to a question like, “What is the chance that all ten radium atoms will transmute into angels before 1:00 pm, conditional on at least five of them transmuted into angels?” Or, “What is the chance that my phone will fly away at  $5 \times$  the speed of light, conditional on its being embedded in a 10-dimensional manifold?” As a rule, there plausibly aren’t well-defined positive conditional chances of this kind (except perhaps in special cases, such as when there are necessary connections between the propositions—e.g.,  $\text{Ch}(\text{something travels faster than light} | \text{Pluto travels faster than light})$ ).

We can summarize the objection as follows:

<sup>1</sup> Pelczar (*ibid*: 103) is explicit that, on his view, “we may speak of the chance that  $q$  given that  $p$  in cases where the objective probability that  $p$  is zero or infinitesimal,” and notes that there are “consistent axiom systems satisfying the formal criteria generally thought to encapsulate our ordinary concept of probability” that allow for well-defined conditional probabilities of this kind.

1. There are individual hydrogen atoms jostling in the sun.
2. If phenomenalism is true and there are individual hydrogen atoms jostling in the sun, then these hydrogen atoms are possibilities for nomologically impossible experiences.
3. If Pelczar's account of "possibilities for experience" is correct, there are no possibilities for the relevant kinds of experience, because the relevant conditional chances are either undefined or zero.
4. Therefore, Pelczar's phenomenalism is false.

#### 4 The indeterminacy objection

There are rocks on the far side of Mars that no one is experiencing. For the phenomenalist, this is true in virtue of the fact that there is a possibility for relevant martian-rock experiences. What kind of possibility? Metaphysical possibility is too weak. There are metaphysically possible experiences of all sorts of things that we don't want to admit as parts of physical reality, such as golden mountains and seven-headed dragons. To explain the intended notion of a "possibility for experience," Pelczar introduces the notion of an ideal world. Niceties aside, we can think of an ideal world as a comprehensive, panoptic network of experiences presenting all the entities within some possible physical world from every angle at every resolution and scale. If there is no Berkeleyan God, the experiences in our world are far too sparse to constitute an ideal world. For example, there are no actual experiences speaking directly to whether there is a tree in the quad right now, or to the size, shape, and color of particular rocks on the far side of Mars. But we can ask what ideal world *would* obtain if our actual experiences were embedded in an ideal world, just as we might ask what "ideal book" would exist if the actual statements in *The Lord of the Rings* were embedded in a vastly larger book that settles every detail of the history of Middle Earth. Pelczar's proposal, roughly, is that there is a "possibility for" an experience if that experience belongs to the ideal world that would obtain if our actual experiences were embedded in an ideal world.

A bit more precisely: Pelczar appeals to irreducible facts about objective probabilities, including conditional probabilities of certain experiential states of affairs conditional on other experiential states of affairs. The official proposal is that there is a "possibility for" an experience iff that experience occurs in the "ideal world our own experiences have the highest probability of belonging to, conditional on their belonging to an ideal world" (*ibid*: 109). If I understand the proposal correctly, for there to be a large egg-shaped red rock on the far side of Mars is for the following fact to hold: there is a suitable collection of large-egg-shaped-red-rock experiences, not in the actual world, but in the ideal world that has the highest objective chance of obtaining, conditional on our actual experiences belonging to an ideal world.

My worry with this proposal is that it threatens massive and unacceptable levels of indeterminacy about what the physical world is like, especially with respect to the character of objects that no one actually perceives. This is analogous to the indeterminacy we would expect when it comes to questions like: if *The Lord*

*of the Rings* were extended into an ideal book that settles every detail of Middle Earth, what would that book say Frodo ate for second-breakfast on his 9th birthday?

Pelczar's account is vulnerable to indeterminacy in at least four ways.

*Ties:* First, several very different ideal worlds might be tied for the most likely ideal extension of our actual experiences. These ideal extensions may massively disagree in their experiences of the rock arrangements on the far side of Mars, or the physical details of pre-Cambrian earth, or even the shape of the tree in the quad.

*Limits:* Second, since our actual experiences can be embedded into infinitely many possible ideal worlds, it might turn out that for every ideal world, there is another more probable ideal world (e.g., we might have an infinite series that asymptotically approaches a conditional probability of 0.6). In that case, no ideal world is even tied for most probable.

*Zeroes:* Third, it could be that each of the infinitely many ideal worlds have a conditional probability of zero, just as every point on a continuous dartboard has zero chance of being struck conditional on throwing a dart. (Strictly speaking, this is a special case of "Ties," but with maximal variation among the tied-for-most-likely ideal worlds.)

*Undefined chances:* Fourth, it could be that the relevant conditional chances are simply undefined.

The last is what we should expect, I think, since (i) in general, we should expect that there aren't well-defined (and positive) objective chances conditional on nomologically impossible states of affairs, and (ii) there is good reason to think that the relevant ideal worlds are nomologically impossible. I defended claim (i) explicitly, and claim (ii) implicitly, in §3. To make the case for (ii) explicit, note that an ideal extension of our actual experiences will be nomologically impossible if it includes experiences of hydrogen atoms jostling in the sun, or experiences of the formation of the first stars, since it is nomologically impossible for anyone to perceive such things. But the relevant ideal world had *better* include such experiences, because physical reality includes those entities/events.

Strictly speaking, this argument only establishes the nomological impossibility of ideal worlds that are *scientifically adequate*, in the sense of including experiences of the things we have scientific reason to believe in (like hydrogen atoms in the sun). It doesn't show that *all* ideal worlds that embed our actual experiences are nomologically impossible. But this is no consolation for Pelczar's project. Suppose there are some (scientifically inadequate) nomologically possible ideal worlds that embed our actual experiences. It would follow that the only ideal worlds that have a shot at being "most likely," conditional on our experiences belonging to an ideal world, are scientifically inadequate worlds. (This follows from the plausible claim that, if A is nomologically impossible, then  $\text{Ch}(A|B) = 0$  for any nomologically possible B.) It would then follow that Pelczar's phenomenalism is inadequate to recover the existence of things we have good scientific reason to believe in.

## 5 The nomological parsimony objection

Pelczar advertises phenomenalism as supremely economical. In one sense, it is. Everything reduces to two basic kinds of facts: phenomenal facts and facts about objective chances. The view is extremely parsimonious with respect to the number of basic kinds of facts it accepts. But there are other important dimensions of parsimony. One is *nomological parsimony*, which concerns the simplicity of the fundamental laws. (Sider (2020: 102) argues that this is the most important dimension of theoretical parsimony, and I'm inclined to agree.) My main concern with (strong) phenomenalism is that it seems likely to fare much worse than traditional (metaphysical realist) forms of physicalism and dualism with respect to the ideal of nomological parsimony.

Consider a standard physicalist view. We have the familiar metaphysical hierarchy, with the various levels of nature being in some sense ultimately reducible to fundamental physics. At bottom, we have a small number of basic entities and properties (electrons, quarks, mass, charge, ...) and, crucially, a small number of *simple laws* governing the behavior of these fundamental entities. A beautiful realization of the Leibnizian dream: richly varied phenomena from simple underlying principles. The picture is similar for standard forms of dualism, but with added fundamental psychophysical laws and primitive phenomenal properties.

Phenomenalism might be compatible with the standard physicalist claim that many high-level phenomena are reducible to low-level physics. The difference is that the phenomenalist will ground physics in phenomenal potentials. My worry is that, when we translate our beautifully simple physical laws into claims about phenomenal potentials, they will become hideously complicated. Suppose for illustration that the physics of our world is classical physics. We have laws like the law of inertia (a body at rest or moving in a straight line will remain at rest or moving in a straight line unless acted on by some force) and the law of gravitation (the gravitational force between two bodies is proportional to the product of the masses divided by the square of the distance between them). If mass, force, and the relevant geometric properties (distance, straight line, etc.) are fundamental, as the metaphysical realist physicalist may hold, then the basic laws of our world are very simple when stated in fundamental terms.

But given phenomenalism, in order to formulate these laws in fundamental terms, we'll need to cash out the notions of having mass, moving in a straight line, etc., in terms of phenomenal potentials. This will complicate the laws enormously. (I assume that what matters for nomological parsimony is how simple the laws are *when stated in fundamental terms*; otherwise it's trivial to formulate simple laws (cf. Lewis, 1983).) An object's having mass will be cashed out in terms of potentials for a hugely complex set of experiences (experiences of heft, experiences of trying but failing to move an object, experiences of moving an object with ease while it's on a smooth surface followed by experiences of strained effort when it reaches a rough surface, and so forth). An object's moving in a straight line will be cashed out in terms of potentials for another complex array of experiences (experiences of the object growing in one's visual field from one angle,

experiences of the object shrinking in one's visual field from another, tactile/proprioceptive experiences of feeling the object as one's arm moves smoothly to the left, etc.). It seems pretty clear that there won't be any reasonably simple formulation of the laws in terms of such phenomenal potentials. (It would be otherwise if, say, the various determinate mass and distance states corresponded to potentials for different values along some simple qualitative dimension of experience, like phenomenal brightness or phenomenal unpleasantness. Then there might be a simple, elegant translation of the physical laws into phenomenalese. But no such proposal looks promising.)

I've pressed the nomological parsimony challenge by reference to the laws of classical physics. But I suspect the point carries over *a fortiori* to more plausible candidates for fundamental physical theories, since the primitives of the latter are, if anything, even further removed from simple qualitative features of experience.

Note also that many potentials for macro-level experiences (e.g., experiences of red surfaces) seem not to be entailed by any potentials for experiences of fundamental physical entities (e.g., experiences of colorless particles). So, unlike standard physicalism, phenomenalism will likely need extra fundamental laws linking micro-physics to macrophysics.<sup>2</sup> I suspect the phenomenalist will even need extra contingent fundamental laws to account for the most straightforward (seemingly necessary and a priori) connections between low-level and high-level geometric facts. Intuitively, the shape of a Lego tower follows necessarily and a priori from the sizes, shapes, and distances among the individual pieces. But plausibly there are no a priori necessary connections between the relevant low-level and high-level phenomenal potentials, since there is no incoherence about a world with potentials for "zoomed-in" experiences but no potentials for "zoomed-out" experiences.

Standard physicalism therefore looks much more parsimonious than phenomenalism when it comes to how simple the basic laws are. What about standard forms of dualism? The dualist needs extra psychophysical laws, which could turn out to be very complex. But as Pelczar recognizes, the phenomenalist may also need psychophysical laws connecting physical states of brains to phenomenal states. These will be cashed out as laws linking *potential* experiences of brain activity to actual experiences of color, pain, and so forth. (The prospects of *reducing* consciousness to physical processes are especially bleak given a phenomenalist conception of the physical world. Actual experience isn't reducible to any mere potential for experience. Pain isn't reducible to the potential for non-hedonic experiences of soggy gray matter.) Presumably the relevant psychophysical laws won't be any less complex for the phenomenalist than for the traditional dualist. And since traditional dualism will have a much simpler set of basic *physical* laws, for the reasons given above, it comes out ahead of phenomenalism with respect to nomological parsimony.

Therefore, unless I'm missing something, or underestimating the resources available to the phenomenalist, it seems to me that the phenomenalist view is committed to a world where the fundamental laws are much messier and more complicated

<sup>2</sup> These will resemble the micro-to-macro laws in Yetter-Chappell's (2024) "realist idealism," a cousin of Pelczar's phenomenalism that is, I think, vulnerable to analogous nomological parsimony objections.

than those we get from a standard (metaphysical realist) form of physicalism and dualism.

**Data availability** There are no associated data.

## Declarations

**Ethical declarations** Informed consent/ethical approval statements are not applicable to this work.

**Competing interests** The author declares no competing interests.

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