



The Fruits of Phenomenalism: A Comment on Michael Pelczar's *Phenomenalism: A Metaphysics of Chance and Experience*

Louis deRosset¹ 

Received: 29 July 2024 / Revised: 9 April 2025 / Accepted: 17 April 2025
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Abstract

Michael Pelczar's book is a clear and well written defense of the titular idea, according to which material reality is constituted by possibilities for experience. I will urge that phenomenism faces a demarcation problem concerning how to distinguish those possible experiences that constitute material objects from those that do not. I will then argue that Pelczar has not yet provided the resources to solve this demarcation problem.

Keywords Phenomenalism · Material objects

Michael Pelczar has written a brisk book recovering a view which the philosophical tradition has apparently left for dead: phenomenism.¹ In broad brush strokes, phenomenism is the view that the physical universe, including all of spacetime, matter, energy, etc., is ultimately to be explained in terms of actual or possible experiences. Thus, the fact that there is a ripe cantaloupe in my kitchen is ultimately to be explained by appeal to the fact that, if someone went there (and conditions were auspicious) they would have experiences characteristic of perceiving a cantaloupe: they would have a visual experience as of a greenish-brown dappled surface; they would have an olfactory experience as of that delicious cantaloupe smell; if they reached their hand out to touch it, they would have a tactile experience as of a cool rough surface; and the like (2). This view is consistent with no one ever actually having such experiences. What phenomenism requires for the existence of a cantaloupe there is that someone *would* or, at any rate, *would be very likely to* have them.

¹ Pelczar, following (Fumerton, 1985), attributes the lack of interest in phenomenism since the 1950's to the influence of (Chisholm, 1957) (49). I would suggest as an alternative sociological diagnosis the influence of (Quine, 1951, esp. §5).

✉ Louis deRosset
Louis.deRosset@uvm.edu

¹ Philosophy Department, University of Vermont, Burlington, VT, USA

This is a highly ambitious project, so it is no surprise that the book is programmatic. As I think Pelczar would readily admit, there are lots of details that remain to be worked out. Pelczar's aim, then, is not to establish phenomenalism, but rather to show that reports of its refutation have been greatly exaggerated. In particular, Pelczar aims to show that the reasons given against phenomenalism do not merit its rejection, and that there are considerable reasons in its favor (183).

This attempt to show that phenomenalism is worth taking seriously (again) succeeds admirably. The book is clear and well written. Pelczar shows that the objections to phenomenalism that he discusses should not have persuaded us as they stand, and the considerations he marshals in its favor have some *prima facie* suasive power. In general, he gives the view a much better run for its money than I would have thought possible. I will urge, however, that one of the matters of detail I mentioned above requires urgent attention. Not every possible experience can plausibly be held to constitute the existence of a cantaloupe in my kitchen. Not even every possible experience as of a cantaloupe in my kitchen can do so. So, the plausibility of phenomenalism depends on solving a demarcation problem: distinguish the possible cantaloupe-style experiences that constitute material objects from those that do not. I will argue that Pelczar has not yet provided us resources to solve this demarcation problem.

1 First Steps Toward Demarcation

Phenomenalism of the sort that Pelczar develops holds that material objects are “possibilities for experience” of a certain sort.² Consider again the cantaloupe, and suppose that a number of people are in my kitchen, perceiving it from different angles. One of them is facing the depression at the stem end and has a visual experience to match. A second observer sees that depression from a more oblique angle. A third sees the cantaloupe from an angle which enables them to see much of the portion of the skin seen by the second, but from which the stem depression is occluded. These disparate experiences intuitively “fit together:” their phenomenal features are correlated, so that the appearance of the stem depression to the first observer is systematically related to its appearance to the second, as appropriate to the change of angle, and the appearance of the skin to the second is systematically related to its appearance to the third, as appropriate to the change of angle. Moreover, if we imagine our observers reaching out to touch the cantaloupe, their tactile experiences would be similarly coordinated, both with one another and with the visual experiences. Pelczar calls congeries of experiences that “fit together” in this way *thinglike* (22).

It is not entirely clear how to characterize the idea that a congeries of experiences “fit together” in the relevant way so as to be thinglike. But the idea is pretty intuitive, and we have enough of a grip on it to recognize cases in which there is lack of “fit.” Someone has just popped a flash-bulb in my face, and now there seems to be a bulb-shaped thing in front of me. But when I move my head, it appears to me as if the bulb-shaped thing does not, intuitively, stay put. It appears to me, rather, as if the bulb-shaped thing moves as I move my head and eyes, so as to maintain a constant

² I will from here on out use ‘phenomenalism’ and its cognates as a label for the view that Pelczar develops. This will save us tedious repetition of such qualifiers as ‘of the sort that Pelczar develops.’

distance and angle with respect to the position and orientation of my eyes. For this reason, it seems to me that I cannot move around it to view the apparent bulb-shaped thing “from the other side.” Moreover, when I reach out to touch things in the place where it appears that the bulb-shaped thing is located, my hand does not appear to occlude it, and I feel nothing there. My companion, who did not get the flash-bulb treatment, has no experience as of a bulb-shaped thing. Thus, my visual experiences do not “fit together” with my proprioceptive and tactile experiences, nor with my more typical experiences as of bulb-shaped things, and they do not “fit together” with my companion’s experiences. So, the congeries of experiences that includes both mine and my companion’s is not thinglike. Similarly, looking down a desert road in the summer, I seem to see a shimmering, silvery expanse in the distance. As I approach the place where the shimmering seems to be located, however, it disappears. These, again, are congeries of experiences that do not “fit together”, and so are not thinglike.

I have mirage experiences regularly enough in the summertime, and I rarely have the inclination or opportunity to approach the place where the shimmering appears to be. For this reason these experiences don’t enter into any systematic relations of “fit” with a systematically integrated congeries of experiences actually had by me or, presumably, anyone else. So, they don’t exhibit the relevant kind of “fit” with other actual experiences found in the case in which I and a number of people in my kitchen are all observing the cantaloupe there. So, the very minimal congeries of actual mirage experiences on a given occasion are not thinglike. But the same can be said of my experiences as of specks of dust that glitter in the afternoon sun. So these experiences, too, are not thinglike. In fact, many of the actual experiences people have are not rich and diverse enough to “fit together” with one another. It would be implausible to conclude in every such case that there is nothing where the specks seem to be. Moreover, plausibility requires us to accept the existence of specks for which there are no actually-existing corresponding experiences, and so no actual corresponding thinglike experiences.³

The phenomenalist does not identify the existence of the speck of dust with any congeries of actual experiences. Instead, phenomenism identifies the speck’s existence with the potential for some congeries of possible experiences, that, together, are thinglike. Potentials for many such congeries of possible experiences will not, however, constitute an object. There is, presumably, a potential for a congeries of possible experiences including experiences relevantly similar to my mirage experience that turn out to be thinglike. For instance, it is possible that I see the silvery shimmering down the road and decide to investigate. As I approach, I discover that the shimmering resolves itself into a sheaf of reflective plastic strips rigged low to the ground and waving in a steady wind. More radically, it is possible that a trio of people have a cantaloupe-style congeries of experiences while standing in my living room, where there are no cantaloupes.

The phenomenalist does not hold that either of these thinglike congeries of possible experiences constitutes a physical object. Though someone might have a suitable thinglike congeries of experiences, they *wouldn’t* (or, it is very unlikely that they would).

³ Berkeleyan idealists, who deny that there could be a speck of dust that exists unperceived, will disagree. See (17ff.) for critical discussion. I invite proponents of this doctrine to take these remarks as attempts to develop the views of their opponents.

If, for instance, I were to investigate the mirage, I would not have the experiences as of a sheaf of plastic strips. Instead, this counterfactual is true:

- (1) If I were to investigate the mirage, I would have the standard sort of mirage experience, in which there initially appears to be a silvery shimmering thing that seems to evaporate as I approach the relevant location.

So, my actual experiences are not thinglike, nor are the experiences that I would have if I were to investigate. Similarly, if a trio of people were to appear in my (cantaloupeless) living room, they would (with high probability) not have a cantaloupe-style congeries of experiences.

I have belabored these fairly obvious points for three reasons. First, it illustrates the dialectical pattern characteristic of the demarcation problem. Here's a quick summary of the forgoing discussion. Phenomenalism can be plausible only if it denies the existence of any material object corresponding to the after-image or mirage experiences. For this reason, we restrict our attention to *thinglike* congeries of experiences, thereby avoiding commitment to material objects corresponding to non thinglike congeries of experiences. But there are fleetingly experienced and unexperienced material objects, with no corresponding, thinglike actual experiences. Plausibility requires that phenomenalism affirm the existence of material objects even when they are only fleetingly experienced, or not experienced at all. So, we expand our attention to *potentials* for thinglike congeries of experiences. But this threatens to admit the after-image and mirage objects again, since it is obviously possible that these experiences be part of thinglike congeries of experiences. So, we restrict our attention again to those thinglike congeries of possible experiences that *would have been had* under certain circumstances. After-image and mirage experiences could in principle have been part of a thinglike congeries of experiences, but they wouldn't have been. On the other hand, unexperienced or fleetingly experienced material objects would have been the objects of thinglike congeries of experiences, if anyone had been suitably positioned. Phenomenalism thereby secures commitment to the unexperienced and fleetingly experienced material objects, while avoiding commitment to material objects corresponding to after-image and mirage experiences. At each step along the way, the plausibility of the ontology of material reality plays a constraining role. The phenomenalist view loses plausibility to the extent that it fails to reconstruct a plausible ontology of material reality.

My second reason for making heavy weather of these points is to bring into sharp focus the need to specify the counterfactual truths phenomenalism requires. The existence and features of material objects, on phenomenalism, are to be identified with the fact that, under certain circumstances, there would (with high probability) be corresponding thinglike congeries of experiences. Clearly, in the particular case of the mirage experience and the possible cantaloupe-style hallucination in my living room, the circumstances can be spelled out in the way we just saw. But the phenomenalist is aiming for a general explanation of the existence and nature of physical reality, so they need a general specification of the conditions in question.

So, we have two desiderata on a development of phenomenalism:

Systematicity: Offer a general, systematic specification of the counterfactual truths whose obtaining constitutes the existence and features of material things.

Reconstruction: Provide a plausible reconstruction of the contents and nature of material reality.

My third reason for dwelling on the obvious points concerning the phenomenalist's views of cantaloupes, specks, and mirages is that it prefigures the worry about phenomenalism. It is not clear that Pelczar has provided us with a view that meets both desiderata. In particular, I will suggest that his proposal for meeting systematicity admits rather more cantaloupe-like things into the ontology than plausibility permits.

2 Including the Unobservable

(RECONSTRUCTION) imposes significant constraints. In particular, no plausible reconstruction can exclude the variety of material things and phenomena which we not only fail to observe, but, intuitively, could not observe. As Pelczar argues, it would be implausible for someone who is both a phenomenalist and blind from birth to conclude from the fact that they have never had an experience as of a reflection or a rainbow that there are no such things. The contents and nature of material reality extend at least a little beyond such a person's powers of observation (134). It would be similarly implausible for a sighted phenomenalist with the usual stock of three kinds of color-sensitive photoreceptors to deny the existence of objects with colors (or properties suitably similar to colors) observable by creatures with more or different photoreceptors. Similarly, there are compression waves in the air at frequencies and volumes our ears cannot detect, and any phenomenalist theory meeting (RECONSTRUCTION) must find a way to include them. More radically, there are long, molecular polyester fibers, DNA molecules in a double-helix configuration, and the like, even though they are not the apparent object of any experience of any living creature.

Meeting (RECONSTRUCTION) requires securing the claim that, under certain circumstances, there would (or probably would) be thinglike congeries of experiences as of such things. That is, meeting the requirements of (RECONSTRUCTION) requires commitment to counterfactuals of something like the form

- (2) Under such-and-such circumstances, there (probably) would be thinglike congeries of experiences as of double-helix DNA molecules, polymer chains, 40 kHz compression waves in the air, etc.

where the circumstances mentioned by the antecedent make it likely that the creature doing the experiencing has extra- or non-human perceptual capacities.

Pelczar accepts that the creatures in question would have to have the capacity to have experiences as of things at very different scales (136ff.). For instance, creatures with experiences as of structure at the cellular scale would, if suitably positioned, have thinglike experiences as of skin cells. Creatures with experiences as of structure at the molecular scale would, if suitably positioned, have thinglike experiences of DNA double-helices and long polymer chains. And creatures with experiences as of structure

at the cosmological scale would, if suitably positioned, have thinglike experiences of the galaxy super-cluster containing the Milky Way. Moreover, if a whole bunch of creatures with the appropriate perceptual capacities were suitably positioned, then their experiences would cohere with one another in terms of properties and location. So, for instance, the thinglike congeries of experiences as of cellulose fibers would, collectively, appear to locate those fibers more or less where human experiences as of the rind of the cantaloupe in my kitchen would appear to be.

But differences in sensitivity to scale do not exhaust the diversity and strangeness of perceptual abilities required of phenomenalism by (RECONSTRUCTION). There are streams of neutrinos beaming through us all the time. The existence of these neutrinos is predicted by well-confirmed physical theory and detected by extremely sophisticated techniques. These special techniques are required because neutrinos lack both mass and electrical charge, and so almost never interact with the sort of matter of which we are made. The special techniques, which do exploit apparatus made of the sort of matter of which we are made, (almost certainly) do not detect the overwhelming majority of neutrinos that pass through them. Creatures with the ability to (reliably) have thinglike experiences of the vast majority of neutrinos would therefore be made of matter very different from the sort of matter of which we are made.

In fact, much of material reality probably cannot be experienced by creatures who are made of stuff at all. There is rather a lot of material reality at the heart of stars, for instance. Any material creature capable of experiencing any of the material things found there under those conditions – a dense soup of hydrogen and helium nuclei, together with electrons, in the plasma state – could not exist there. Thus, the sort of creatures who would (probably) have thinglike experiences of those bits of material reality would have to be counter-physical. So, meeting (RECONSTRUCTION) appears to require aversion to possible experiences of counter-physical creatures.

Pelczar considers the somewhat similar case of material reality deep in the atmosphere of Jupiter (106). He expresses confidence that there is a series of experiences as of descending into Jupiter's atmosphere which would make highly probable certain further experiences as of what one would find there. He can't go into detail about what such further experiences would be, because he doesn't know exactly what is to be found there. Imagine we attempt a similar treatment of the case of the core of the Sun. Should we be confident that there is a series of experiences as of descending to the Sun's core which would make highly probable certain further experiences as of what is found there? It is not clear to me that we should. But the point I am making now does not concern skepticism about the existence of such possible series of experiences. Rather, what I am suggesting is that the realization of such a possibility would require that the experiencer be made of stuff that does not interact in an environment hot and dense enough to enable nuclear fusion in a way that destroys the experiencer. In this sense, the experiencer is counter-physical.

There is a more prosaic way to appreciate how exotic the individuals who would have the relevant possible experiences would have to be. Consider again the cantaloupe in my kitchen. Clearly, if there were three people in my kitchen looking at the cantaloupe from a variety of angles, they would (probably) have thinglike congeries

of possible experiences as of the cantaloupe. But my kitchen is not very big; three people would be a noticeable crowd there. They would also (probably) have thinglike congeries of possible experiences as of one another. If we were to add in all of the possible experiencers of the cellulose fibers in the rind, the place would be crawling. Or, perhaps, a single creature with compound eyes suitably distributed around the cantaloupe would (probably) have the requisite thinglike experiences. But that creature would (probably) also have thinglike experiences as of itself. So, the possible observers would have experiences as of possible observers, so long as they are made of the kind of material that actual observers are.

Needless to say, there are not three people in my kitchen, nor a crowd of relatively small cellulose-fiber detectors, nor a creature with a suitably configured compound eye. So, satisfying (RECONSTRUCTION) requires that the possible thinglike experiences to which the phenomenalist appeals not include experiences as of such experiencers. How might we deal with the fact that ordinary experiencers of the cantaloupe would also be experiencers of one another? A convenient way to do this is to suggest that the experiencers are not ordinary: they are sensitive to the cantaloupe without being sensitive to one another. Given the vast range of sensitivities required (across scales, and to all of the sorts of interactions of which the cantaloupe is capable) it is tempting to appeal to possible thinglike congeries of experiences had by creatures who are affected by, but themselves have no effect on, the physical world. Pelczar appeals to exactly this sort of experiencer (2), which he terms an *ideal observer*. The possible congeries of thinglike experiences with which the cantaloupe's existence is identified will include experiences of ideal observers. Such observers are clearly counter-physical.

If phenomenologists may appeal to counter-physical, ideal observers, then there is presumably no problem with the claim that some such observers would (probably) have thinglike experiences as of a dense soup of very hot matter in the plasma state at the core of the Sun. I have little or no idea what it would be like to undergo such experiences, but this presumably is the result of my own cognitive and perceptual limits (Nagel, 1974).

3 Ideal Worlds

I have been speaking freely about what experiences people with certain sensitivities would have if they were in various positions, and characterizing phenomenism rather vaguely as the view that the existence of material objects like the cantaloupe in my kitchen are to be identified with the facts expressed by some such counterfactuals. It is high time we attempt more precision. Assessing the prospects for solving the demarcation problem requires saying both which counterfactuals are supposed to constitute the existence and features of material reality and what the truth conditions of those counterfactuals are.

To this end, Pelczar introduces the idea of an *ideal world* (3,94). An ideal world is a world in which: (i) there are ideal observers with appropriate sensitivities distributed thickly enough that they are, collectively, in a position to perceive every physical

aspect of that spacetime;⁴ and (ii) those ideal observers' experiences "fit together" into a bunch of thinglike congeries of experiences.

Pelczar's phenomenalist holds that the existence of the cantaloupe in my kitchen is to be identified with the fact that,

- (3) if our actual experiences were to be part of an ideal world, there would (probably) be a thinglike congeries of experiences of a certain sort as of something in my kitchen (95).

The sort of experiences in question are, presumably, those congeries of experiences which we would paradigmatically count as of a cantaloupe: they would be experiences as of something grown in a melon patch, cut from its stem, transported to my kitchen, with a rough, brownish-greenish rind enclosing juicy, sweet orange flesh, etc. (95). Pelczar takes on board a variant of the (now canonical) similarity semantics for counterfactuals due to Stalnaker and Lewis (101).⁵ On this view, what makes the relevant counterfactual true (and so what makes it the case that there is a cantaloupe in my kitchen) is that the ideal worlds containing all of our actual experiences that are most similar to the actual world also contain a thinglike congeries of experiences of the relevant type.

Supposing there is any such thing as an ideal world, there will be lots of ideal worlds containing our actual experiences. Some of them contain a thinglike congeries of experiences as of a cantaloupe in my kitchen and others do not. Some of them contain a thinglike congeries of experiences as of a rotten cantaloupe in my kitchen, and others experiences as of a merely ripe cantaloupe. Which such ideal worlds are most similar to actuality?

A non-phenomenalist can plausibly answer that the most similar ideal worlds are the ones in which matter is arranged ripe-cantaloupe-wise in my kitchen. But, since that is precisely the fact to be identified with the counterfactual in question, a phenomenalist cannot give this answer, on pain of circularity.⁶

Pelczar proposes a different answer. According to Pelczar there are objective conditional probabilities for experiences in my kitchen. For instance, the probability, given that *o* is a suitably sensitive ideal observer in my kitchen, of *o*'s having an experience as of firm, orange flesh inside a fibrous rind is very high. On the other hand, the probability, given the same condition, of *o*'s having an experience as of mushy, brown flesh is very low. The conditional probability of *o*'s having no experience as of flesh enclosed in a rind is similarly low. The existence of these conditional probabilities make the ripe-cantaloupe ideal world more similar (or more probable) than the no-cantaloupe and rotten-cantaloupe ideal worlds. More generally, Pelczar says that ideal world w_1

⁴ Pelczar attempts a reconstruction of the notion of a spacetime in terms of coherent congeries of experiences of ideal observers (79-90). Here I omit discussion for reasons of space.

⁵ See (Stalnaker, 1968) and (Lewis, 1973).

⁶ It is not clear that the circularity is vicious. If the phenomenalist rests content with it, however, then it is also not clear that their view satisfies (SYSTEMATICITY). They would then insist that (3) is true, and the fact it expresses is identical to there being matter distributed cantaloupe-wise in my kitchen, and that that fact itself is part of what guarantees that the truth condition for (3) is satisfied. This is a coherent package of views, but so is the corresponding package of views according to which there is matter distributed rotten-cantaloupe-wise in my kitchen. Only one of these plausibly reconstructs the contents of material reality, but we have been given no systematic reason to affirm one package over the other.

is closer to actuality than ideal world w_2 just in case w_1 's conditional probabilities of experience more closely match actuality than w_2 's (107).⁷

4 Return of the Demarcation Problem

We now have the materials needed to appreciate the difficulty of the demarcation problem. Physical reality includes: a cantaloupe in my kitchen, compression waves in the air at frequencies above human audibility, a very dense soup of matter in the plasma state at the core of the Sun, etc. Meeting (RECONSTRUCTION) requires explaining how, on a phenomenalist view, things of these sorts exist. Pelczar obliges: there are corresponding phenomenal probabilities in the actual world, like the high probability of a congeries of thinglike, cantaloupe-style experiences, conditional on there being a suite of appropriately sensitive ideal observers in my kitchen. Consequently, it is plausible to hold that, if our experiences were part of an ideal world, then: ideal observers in my kitchen with appropriate sensitivities would (probably) have thinglike, cantaloupe-style experiences; other ideal observers with appropriate sensitivities would have thinglike congeries of experiences as of compression waves at the relevant frequencies in the air; and still further ideal observers with other sensitivities would have thinglike congeries of experiences as of a dense soup of matter in the plasma state at the core of the Sun.

The problem is that the phenomenalist appears to have let too much in to offer a plausible reconstruction. Consider any region R of spacetime that is cantaloupe-shaped, but contains no material thing of that shape. A group of R -cantaloupers is a group of ideal observers who are sensitive in the way we are to the presence and absence of cantaloupes outside R , but are also (collectively) sensitive to R in a peculiar way: when they are near R and appropriately oriented, they will almost certainly (collectively) have a congeries of thinglike, cantaloupe-style experiences as of something in R . So, there is this phenomenal probability:

- (4) The probability of a congeries of thinglike, cantaloupe-style experiences, conditional on there being a suite of R -cantaloupers near R , is very high.

Assuming it is possible that there be an ideal world containing our actual experiences, along with ideal observers reliably sensitive to neutrinos, and ideal observers sensitive to the incredibly, hot, dense plasma at the center of the Sun, etc., it seems also to be possible that there be an ideal world containing our actual experiences, with all of those ideal observers, together with a bunch of R -cantaloupers near R .

The nearest ideal worlds will, on Pelczar's view, agree with our world in their phenomenal probabilities, including the probability reported by (4). Thus, so long as the nearest ideal worlds contain the relevant ideal observers in all of the right places, it will very likely be a world in which there is a congeries of thinglike, cantaloupe-style experiences as of something in R . It does not follow that the R -cantaloupers'

⁷ More exactly, Pelczar requires match of *phenomenal* probabilities, which are conditional probabilities specified in purely experiential terms. I have generally specified conditional probabilities and possibilities like (1) in ordinary terms. Pelczar suggests that his inability to helpfully specify phenomenal probabilities (and possibilities for experience more generally) in detail does not provide reason to doubt that there are any (24-5).

experiences would be experiences as of a cantaloupe, since it is, perhaps, necessary that cantaloupes be detectable by human beings, and nothing in R is. But they would certainly be experiences as of something material: call it an R -cantaloupoid. The point obviously generalizes to every cantaloupe-shaped region of spacetime. So, the phenomenalist's view appears to yield the truth of

- (5) if our experiences were part of an ideal world, then, for every cantaloupe-shaped region of spacetime R , ideal observers near R with appropriate sensitivities would (probably) have thinglike, cantaloupe-style experiences.

It is hard to see, then, how the phenomenalist will resist the conclusion that there is a plenum of cantaloupoids undetected by us humans. But there are no such things. No plausible reconstruction of the contents and nature of physical reality includes such a profusion of cantaloupoids. The point generalizes further, to other kinds of fruit. The demarcation problem is back.

5 Options

The phenomenalist has two strategies for resisting the plenum of cantaloupoids: (i) deny that an ideal world containing both R -cantaloupers and the other relevant ideal observers is possible; or (ii) deny that any such ideal worlds are closest to the actual world. The problem is that, in attempting to deliver a plausible reconstruction of physical reality, the phenomenalist has foreclosed all of the most obvious ways of pursuing either strategy.

Consider first the alleged possibility of ideal worlds containing our experiences, the R -cantaloupers' experiences, and the experiences of other ideal observers as of neutrinos, high-frequency compression waves, and the core of the Sun. The claim that such worlds are possible might be resisted on the grounds that ideal observers are counter-physical. They don't interact with the physical world in any physically possible way. In particular, it is physically impossible that there should be a group of creatures who are highly likely to have thinglike cantaloupe-style experiences when they "look at" the particular region of spacetime R . Of course, if we reject the possibility of R -cantalouper-containing worlds on grounds of physical impossibility, we have similar grounds for rejecting worlds containing the other ideal observers. So, this way of rejecting the implausible commitment to R -cantaloupoids will also end up rejecting the overwhelmingly plausible commitment to neutrinos and the matter at the core of the Sun.

Consider, then, the alternative strategy, which denies that the R -cantalouper-containing worlds are as close to actuality as the non- R -cantalouper-containing worlds. It might be suggested, for instance, that even if the R -cantaloupers are possible, they are *less* possible than ideal observers for neutrinos and the rest.⁸ The problem, of course, is that there is no plausible reason to endorse this graded possibility claim. There is nothing which makes the R -cantaloupers more outré than the sun-core expe-

⁸ Here I appeal to an intuitive idea of graded possibility. In the same sense, a Clinton victory is more possible than a Truman victory in the 2016 U.S. presidential election. That's why, if Trump had not won, Clinton would have; and it is not the case that, if Trump had not won, Truman would have.

riencers, or, for that matter, the would-be cantaloupe-experiencers in my kitchen who can't detect one another.

According to the phenomenalist, closeness of worlds is measured by match of phenomenal probabilities. What makes the *R*-cantalouper ideal worlds close to actuality is match of phenomenal probabilities like (4). Perhaps, however, there is something defective in my specification of that phenomenal probability. The most conspicuous feature of that specification is that its condition appeals to a bizarre sort of ideal observer. If this gives us reason to deny that (4) states a genuine phenomenal probability, then agreeing with the actual world on (4) does not make the *R*-cantalouper ideal world close to actuality. The problem, of course, is that all ideal observers are bizarre in that their pattern of interaction with physical reality is bizarre, and the neutrino- and Sun-core-experiencing ones, like the *R*-cantaloupers, are additionally bizarre in their sensitivities. It seems that there is no way of excluding (4) as a phenomenal probability without also excluding similar probabilities for thinglike experiences as of neutrinos, etc. So, this way of arguing that the *R*-cantalouper ideal worlds are less close to actuality than *R*-cantalouper-free ideal worlds appears also to entail that the neutrino-detector ideal worlds are less close to actuality than neutrino-detector-free ideal worlds.

Perhaps, however, there is some other respect of similarity in play: though the *R*-cantalouper ideal worlds match the actual world with respect to phenomenal probabilities, they differ in some other way that makes them less similar to the actual world than other ideal worlds without *R*-cantaloupers. It might be held, for instance, that the *R*-cantaloupers are an extravagant addition: slimmer worlds with “fewer” ideal observers are closer to actuality.⁹ This is a view on which the closest worlds will have phenomenal probabilities that are *unrealized* in the sense that the condition does not obtain. So, for instance, on this view, (4) is an actual phenomenal probability that is unrealized: there are no *R*-cantaloupers near *R*, and so there are no cantaloupe-style experiences as of something in *R*. The problem, of course, is that once we allow unrealized phenomenal probabilities in the closest ideal worlds, we need some reason to expect that the phenomenal probabilities for experiences as of neutrinos, humanly inaudible compression waves in the air, and dense plasma at the core of the Sun are realized in the closest ideal worlds.

It might be contended that what makes *R*-cantaloupoid-experiences different from neutrino-experiences is that, unlike neutrinos, *R*-cantaloupoids (assuming for expository purposes that there are any) have no effects on human-observable physical reality. Neutrinos have been detected. *R*-cantaloupoids never will be. A phenomenalist might hope to use this asymmetry to undergird the case that the *R*-cantalouper ideal worlds are less similar to actuality than other ideal worlds. The idea, presumably, is that a given ideal world is more similar to actuality when all the thinglike congeries of expe-

⁹ As a technical matter, it is not clear that there would be fewer ideal observers in an ideal world with no *R*-cantaloupers; perhaps, instead, we would have a situation in which there are exactly as (infinitely) many ideal observers in the two worlds. I ignore this complication for the sake of discussion.

riences it contains are as of things detectable, either directly or indirectly, by us: things that interact with the kinds of things our actual experiences present.¹⁰

This response ties the contents and nature of physical reality far too tightly to actual human sensitivities.¹¹ The matter is somewhat abstruse, but may be illustrated by considering two hypotheses about the nature and contents of physical reality. On the one hand, there is an anti-Occamite hypothesis, according to which there is a lone *R*-cantaloupoid, and also all of the kinds of more familiar material things, including neutrinos, dense hot plasma at the core of the Sun, ships and sealing wax, cabbages and kings, and that's all.¹² On the other hand, there is the Occamite hypothesis according to which there are neutrinos and the rest, but no *R*-cantaloupoid.

It seems that there are a pair of worlds, one satisfying the Occamite hypothesis and the other satisfying the anti-Occamite hypothesis, which agree on all phenomenal probabilities, including (4), and in which human beings have exactly the same sensitivities and exactly the same experiences as in the actual world.¹³ The phenomenalist has not given us the means to distinguish these hypotheses. In particular, the dimensions of similarity specified so far give us no basis on which to say that the *R*-cantaloupoid world is among the ideal worlds containing actual human experiences closest to the anti-Occamite world, but is not among those closest to the Occamite world. As a result, we have, as yet, no basis for saying that the counterfactual claim (5) is true in the anti-Occamite world, but not in the Occamite world.

Obviously, the hypothesis of an Occamite world is coherent; it would be unreasonable to reject it. It would be unreasonable to affirm the anti-Occamite hypothesis, but it is coherent nonetheless. Violating Occamite constraints on reasonable acceptance of hypotheses does not entail incoherence. So, these hypotheses are each consistent and coherent. But they are inconsistent with one another, and so should not be identified. The problem, as I have already said, is that the phenomenalist has not yet given us a basis for distinguishing them.

I have appealed repeatedly to the claim that phenomenalism provides no *basis* for certain plausible claims regarding the content and nature of physical reality. It is certainly open to the phenomenalist to agree, and then to affirm the claim nonetheless without any principled basis. So, for instance, a phenomenalist might claim that every ideal world with *R*-cantaloupers is further from actuality than ideal worlds without

¹⁰ Let's grant that these constraints on interactions between physical objects or phenomena can be cashed out in terms of phenomenal probabilities. So, for instance, the fact that neutrinos can interact with humanly observable physical phenomena is reflected in the fact that one ideal observer's experience as of a neutrino whizzing through a neutrino detector raises the probability of another ideal observer's experience as of the detector going "bing."

¹¹ Pelczar may agree, though it is not entirely clear that he does; see (134-5).

¹² This hypothesis is anti-Occamite because it entails the existence of something which is not required to explain any actual observations.

¹³ One issue is that *R*-cantaloupers, as defined, would not be sensitive to variation in the position and features of the *R*-cantaloupoid that exists in the non-Occamite world. To secure sameness of phenomenal probabilities, we may need to appeal to a variant kind of ideal observer, who would be sensitive to such variations. So, for instance, we might imagine a kind of observer who is highly likely to have cantaloupe-style experiences in proximity to *R*, unless they have cantaloupe-style experiences in proximity to other regions, in accord with some laws describing the contents, structure, and dynamics of cantaloupoid experiences. Those laws would need to be specified. But, if they were, there is no reason to doubt that there are corresponding phenomenal probabilities. I will suppress these complications going forward.

them, and that's that. On the other hand, an ideal world with *R*-cantaloupers is closer to the anti-Occamite world than any ideal worlds without them, and there's nothing helpful to be said about the basis for drawing such a distinction. That is, the phenomenalist may always evade the demarcation problem by rejecting (SYSTEMATICITY).¹⁴ I find such an unsystematic view intuitively unattractive, but this is an option.

Another option for evading the demarcation problem is to reject (RECONSTRUCTION), and simply accept the existence of *R*-cantaloupoids. As I have indicated, parity of reasoning (notice that this is an implicit appeal to (SYSTEMATICITY)) will require acceptance of the existence of a canaloupoid for every suitably shaped spacetime region, as well as analogues for raspberries, oranges, tomatoes, durians, *etc.* This is a view – call it *fructoid abundance* – on which we are constantly moving through a plenum of fruit-like physical objects without any possibility of interacting with them.

At a certain point in his career, Russell was happy to accept the existence of ghosts, auras, objects corresponding to hallucination experiences, and the like (Russell, 1919, pp. 349-50, 370-1). He attempted to mitigate the implausibility of these claims by noting that these things are not systematically related to other perceptible things in the robust ways they are systematically related to one another.¹⁵

Whatever the merits of Russell's defense of the existence of, say, a congeries of phantom pink rats corresponding to a hallucination, it does not seem available to the proponent of fructoid abundance. First, unlike the case of the phantom pink rats, the existence of the fructoids is not attested by any actual experience. The theory of fructoids, such as it is, is entirely my own invention, wholly unsupported by any experience, hallucinatory or otherwise. So Russell's reason, at least, for affirming the existence of phantom pink rats, does not apply in the present case.

Moreover, as I have indicated (n. 13), it seems possible in principle that there should be laws governing the contents, structure, and dynamics of cantaloupoid experiences, so that they are systematically interrelated. So, Russell's strategy for mitigating the implausibility – that experiences of phantom pink rats, say, are not systematically related to other possible experiences – is not available in this case.

Finally, an essential part of Pelczar's case in favor of phenomenalism over its rivals, including a straightforward view on which possibilities for thinglike experiences are explained by the existence, nature, and arrangement of matter, is that phenomenalism is a more parsimonious explanation (63). Accepting fructoid abundance appears to undercut this appeal to parsimony, since it is difficult to imagine a less parsimonious view: according to fructoid abundance, there are an immense number of individual things, belonging to an immense number of different kinds, obeying an immense thicket of arbitrarily complex principles governing their structure and dynamics. So, the version of phenomenalism which accepts fructoid abundance would abandon a key source of support, and so stands in need of a replacement. To be honest, I find

¹⁴ In fact, there are several points in the discussion at which a phenomenalist might simply dig in their heels, appealing to a distinction without some further basis. So, for instance, they might simply deny that (4) is true, without providing any basis for distinguishing that claim from similar claims regarding phenomenal probabilities for neutrino experiences and the like.

¹⁵ Thanks to an anonymous referee for noting the need to consider a response of this sort and for pointing me to Russell's discussion.

the view incredible, so I regard the prospects for support to be very dim. Perhaps this is a personal failure of imagination. If so, the phenomenalist who proposes to evade the demarcation problem by accepting fructoid abundance will need to find new arguments for the view.

I want to close by considering a different response: accept that there are *R*-cantaloupoids, but deny that this acceptance is implausible. The idea would be to assimilate *R*-cantaloupoids to some plausible bit of our picture of the contents and nature of physical reality. The most promising version of this idea would be to accept the existence of an *R*-cantaloupoid but claim that it is identical to the spacetime region *R*.

The problem is that this claim does not do justice to the idea that there is *nothing material at all* in *R*, or at least nothing whose structure corresponds to the structure the *R*-cantaloupers' experiences present. So, for instance, there are no material differences between the outer bits of *R* and its inner bits that corresponds to the *R*-cantaloupers' experiences as of the toughness of the rind and the contrasting tenderness of its contents. The phenomenal probabilities are not just for experiences as of something located at *R*, but as of something with certain material characteristics. And there just isn't anything like that there at all.

We have explored several of the more obvious options for a phenomenalist to take to navigate this particular version of the demarcation problem. No satisfactory solution has come to light. But it must be admitted that the demarcation problem is still open. The sorts of phenomenalism we have discussed are clearly only a few of a large variety of diverse views. So, this discussion may be taken by phenomenologists as an invitation to develop their view. In advance of such further developments, however, the demarcation problem presents a genuine difficulty for phenomenologists. There don't seem to be similar problems for non-phenomenologists. So, phenomenologists have their work cut out for them.¹⁶

Author Contributions Each author contributed 100% of the work in preparing this paper.

Funding Information None.

Declarations

Conflicts of Interest The author declares that they have no conflict of interest.

Ethical Approval and Consent to Participate N/A

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¹⁶ Thanks to Terence Cuneo, Kate Nolfi, and Michael Pelczar for helpful comments on an earlier draft.

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