

There is No Combination Problem

Emergentist and reductive forms of panpsychism

We can divide things that exist into two categories: metaphysically heavyweight entities and metaphysically lightweight entities. The heavyweight entities are those into which nature is carved in and of itself; the lightweight entities are mere shadows cast by our discourse. To put it less metaphorically: the heavyweight entities are the entities upon which truths depend, the lightweight entities are those entities which depend on truth.

For those enemies of realism who hold that truth is grounded in coherence or usefulness, all entities are lightweight: the sentence 'The moon exists' is grounded not in the existence of some object, the moon, but in the coherence the proposition expressed by the sentence has with other propositions, or in the usefulness of believing that proposition. But those who believe that truth is ultimately grounded in the world need not take all entities to be heavyweight. It is highly plausible to think that the truth of the sentence 'There is a party at Bill's' does not require of the world that there be some thing, Bill's party; it requires merely that there be people having a good time at Bill's. If this is the case, then Bill's party is metaphysically lightweight: its existence is grounded in, rather than itself being something that grounds, truth. For reasonable realists the same is surely true of wars, street fights, the European Union and Beethoven's 5th.

I take physicalism to be a form of realism according to which the only metaphysically heavyweight objects are the non-conscious objects of fundamental physics; all other objects, such as tables, planets, rocks and conscious subjects, are mere shadows cast by our language. I take the defining commitment of panpsychism to be to the heavyweight existence of mereological ultimates with conscious experience. We can, at least in the first instance, distinguish between two distinct ways to go on from that initial commitment. Let us call 'panpsychists reductionists' those who take these conscious ultimates to be the only metaphysically heavyweight things: sentences about the existence and conscious experience of macro-level subjects, e.g., 'Bill is feeling anxious', are made true not by macro-level subjects instantiating phenomenal qualities but by facts about conscious ultimates, just as 'There is a party at Bill's house' is made true not by a party but by facts about partiers. For panpsychist reductionists macro-level conscious subjects are metaphysically lightweight, in something like the way the physicalist takes all conscious subjects to be metaphysically lightweight.

In contrast, we can define 'emergentist panpsychists' as panpsychists who believe that both conscious

ultimates and macro-level conscious subjects are metaphysically heavyweight: 'Bill is feeling anxious' is made true by some single subject of experience instantiating the phenomenal quality of feeling anxious (and not by any more fundamental state of affairs). Taking macro-level conscious subjects to be heavyweight does not imply substance dualism; it is coherent to suppose that certain physical objects, wholly composed of physical parts, such as brains or central nervous systems, are metaphysically heavyweight. If a brain is metaphysically heavyweight, then, although it is wholly composed of physical parts, it is utterly irreducible to those parts; we can call such a composite physical object an 'emergent whole'. Emergent panpsychists identify the subject of Bill's experience with some emergent whole in the physical world.¹

An emergent whole is irreducible to its parts in the sense that truths about its existence and nature are not made true by facts about its parts. Contrast again with Bill's party. Truths about the existence and nature of Bill's party, truths such as 'There is a party at Bill's tonight' or 'Bill's party was wild!', are made true by entities at a more fundamental level, i.e. people (having a good time). Emergent wholes are not like that: truths about their nature and existence, such as 'Bill thinks therefore he is', or 'Bill is feeling anxious', are made true by facts about the emergent whole itself and its qualities, and not by facts about its parts.

The physicalist and the reductive panpsychist think that all macro-level entities are reducible to micro-level facts, in the same way that Bill's party is reducible to facts about partiers. In contrast, the emergentist panpsychist holds that macro-level conscious subjects are emergent wholes.

Against reductive panpsychism

I think reductive panpsychism is a position that is difficult to maintain. One becomes a panpsychist because one is metaphysically serious about consciousness. It seems to me that this metaphysical seriousness ought to be credited either to both macro-level and micro-level subjects alike, or to neither.

Just as we have divided objects, so we can divide properties, into heavyweight and lightweight. Heavyweight properties constitute the joints of nature; to the extent that objects share heavyweight properties they *genuinely resemble*, that is, they resemble in and of themselves. Lightweight

¹ I remain neutral on the question of whether 'the subject of Bill's experience' is identical to Bill. It would be plausible to think so if we took the subject of Bill's experience to be identical to a whole organism. It is less obvious what we should say if we think that the subject of Bill's experience is identical to a part of an organism, for example a brain. In this case, I suspect it is indeterminate whether Bill's uses of the first person pronoun refer to the organism or the brain, but obviously these are deep matters which deserve more attention (see Strawson 2009 for a little more detail on these issues, and a defence of the view I incline towards).

properties are merely shadows cast by predicates. An electron and a horse do not genuinely resemble, do not resemble in and of themselves, in virtue of both possessing the property of being either an electron or a horse. But it is plausible to think that two electrons genuinely resemble, resemble in and of themselves, in virtue of both being negatively charged. If these intuitions are correct, being negatively charged is a heavyweight property, whilst being either negatively charged or a horse is a lightweight property.

Lightweight properties are those which are dependent on the satisfaction of predicates, whilst heavyweight properties are those upon which the satisfaction of predicates depends. An electron has the property of being negatively charged or being a horse in virtue of satisfying the predicate 'being either negatively charged or a horse', which it in turn satisfies in virtue of being negatively charged. When it comes to the property of being negatively charged, however, it is plausible to think that things go the other way round: the electron satisfies the predicate 'being negatively charged' in virtue of being negatively charged.

Physicalists take phenomenal properties to be lightweight: objects have phenomenal properties in virtue of satisfying phenomenal predicates, which they satisfy in virtue of more fundamental physical facts.² The minimal commitment of panpsychism is that the consciousness of fundamental particles is a heavyweight property: fundamental particles satisfy phenomenal predicates in virtue of having phenomenal properties rather than the other way round (from now on I will think of mereological ultimates as fundamental particles for ease of exposition).

It follows from this commitment that two fundamental particles, in so far as they share phenomenal qualities, genuinely resemble each other. But macro-level conscious subjects like Bill and Ben also share phenomenal qualities.³ It seems to me unintelligible that the sharing of determinates of some determinable X can, in one instance, constitute genuine resemblance, whilst in another instance fail to constitute genuine resemblance, for example, it is not intelligible to suppose that two spherical things genuinely resemble in so far as they are spherical, whereas two cuboid things do not genuinely resemble in so far as they are cuboid.

We have then an argument from the basic commitment of panpsychism to panpsychist

2 Can't physicalists identify phenomenal properties with physical properties, e.g. pain with c-fibres firing? Of course they can, but on my understanding of physicalism, the physicalist is obliged to take such higher-level physical properties to be lightweight; only the properties of fundamental physics, e.g. mass and charge, are metaphysically heavyweight.

3 Bill and Ben might be organisms or might be brains of organisms depending on what we identify macro-level subjects of experience with.

emergentism:

Premise 1: The consciousness of fundamental particles is a heavyweight property, and so any two fundamental particles, in so far as they share phenomenal qualities, genuinely resemble.

Premise 2: Bill and Ben share some phenomenal qualities, e.g. what it's like to see red.

Premise 3: For any four objects O1, O2, O3, and O4, and any determinable X, if O1 and O2 genuinely resemble in so far as they share a single determinate of X, and O3 and O4 share a single determinate of X, then O3 and O4 genuinely resemble in so far as they share a single determinate of X, and hence in sharing a single determinate of X they share a heavyweight property.

Conclusion: Bill and Ben, in so far as they share phenomenal qualities, genuinely resemble, and hence in their sharing of phenomenal qualities, Bill and Ben share heavyweight properties.

I conclude, therefore, that the panpsychist is obliged to take phenomenal qualities to be metaphysically heavyweight.

Even if the argument above is sound, couldn't the panpsychist be an emergentist about phenomenal qualities, but not about conscious subjects, i.e. the objects that instantiate phenomenal qualities? I find this kind of hybrid position unintelligible. It entails that a lightweight object instantiates a heavyweight property, which would be analogous to Bill's party instantiating negative charge. How can a linguistic shadow instantiate a joint of nature? To drop the metaphor: I don't think we can make sense of the idea that an object dependent on the truth of our discourse can instantiate a quality upon which the truth of our discourse depends.

I conclude, therefore, that panpsychists are obliged to be emergentists about conscious subjects.

Why there is no combination problem

Let us return to the canonical expression of the combination problem in William James:

Take a hundred of them [feelings], shuffle them and pack them as close together as you can (whatever that may mean); still each remains the same feelings it always was, shut in its own skin, windowless, ignorant of what the other feelings are and mean. There would be a hundred-and-first-feeling there, if, when a group or series of such feelings were set up, a consciousness *belonging to the group as such* should emerge. And this 101st feeling would be a totally new fact; the 100 feelings might, by a

curious physical law, be a signal for its *creation*, when they came together; but they would have no substantial identity with it, not it with them, and one could never deduce the one from the others, nor (in any intelligible sense) say that they *evolved* it (James 1983, 162).

What does James mean when he says that the 101st feeling would not have a 'substantial identity' with the 100 feelings, that it would not have 'evolved' from them? I suggest that we can capture the spirit of what James meant in terms of the framework developed above. I interpret James as claiming that the relationship between the 101st feeling and the 100 feelings is not like the relationship between Bill's party and his guests. Once you shuffle round Bill's guests in a certain way – give them drinks, pump up the music, encourage them to engage in inane party banter – you've thereby got a party. The fact the guests are arranged in this way, and the fact that there is a party, are not metaphysically distinct states of affairs. The fact that the guests are so arranged makes it true that there is a party.

On my interpretation of James, he is struggling to make sense of an analogous relationship between the hundred feelings and the hundred-and-first-feeling. James can't see how the fact that there are a hundred feelings arranged in a certain way could make it true that there is a hundred-and-first-feeling. These seem to be metaphysically distinct states of affairs, even if, as a matter of brute fact, one emerges from the other, perhaps on account of some 'curious physical law'.

In other words, what James is struggling to find intelligible is panpsychist *reductionism*, the view that truths about the existence and nature of high-level conscious subjects are made true by truths about lower-level subjects. He has no concerns about the intelligibility of panpsychist *emergentism*, the view that facts about the existence and nature of high-level conscious subjects, as a matter of brute fact or natural law, arise from facts about the existence and nature of micro-level conscious subjects. The combination problem, at least as understood by James so interpreted, is a problem only for panpsychists reductionists, not for panpsychists emergentists. If I am right that all panpsychists ought to be emergentists in any case, it follows that panpsychists have nothing to worry about as regards the combination problem.

The special phenomenal composition question

So we panpsychists have to be emergentists. As such we don't have a combination problem. But we

do have a pressing question to answer. I call this question, in homage to van Inwagen,⁴ 'the special phenomenal composition question', and it goes like this:

The special phenomenal composition question: Under what conditions do fundamental particles combine to form a higher-level subject of experience?

I take there to be five places metaphysicians should look for answers to metaphysical questions:

1. Truths we know with Cartesian certainty via our immediate acquaintance with conscious experience.
2. Conceptual truths
3. Common sense
4. Empirical data
5. Cost-benefit analysis of theoretical virtues.

I don't believe, contra Descartes, that Cartesian certainty, in and of itself, can rule out any answer to the special phenomenal composition question. Cartesian certainty tells me that there exists at least one conscious thing, but it cannot tell me whether or not that conscious thing is metaphysically simple or composed of physical parts.⁵ However, on the plausible assumption that cost-benefit analysis will yield the result that the identification of conscious subjects with composite physical objects is preferable to the identification of conscious subjects with either Cartesian egos or fundamental particles, then Cartesian certainty and cost-benefit analysis working together can rule out one answer to the special phenomenal composition question:

Nihilism about phenomenal composition: Fundamental particles never come together to form a macro-level conscious subject.

If there is at least one conscious subject, i.e. the subject of my experience, and that conscious subject is identical to a composite physical object, then there is at least one occasion on which

⁴ See van Inwagen 1990.

⁵ So I disagree with Descartes that we can know that the mind is indivisible. When I introspect, the subject of my experience does not present itself as a thing with parts. However, I see no way of ruling out the possibility that, when introspecting, I am conceiving of the subject of my experience in terms of only part of its nature. Perhaps the subject of my experience has non-phenomenal as well as phenomenal aspects, such that if I were to conceive of it in terms of its whole phenomenal and non-phenomenal nature, it would be evident that it has parts. I find the idea of an object that instantiates both phenomenal and non-phenomenal aspects forming a unified nature quite beautiful, even though we can form no positive conception of such a thing. If the brain is the bearer of consciousness, and I believe it is, it must be a very beautiful thing.

fundamental particles come together to form a conscious subject, i.e. when they come together to form the subject of my experience.

What about conceptual truths? I can't see how conceptual truths can rule out any of the answers to the special phenomenal composition question (except ones which are obviously contradictory, e.g. fundamental particles form conscious subjects under condition X, and don't form conscious subjects under condition X).⁶ The following answer seems perfectly coherent, although exceedingly unlikely (for cost-benefit reasons to do with inelegance and arbitrariness):

Small blue tablism about phenomenal composition: Fundamental particles form conscious subjects when they form small blue tables.

What about common sense? I think it's pretty clear what answer common sense would give to the special phenomenal composition question:

Commonsense answer: Particles form a conscious subject when and only when they form organisms (or a subset of organisms, or the brains/central nervous systems of organisms; I will ignore these alternatives for the sake of simplicity).

Unfortunately, I think we have very strong reason to reject this answer, as I will now try to explain. The boundary between the organic and the non-organic is vague. There are what we can call 'organic borderline cases' – cases where there is no fact of the matter as to whether or not we have a human organism – at the beginning and end of an organism's existence. In any particular case, there is no utterly precise point in time, after which we have a zygote, and before which we had only sperm and egg. Similarly, in each particular case, there is no utterly precise point in time after which we have a corpse and before which we have a living body. Given our macroscopic concerns, this vague boundary is barely discernible. But if we were looking at a complete description of the fundamental particles composing a human organism during, and slightly before and after, its existence, there would be no precise arrangement of particles which constituted the beginning and end of the human's existence; there would be borderline cases.

⁶ Slight qualification: if metaphysical vagueness is incoherent, then conceptual truths can rule out the common sense answer (and probably small blue tablism as well, given the vagueness of the concept of the concepts involved in this answer). Also, perhaps some non-obvious incoherences may constrain answers to the special phenomenal composition question, e.g. if actual infinities are impossible, then the thesis that macro-level consciousness requires an infinite number of ultimates will be inconsistent with realism about macro-level consciousness.

If the commonsense answer to the special phenomenal composition question is correct, it follows that there are 'phenomenal borderline cases', cases where there is no fact of the matter whether or not we have a conscious subject. If the existence of an organism is necessary and sufficient for the existence of a conscious subject, and if it's sometimes vague whether or not we have an organism, it follows that it's sometimes vague whether or not we have a conscious subject.

But for emergentist panpsychists, both micro and macro-level conscious subjects are metaphysically heavyweight entities: nature is carved up in and of itself into both micro and macro-level conscious subjects. If we couple this commitment with a commitment to phenomenal borderline cases, we reach the view that the world in and of itself is vague. Emergentist panpsychism, in conjunction with the commonsense answer to the special phenomenal composition question, entails metaphysical vagueness.

However, it is extremely plausible that vagueness is a semantic, rather than a metaphysical, phenomenon. To explain the fact that Bill is tall, we don't need to suppose that there is some fuzzy, indeterminate state of affairs of Bill's neither having nor lacking some quality; we need only suppose that the meaning of the predicate 'is tall' is indeterminate such that there is no fact of the matter as to whether or not it applies to someone with Bill's exact height. On such an explanation, it is language, rather than the world, which is indeterminate. Such semantic explanations of vagueness are extremely plausible.⁷ Indeed, Horgan and Potrč have powerfully argued that metaphysical vagueness is incoherent.⁸ Vagueness is a massive area, and I don't have space here to adequately defend the semantic theory of vagueness. My own judgement is that the attractiveness of semantic theories of vagueness, and the dubious intelligibility of metaphysical vagueness, give us very strong reason to want to avoid any metaphysical theory which is committed to metaphysical vagueness.⁹

If we are to avoid metaphysical vagueness, and if we are to take macro-level subjects to be heavyweight (as I have argued we must as panpsychists), then we cannot accept common sense's answer to the special phenomenal composition question.

What about empirical data? Perhaps a non-panpsychist might try to argue that the behaviour of a system can constitute evidence as to whether or not that system is conscious, but it is difficult to see how the panpsychist could claim this, given that she thinks that fundamental particles are conscious.

⁷ See for example, Dummett 1978: 260, Fine 1975, Russell 1923.

⁸ Horgan and Potrč 2008, Ch. 2.

⁹ It is worth noting that the phenomenon that philosophers call 'vagueness' is very different from the kind of indeterminacy postulated by standard interpretations of quantum physics.

And so, having exhausted all other possible sources of metaphysical truth, we find ourselves having to turn to cost-benefit analysis of theoretical virtues to find the answer to the special phenomenal composition question. The two most theoretically elegant answers to the special phenomenal composition question are

1. **Nihilism about phenomenal composition:** Fundamental particles never come together to form a macro-level conscious subject.
2. **Universalism about phenomenal composition:** All arrangements of fundamental particles result in their composing a macro-level conscious subject.

We have already ruled out nihilism. Thus, by a process of elimination, we end up with universalism.

Universalism entails that there is a conscious object formed of the particles composing my teeth, the particles composing your toe nails, and the particles composing Venus. Isn't this view wildly counter to common sense? Of course it is, but the commonsense view cannot be true, assuming reality in and of itself is not vague, and so we must look elsewhere for the truth. Having exhausted all other sources of metaphysical knowledge, we find we must turn to cost-benefit analysis, and this criterion of theory choice clearly favours universalism and nihilism. Assuming the falsity of nihilism, our only rational choice is universalism.¹⁰

Conclusion

Panpsychists should be emergentists, from which it follows that (i) they should stop worrying about the combination problem, (ii) they should be universalists about phenomenal composition.¹¹

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¹⁰ My argument for universalism about phenomenal composition is very similar to David Lewis's argument for universalism about composition (Lewis 1986: 212-13).

¹¹ I am very grateful to all the participants at the 'Mental as Fundamental' conference in Vienna for helpful comments.

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