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COMMENTS ON SEBASTIAN: "WHAT PANPSYCHISTS SHOULD REJECT: ON THE INCOMPATIBILITY OF PANPSYCHISM AND ORGANIZATIONAL INVARIANTISM"

In "What panpsychists should reject…", Miguel Sebastian presents an intriguing new challenge for panpsychism. Sebastian argues that panpsychism is in tension with the principle of organizational invariantism (OI), which says that two systems with the same fine grained functional structure will have or give rise to identical experiences. Maintaining OI (or a principle in its vicinity) requires not only a costly modification of panpsychism, it is also ultimately pointless as the motivation for OI is undermined anyway, according to the argument. The main motivation for OI is to rule out dancing, fading and suddenly disappearing qualia in scenarios that have been described by Chalmers, and the conjunction of panpsychism and OI ends up not ruling this out after all, argues Sebastian.

The argument has two parts. The first part consists in showing the price of OI for panpsychism: compatibility with OI requires panpsychists to say that human consciousness or macro-experience in general does not constitutively depend on the character of micro-experience. This seems to me entirely correct. However, there is already a lot of pressure on panpsychism to accept something like this because of the so-called combination problem, which is the main objection that panpsychism faces. In my view, it is an assumption panpsychists should be prepared to give up anyway, maybe even happily, as abandoning constitutive dependence seems to come with some advantages.

But then comes the second part of the argument, which aims to show that abandoning constitutive dependence is not sufficient to rule out dancing qualia anyway. I do not agree with this part of the argument. There are important disanalogies between the original dancing qualia scenario and the scenario as it could arise within the constraints of panpsychism, which enables one to consistently regard the new version of the scenario as less problematic than the original one.

Finally, I will have some comments on whether panpsychism in any way makes it easier to reject OI.

1 First part of the argument

Given panpsychism, OI entails a thesis not about where mentality, experience or consciousness is to be found, because panpsychism posits some form of mentality as ubiquitous.[1] Rather OI will entail a thesis about where we find *complex* mentality, macro-experience or consciousness of the kind that humans enjoy: whenever micro-experiential matter realizes certain higher level functions, then it will combine into or somehow result in human macro-experience. Sebastian argues to the effect that higher level functional properties should not be taken as the correlate of macro-experience or the trigger of mental combination – panpsychists should not be functionalists about mental combination.

The first part of the argument starts from observing that if higher level functional properties determine the precise character of macro-consciousness, then via having several different microphysical realizations, the same macro-consciousness will thereby also have different micro-experiential realizations. This means that the intrinsic micro-experiential character of the constituents of a macro-conscious system has nothing to do with determining the character of the macro-consciousness in question – the function alone determines it irrespective of micro-experiential realization. This is incompatible with panpsychism insofar as it "[...] maintains that consciousness constitutively depends on the intrinsic features of our fundamental particles," (Sebastian 2013: 6). If panpsychists remain committed to OI, they have to "maintain that the intrinsic features of the fundamental particles of the actual world provide merely enabling conditions for the experience" (Sebastian 2013: 7).

That macro-consciousness constitutively depends on micro-consciousness is the default assumption among panpsychists. Many are reluctant to give up constitutive dependence because they fear brute emergence is the only alternative. So I think Sebastian is right that OI comes at a price for panpsychism.

However, there is already a lot of pressure on the so-called constitutive version of panpsychism in view of the combination problem. The combination problem is the problem explaining *how* the micro-experiences that panpsychists posit as belonging to all matter can give rise to macro-experience. The answer can hardly be by straightforward constitution or realization, several philosophers have thought (James 1890/1981; Coleman 2012; Goff 2009;

[1] In this comment, I will focus panpsychism, and disregard panprotopsychism, because regrettably I somehow missed that the paper explicitly specified that it focused on panprotopsychism (p. 3, footnote 2). However, one could replace most of my mentions of "micro-experience" with "proto-experience" and so on, and in that way adapt my comments to panprotopsychism.

Seager 2010) for reasons largely analogous to well-known anti-physicalists arguments. There seems to be an explanatory gap between macro-consciousness and any configuration of micro-consciousness that should not be there if the connection were constitutive. It is conceivable that there is a physical and micro-experiential duplicate of our world, but where there is no macro-experience – just micro-conscious zombie twins (Goff 2009). And so on.

The objection from seeming incompatibility with OI is as such in good company. It highlights yet another way in which constitutive panpsychism does not seem to provide an advantage over physicalism when it comes to explaining the place of *our* particular kind of consciousness in nature.

Still, if the objection from incompatibility with OI is given weight, it does more than just add to the already significant pressure on constitutive panpsychism. It also puts an extra constraint on what the alternative to straightforward constitution has to be. OI requires a relatively radical emergentism, where it is not just new macro-subjects that emerge to jointly experience qualities that were once separately experienced by individual micro-subjects. OI entails, as Sebastian shows, that sets of qualitatively different micro-experiences can result in the same macro-experience, which means that not just new subjects, but also new qualities emerge. Coleman (2012) argues that constitutive quality combination is not a problem, only subject combination is, but we can see that this view must be incompatible with OI. Possibly, suggestions that involve special phenomenal bonding (Goff manuscript) are affected in the same way, insofar as it is thought of as an epistemically opaque variety of constitution.

As alternatives to all kinds of constitution panpsychists have suggested, for example, intra-mental emergence (Strawson 2006; Rosenberg 2004) or causation (myself). I find that abandoning constitution is not really such a steep price to pay as some take it to be. If causation or intra-mental emergence can be distinguished from metaphysically brute emergence, as it arguably can, then it buys panpsychism much more than just an escape from the combination problem and the objection from incompatibility with OI. It seems to avoid also an analogue of the exclusion problem for macro-mental causation, it avoids the problem of phenomenal richness or qualitative emergence (as posed by McGinn 2006), and it is also more adaptable to a world where all special sciences do not ontologically reduce to physics ("a dappled world," as Cartwright puts it), which is a live empirical possibility. Hence, I think panpsychists can happily accept the conclusion of the first part of Sebastian's argument.

2 The second part of the argument

According to Sebastian, this will only get panpsychism so far. He argues that non-constitutive panpsychists will still be "committed to the existence of dancing and fading qualia in some worlds that verify P – a sentence of all the physical truths in the actual world – but do not satisfy it and that this is as implausible in these worlds as it is in ours" (Sebastian 2013: 6). There is a possible P-verifying world where intrinsically experiential *strings* co-exist with non-experiential *strings*-. If function alone is not sufficient for consciousness, as in the original OI, but macro-experience must be enabled by an experiential realizer as well, then we could replace the pain correlate of a macro-subject with a functionally identical one that is realized by strings- and get a dancing qualia scenario, where pain drops in and out of consciousness without the subject noticing. This is supposed to demonstrate that the modified version of OI that is compatible with non-constitutive panpsychism is not sufficient to rule out the bizarre scenarios it was designed to rule out after all.

I see two main problems with this part of the argument. Firstly, it is arguable that the replacement of the pain correlate in this scenario is neither naturally nor metaphysically possible. It requires the interaction of substances with radically different intrinsic natures, and would be faced with classic interaction problems of substance dualism. Often such problems are dismissed on the background of a Humean conception of causation, where causal relations are brute and do not hold in virtue of anything. However, (Russellian) panpsychism is highly compatible with, and arguably even entails, the view that causal relations are entered into in virtue of the intrinsic properties of the relata, or that dispositions are categorically grounded. Panpsychists could argue that there is nothing in virtue of which mental and non-mental substances can enter into causal relations, or that causation involves the transference of powers and, non-mental things cannot carry mental powers, and vice versa. There are a number of such metaphysical considerations that should be relevant.

Chalmers writes:

> An opponent might try to focus on problems with the silicon/neuron interface, in which case the pure neural system and the pure silicon system might both be quite possible, but intermediate systems would be challenged. […] it is hard to see how this sort of point could support a deep, principled objection to the invariance principle. There will presumably be some systems between which gradual replacement is possible […]. (Chalmers 1996: 260)

This seems like a reasonable thing to say in the original dancing qualia scenario; that there is nothing that in principle rules out an interface between neurons that are realized by different physical materials. There is plenty of reason to object to the interaction of neurons that are realized by fundamentally different substances.

Secondly, if one is not moved by such objections, then in the stipulated case and the modified version of OI, accepting the consequence of suddenly disappearing qualia would be more plausible than in Chalmers' original thought example. With the modified OI, we have already granted that functional organization is not sufficient for macro-consciousness; realization of this function by intrinsically experiential matter is equally required. It seems least arbitrary to say that the function has to be 100% realized by experiential matter, as opposed to say 90%, or more than 50%. If the function must be realized 100% by experiential matter, then once we replace just one experientially realized neuron[2] with a non-experientially realized one, macro-consciousness will de-combine into individual micro-experiences belonging to the each neuron or particle/string.

Couldn't non-panpsychist opponents of OI then say the same thing? That consciousness should disappear entirely when we replace a single organic neuron (that is part of the core correlate of occurrent consciousness) with a silicone version? There would be much weaker basis for this claim. The requirement that the relevant functions must be experientially realized is based on independent considerations according to which the non-experiential giving rise to the experiential requires metaphysically problematic (or even impossible) brute emergence (this is part of the basic motivation for panpsychism). There is no analogous independent argument that non-organic physicalist matter giving rise to experience is metaphysically problematic (or impossible) if it is already accepted that that organic neurons can actually do so. And the natural possibility of it is precisely what the thought example is designed to help us evaluate. Already presupposing that 100% organic realization is required would be question-begging. If it were *already* granted on independent grounds that it were metaphysically or naturally impossible for non-organic matter to give rise to experience, then it would not seem as arbitrary that replacing one organic neuron with silicone makes all experience disappear, or that there would at least be some point of sudden disappearance.

[2] Not any neuron in the brain, presumably, but any neuron that actually takes part in occurrent macro-experience.

3 Does panpsychism make it easier to reject OI?

Sebastian shows that constitutive panpsychism must reject the ordinary version of OI. But if panpsychism of any kind is true, rejecting OI is at least a little bit less implausible than it would be otherwise. Here are some reasons why constitutive panpsychists should not worry as much about having to reject OI as non-panpsychists perhaps should.

One reason for rejecting OI as it is understood in the context of the fading/dancing qualia arguments, is that panpsychism of the kind that makes sense as a response to the conceivability argument and the other main anti-physicalist arguments is a kind of Russellian monism, and Russellian monism says that the physical (i.e., the physicSal or t-physical, as Strawson and Stoljar, respectively, would put it, or physical concepts/descriptions) is basically functional all the way down. There is no principled distinctions between functions and realizers, because all physical properties are functions or structures being realized by mental intrinsic natures. There are only physical realizers relatively speaking.

Silicone brains would thus not be functionally isomorphic to organic brains, if we accept the Russellian conception of the physical. Being silicone equals functioning in a certain way; being organic equals functioning in a different way. One might say that silicone and organic brains have different dispositions, but they could still be actually or manifestly functionally isomorphic across at least a certain time interval. But there must be some way in which being silicone as opposed to organic manifests in different interactions with the surroundings. Sending out different levels of infrared radiation, or having slightly different gravitational pull, or any such thing. So when we replace organic neurons with silicone ones, we do change the system's functional makeup.

It seems these are not differences in behavioral or computational function, though. It is odd to say that these non-behavioral functional differences are sufficient to account for subjects noticing gradual fading or change in qualia or other reactions that must be posited to avoid the implausible accounts of what happens in the replacement scenarios.

So if this version of OI would not let constitutive panpsychists rule out fading, dancing or suddenly disappearing qualia after all, is there any way in which panpsychism makes biting one of these bullets look a bit less unattractive?

There might be, at least when it comes to the bullet of suddenly disappearing qualia. If we accept that functional duplicates of brains, such as silicone brains, will not have consciousness

at all, then it entails that as we replace organic neurons with silicone neurons one by one, consciousness will either gradually fade out or suddenly disappear. Chalmers thinks the scenario of suddenly disappearing qualia is the most implausible of all:

> On this hypothesis, the replacement of a single neuron (leaving everything else constant) could be responsible for the vanishing of an entire field of conscious experience. This seems extremely implausible, if not entirely bizarre. If this were possible, there would be brute discontinuities in the laws of nature unlike those we find anywhere else. (Chalmers 1996: 255)

Now, given panpsychism, the discontinuity would not be as severe. As already mentioned, according to panpsychism, consciousness will never outright disappear, it will merely de-combine. The complex and unified experience of the brain will change into a number of simple experiences belonging to the individual neurons or maybe the individual particles of the brain. It is still a discontinuity insofar as it happens suddenly, and it is a big change compared to the very small change from the physical perspective of replacing a single neuron, but still, there is not as big of a difference or gap between complex and simple forms of consciousness as there is between any consciousness and no consciousness whatsoever. I am not sure how much weight should be put on this, if one could be moved by this alone to reject OI, but I think it is worth pointing out that there is at least this one disanalogy when we apply the fading qualia argument to panpsychism.

So it seems the prospects for combining the motivation for OI (without OI itself) with constitutive panpsychism are not good, although it looks ever so slightly better than it does for some other positions.

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