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From Emergence Theory to Panpsychism—A Philosophical Evaluation of Nancey Murphy's Non-reductive Physicalism

Mikael Leidenhag[1]

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Abstract In this article, I offer a critical evaluation of non-reductive physicalism as articulated and defended by Nancey Murphy. I argue that (A) the examples given by Murphy do not illustrate robust emergence and the philosophical idea of downward causation. (B) The thesis of multiple realizability is ontologically neutral, and so cannot support the idea of the causal efficacy of higher-level properties. (C) Supervenience is incompatible with strong emergence. I also argue for the fruitful relationship between emergence theory and panpsychism pertaining to the metaphysical issue of the origin and nature of mind.

Keywords Emergence theory · Nancey Murphy · Panpsychism · Causal powers

For centuries, theologians have construed humans in a dualist fashion according to which human persons are immaterial souls. That is, our very personality, what makes us who we are, is definable in terms of an immaterial category. Hence, when theologians have claimed that humans are created in the image and likeness of God, having a unique place in creation and the history of salvation, it has frequently been associated with the idea of a non-physical soul.

However, the idea that humans are composed of a material body and a separate, non-physical, soul has come to be challenged. Some have argued that it is biblically inadequate or at least not a prerequisite for Christian belief. Others have said that dualism leads to severe philosophical problems and that it should be abandoned given new discoveries in the natural sciences, especially neuroscience and the emerging picture of an intimate brain-mind correlation/dependency.

✉ Mikael Leidenhag
mikael.leidenhag@teol.uu.se

[1] Uppsala University, Uppsala, Sweden

Christian philosopher Nancey Murphy has called for the abandonment of dualist ontology. However, rather than rejecting soul-talk completely in favor of a reductionist framework, Murphy has sought to integrate the Christian notion of a soul, and the capacities often associated with a soul, within the larger whole of physicalism (whereby all existing things are in some sense physical).

The aim of this paper is to critically evaluate Murphy's theological and philosophical contribution. I will argue for the following conclusions: (1) Murphy's examples, the multiple realizability thesis, and use of supervenience theory all fail to ground higher-level properties in the framework of emergence. (2) Strong emergence seems to imply a weaker form of panpsychism (the idea that physical 'stuff' also possess a mental or an experiential component). Here, I also argue against the many philosophers who have taken emergence theory and panpsychism to be competing explanations for consciousness. I will instead suggest that panpsychism in conjunction with emergence theory carries certain metaphysical benefits with regard to the philosophical issues of the origin and nature of mind.

First, I will describe Murphy's non-reductive version of physicalism. Following the description of Murphy's proposal, I will outline three critiques: (A) the examples given by Murphy do not illustrate robust emergence and the philosophical idea of downward causation. (B) The thesis of multiple realizability is ontologically neutral and so cannot support the idea of the causal efficacy of higher-level properties. (C) Supervenience is incompatible with robust emergence.

In the second part of the paper, I will consider another approach; namely panpsychism. Although it has its share of problems, combining a form of weak emergence and panpsychism gives greater potential to Murphy's project.

Nancey Murphy's Non-Reductive Physicalism

Many believers have expressed fear over the idea of denying an immaterial soul. That by denying the existence of the soul we are effectively denying what makes us persons; 'how can I be I if I have no soul', some students of Murphy have asked (Murphy and Brown 2007:1). According to Murphy, this fear is ungrounded. Neurobiology does indeed challenge the idea of an immaterial 'I', acting independently of physical processes, which has been the defining idea of Cartesian dualism. However, the rejection of an immaterial soul does not necessarily entail a nothing-but-materialism. The overall message of science, according to Murphy, is that we are physical creatures through and through. Today, all of the capabilities that we once attributed to the soul are 'now being fruitfully studied as brain processes—or, more accurately, I should say processes involving the brain…' (Murphy 2006: 56). Nevertheless, certain higher-level properties cannot be reduced to some physical base-level. Murphy sees these as emergent levels, acting through downward causation.

Non-reductive physicalism refers, therefore, to the constellation of two positions: 'the acceptance of ontological reductionism, but the rejection of causal reductionism and reductive materialism' (Murphy 1998: 127–148). The non-reductive physicalist, says Murphy, does not deny these higher-level properties; instead he/she seeks to show how these capacities/properties are ontologically dependent on the body.

Causal anti-reductionism is, according to Murphy, of essential importance for developing a robust account of personhood:

> The question of *causal* reduction seems to be the one that matters for retaining our traditional conceptions of personhood… First, if mental events can be reduced to brain events, and the brain events are governed by the laws of neurology (and ultimately by the laws of physics), then in what sense can we say that humans have free will?… Second, if mental events are simply the product of neurological causes, then what sense can we make of *reasons*? (Ibid: 131).

If causal reductionism turns out to be true, that we have neither free will nor the capacity for reasoning, then our intellectual life, and with it our personhood, no longer makes sense. Following Murphy, we can say that there is a huge price to pay for this kind of reductionism.

Murphy holds to a general form of physicalism with regard to mental states, namely that all mental states are, minimally speaking, *related* to brain events. However, this relatedness does not entail determinism as mental states are *multiply realizable*, meaning that a mental or psychological state can be realized by many distinct physical kinds, or brain states. That is if '*S* supervenes on *B* (given circumstance *c*), then something's being *B* entails its being *S*, but it is being *S* does not entail its being *B*' (Ibid: 135). *S*, according to Murphy, is therefore multiply realizable; thus higher-level happenings are non-reducible.

Murphy exemplifies this relationship of supervenience with St. Francis. Basically, the higher-level property designated by the concept of 'goodness' '…supervenes on a collection of descriptions of Francis's character traits and actions. Or, to say the same thing, these character traits and actions constitute Francis's goodness'. But the concept of 'goodness' is multiply realizable, meaning that 'there are many life patterns different from Francis's that also constitutes one a good person' (Ibid). And so the concept or property of goodness cannot be reduced to any one physical state. It does not matter how much information we have of the physical base-level, a reduction of higher-level description to the lower-level base is not possible given the multiple ways higher-level properties can be realized or actualized.

Murphy also argues that reductionism, and specifically causal reductionism, should be abandoned given that there is a direction of causal influence from higher-levels to lower-levels. Humans, on this emergentist view, '…are self-directed organisms whose behavior exerts downward causal control over their own neural systems' (Murphy 2006: 73). Consequently, bottom-up causation can only be a part of the story. To fully capture the complexity of reality and of humans, we need to invoke what is often referred to as 'downward causation', whereby emergent phenomenon *Y* exerts causal influence on its constituent parts.

Murphy provides several examples of things that exhibit the kind of ontological and causal newness characteristic of emergence theory: a paper plane, a watch, the goal-directedness of humans and ability for language, and the capability of animals to learn through trial and error (i.e., mammalian flexibility). I will not explain these examples in detail here. Instead, I will in the next section investigate if these examples of emergence really do support *strong* emergence.

Critically Examining Murphy's Examples: the Watch and the Paper Plane

I have so far provided a brief description of Murphy's view. I also suggested why emergence theory, and in particular the (controversial) notion of downward causation, plays an important part in developing a version of physicalism that can (a) bypass the problems associated with reductionism and (b) provide conceptual resources for differentiating between non-reductive physicalism and reductive physicalism. Now we must ask: do the examples of emergence that Murphy pointed at help in developing a genuine alternative to reductive physicalism? We must keep in mind here that what we are looking for are *new causal powers*.

For the sake of brevity, I will focus on the first two examples (the watch and the paper plane), but it should be stated that the same logic can be applied to all Murphy's examples. Murphy suggests that both a watch and a paper plane have causal capacities that cannot be accounted for by merely looking at their specific constituting parts. A standard watch is typically constructed in a way such that the behavior of the watch is determined by its parts. This kind of watch is fully describable by and reducible to its physical parts. However, Murphy owns another type watch:

> I have one that re-sets itself every so often by picking up signals from orbiting satellites. It has been designed specifically so that its behavior is subject to readjustment by causal factors *from outside* the system (Ibid: 77).

The same is true, says Murphy, if we look at a paper plane. Its parts are the cellulose and other molecules making up the paper. As Murphy points out, 'These parts only serve the function of providing mass and rigidity' (Ibid). If we look at the behavior of the plane, we will also see that it is governed by two environmental factors, namely the hand that throws it and the air currents that will affect its flight path. Thus, the plane seems to possess a causal capacity, that of being able to fly, that is neither derivable from, nor entailed by its parts. The environment is causally relevant here, indeed any version of physical explanation of the plain that does not take into account these mentioned factors will without a doubt fail.

The above description of Murphy's argument, when looked at more closely, does not seem to support the idea of new causal powers. Firstly, the idea that there is a causal influence from outside of phenomenon X does not entail that X itself possesses irreducible causal powers. That is, even if the behavior of the watch or the plane receives causal input from their respective environment (be it a satellite or a playful human), this should not make us believe that these objects have causal capacities that somehow defy physical explanation. Moreover, I fail to see how this is *not* consistent with a reductive explanation. I think a physicalist with a more reductionist leaning (like David Papineau, Daniel Dennet, or Jaegwon Kim) would be comfortable with the fact that we might have to venture outside the watch or the plane itself in order to explain changes in behavior—and here comes the important part—*as long as we only employ physical categories in our explanations*.

Murphy suggests that in the causal explanation of the watch and the plane there are higher-level properties involved. She states, for example, that aerodynamics exhibit downward causal influence on, in this case, a paper plane. The law of aerodynamics, while still being a part of physics, is (according to Murphy) an emergent level.

Additionally, Murphy might suggest that the human throwing the plane possesses irreducible causal powers that are not exhaustively explainable by the ontology or vocabulary of physics.

There are at least two problems with this suggestion: (a) Murphy's initial aim was to show that the causal capacities of the watch/plane are safe from reductionism. However, to invoke the idea of causal influence from a higher-level property/object/phenomena outside of *X* fails to give *X* itself new causal powers. Something else is simply acting upon *X*, *X* is not acting in a new way. (b) In arguing for the presence of new causal powers in the watch and the plane, Murphy seems to presuppose the truth of emergence. The problem is this: Murphy assumes the emergent nature of *Y* (the satellite transmission or the playful human) and uses this to argue for the emergent nature of *X*. Murphy is in this way presupposing, rather than truly arguing for, a robust emergence theory. To put it another way, Murphy has merely moved the issue of emergence to another phenomenon.

So far, we have no good reason to suppose that there is anything beyond micro-to-micro physical causation going on, or that that these 'new' causal powers cannot be exhaustively explained in terms of the properties, parts, and relations present at the subvenient level.

Before dismissing Murphy's proposal, we should consider the issue of human causality and whether free will and intentionality can be considered the types of emergent properties that we are looking for. In the next section, we will consider the notion of multiple realizability and the part it plays in Murphy's project when it comes to safeguarding higher-level ontologies and free will of human creatures.

Emergence, Multiple Realizability, and New Causal Powers

Before outlining Murphy's view on the irreducible causal efficacy of humans, manifested in reason-giving and moral responsibility, we should consider her view on emergence more closely. When she writes about new causal powers, she explicitly rejects what might be called 'combinatorial emergence'. She writes:

> So we conclude that what the emergentist needs to show is that as we go up the hierarchy of complex systems we find entities that exhibit new causal powers (or perhaps better, participate in new causal processes or fulfill new causal roles) that cannot be reduced to the *combined effects* of lower-level causal processes (Murphy and Brown 2007: 79–80).

Combinatorial emergence, i.e., the combined effects of the physical constituents, is not enough to save human causality from the threat of reductionism and epiphenomenalism. Therefore, (referring to Robert Van Gulick's view on emergence) Murphy suggests that in order to defeat causal reductionism we also need a *metaphysical* conception of emergent properties. An epistemological conception will not suffice:

> We know of cases where we can neither predict outcomes nor explain known facts (explain in the sense 'retrodiction' from laws and initial conditions) simply because the level of complexity or the need for fine-scale measurements goes

> beyond human capacities. If we attempt to evade this problem by invoking an omniscient predictor, we are unable to *apply* the criterion because we have no way to settle disputes about what the omniscient one would or would not know. An ontological or metaphysical definition, then, is desirable (Ibid: 79).

That is, non-derivability or unpredictability cannot be explained by the limited cognitive resources on behalf of humans.[1] It is the *ontology* of emergent properties that makes any attempt to reductively explain higher-level phenomena metaphysically impossible, even under the conditions of omniscience.[2] Rather than combinatorial emergence, Murphy seems to endorse *sui generis* emergence, meaning emergent properties are ontologically unique. This strong emergence, therefore, suggests that emergent phenomena are of an entirely different kind when compared to their lower-level base from which they arose.[3]

Moreover, like some other emergence proponents,[4] Murphy subscribes to the idea that causal efficacy is a necessary component for saying that emergent properties enjoy positive ontological status, that they actually exist. She writes that 'having causal powers seems to be the best *criterion* we have for the existence of a distinct *property*' (Murphy and Brown 2007: 79).

Murphy has argued that strong emergence, or metaphysical emergence, can be applied on mental states. Emergence provides an ontological opening for ascribing a causal role to mental states, whilst maintaining that mental states have a sufficient[5] physical origin. Murphy argues that once mental states have emerged they are irreducible for several reasons. Most notably, mental states express and carry information. The property of being an information bearer is seen as irreducible by Murphy because it is a contextual phenomenon.

Murphy asks us to consider a meta coil in a thermostat whose function it is to measure the temperature of the room. According to Murphy, the reductionist view of the thermostat (being the idea that all the real causal work is done at the physical level) is inadequate, given that we have to take into account the *broader context*; we have to ask *why* the heat comes on at, for example, 65 degrees rather than some other temperature. We also have to search for the *reason* why it is being heated (which

[1] A naturalist who seems to hold to an epistemological conception of emergence is Colin McGinn who argues for 'agnostic naturalism' (see McGinn 1993).

[2] Those who hold to an ontological view of emergent phenomena include, among others, Philip Clayton (2004), Arthur Peacocke (2004) and Stuart Kauffman (2008).

[3] A similar distinction is made by Timothy O'Connor and Hon Yu Wong. They distinguish between structural properties and non-structural properties. A structural property S is defined by the relation of the parts of S. A non-structural property, on the other hand, does not even partly consist in the instantiation of distinct properties by the entities *or* its parts. O'Connor and Wong maintain that robust ontological emergence is dependent on a view of properties as being non-structural. See O'Connor and Wong (2005).

[4] Peacocke writes 'For *to be real is to have causal powers*', (Peacocke 2006: 262). Clayton argues in the following way about the importance of causal efficacy: 'one cannot make sense of mental causation except from the standpoint of strong emergence. If the strong emergence interpretation of mental causes is not correct, one should be an epiphenomenalist about mind, that is, one should hold that mind has no effect on the world', (Clayton 2004:108). Similar to Clayton, Mark A. Bedau writes that 'Emergence is interesting in part because of emergent causal powers. Emergent phenomena without causal powers would be mere epiphenomena', (Bedau 2008: 175).

[5] By 'sufficient' Murphy probably means that the physical base structure is enough to explain M such that there is no need to invoke a non-physical category to explain M.

might be to promote the growing of plants). We are dealing with '*contextualized* physical states'. Murphy argues that we have to understand a mental state (being an information bearer) in the same way; that by being interconnected within a broader context of causal factors, any explanation referring only to brain states is inadequate. Thus, 'Mental events are not reducible to brain events, because mental events are largely constituted by relations to actions in the environment' (Ibid: 209).[6] The multiple factors in any given environment, causing a resistance to reductionist explanations, also relates to Murphy's view of the multiple realizability of mental states. Murphy suggests that by holding to a 1–1 (lower-level to higher-level) correlation, as opposed to her many-1 (lower-level context to higher-level) correspondence, the reductionist will fail in fully mapping out the physical ←→ mental causal relationship.

Murphy's way of reasoning about the non-reducibility and causal efficacy with regard to mental states (as described above) suffers from the same problems as her argument that the behavior of the watch and the paper plane is causally irreducible. It is, ontologically speaking, not enough to say that M is irreducible in virtue of standing in a relation to environments E1, E2, E3 (…) for us to make the ontological claim that M has irreducible causal powers, or that M exhibits downward causal influence on its physical parts.

At this point we can start to see the problems with using the multiple realizability thesis as an argument for the existence of higher-level ontologies. This thesis boils down to an epistemological claim pertaining to the problem of capturing (reducing, deducing, predicting, and so forth) the relationship between higher-level happenings and the physical base structure. However, there is quite a leap to move from an epistemological claim, about what we can and cannot know about the higher-lower relationship, to an ontological claim about the emergence of new causal powers. The thesis of multiple realizability certainly seems to undermine an eliminativist version of physicalism (a physicalist who argues that we can replace higher-level explanations with physical explanations), but it does not *entail* the realness of mental efficacy. Indeed, the reductionist slogan is still an option; 'all the real causal work is being done at the microphysical level', even though there are *currently* no base-level explanations available.

Murphy's thesis of multiple realizability may give us *explanatory* anti-reductionism, but cannot justify the kind of *causal* anti-reductionism that Murphy needs as a non-reductive physicalist. Explanatory irreducibility seems to be neutral with regard to ontology. The reason that certain descriptions are non-reducible might be explained, for example, pragmatically; that is, we talk in a certain way about physical and abstract things (invoking higher-level language), but this way of talking does not necessitate any ontological commitments on the part of the speakers.[7]

Murphy, so far, seems to be conflating explanatory issues with ontological issues. In order for us to be justified in deriving ontological conclusions from explanatory anti-reductionism, she must provide us with additional arguments. If there is a standoff

[6] Murphy's idea regarding the notion of mind being constituted by its environment is related to 'the extended mind'thesis. See, in particular, Andy Clark's and David Chalmers' seminal paper on extended mind, (Clark and Chalmers 1998).

[7] For an interesting linguistic treatment of naturalism, see Price (2011).

between causal reductionism and causal anti-reductionism at this point, the thesis of multiple realizability *alone* will not settle the dispute.

The Conflict Between Supervenience and Strong Emergence

As argued above, what is lacking in Murphy's proposal is a reason to ascribe mentality with ontological independence/autonomy. This is where strong emergence comes in. However, I suggest that the kind of emergence theory that Murphy advocates causes a problem for a physicalist ontology as it undermines supervenience.

Recall my earlier distinction between *combinatorial* and *sui generis* emergence. Combinatorial emergence, according to Murphy, is too weak as it cannot give an ontological account for new causal powers. Murphy's view of 'newness' is that there is a new type of causal power that cannot be identified in terms of the combined effect of the physical constituents. Consequently, Murphy provides us with a view of emergent properties according to which emergents are *brute facts* of reality (exhibiting ontological novelty) that we have no way of explaining.

Recall also that Murphy's view of unexplainability/unpredictability is ontological, not merely epistemic. Murphy's ambition to find a way of giving mental states ontological independence is both understandable and admirable. If a robust account of emergence theory is successful then we can finally fend off causal reductionism and the creeping threat of epiphenomenalism.

Nevertheless, to consider emergent properties as brute, unexplainable, and ontologically independent (as in strong emergence theory) is problematic for the following reason: to hold emergents as *ontologically* unexplainable invites agnosticism concerning the relationship between the higher-level property and the subvenient base. Consequently, supervenience is undermined given that we can no longer maintain that these higher-level properties are *physically* realized and that they in fact supervene on physical states. That is, given the agnosticism produced by the epistemology of strong emergence, we can no longer be sure that higher-level phenomena emerged from (or supervenes upon) a physical, rather than a non-physical, base structure. However, if we cannot be sure that emergent properties solely have a physical base structure, then physicalism *itself* is undermined. We need to be able to affirm some causal correspondence, or a form of supervenience, between emergent X and the physical base-level. If we do not, as seems to be the case in a robust/strong emergence theory, then we depart from physicalism as such.[8]

The dilemma for Murphy, therefore, runs as follows: Supervenience (even when coupled with the notion of *multiple realizability*) is too weak to establish a higher-level ontology. In addition, strong emergence, a view that can defeat causal reductionism on ontological grounds, seems to undermine supervenience and hence ontological physicalism. However, both causal irreducibility (strong emergence) and ontological dependence (supervenience) seem essential for the project of non-reductive physicalism. There is no easy solution to this problem.

However, the discussion concerning the possibilities of Murphy's project should not stop here. I will argue that Murphy offers some ontological resources for entertaining

[8] See Post (1987: 159–208).

another perspective on the body-mind problem, namely *panpsychism*. At first glance, this might seem like a somewhat puzzling proposal as emergent physicalism and panpsychism have often been taken to be two *competing* and mutually exclusive ontologies. Hopefully, the following discussion will show that panpsychism is a viable option and that, in fact, it is a helpful direction for Murphy.

The Panpsychist Opening in Murphy's Physicalism

Panpsychism, throughout its history, is a position that has been met with skepticism. Some of the most prominent philosophers have described panpsychism as a view with no anchor in reality: biological naturalist John Searle claims that panpsychism is an 'absurd view' (Searle 1997), agnostic naturalist Colin McGinn (who I will return to shortly) argues that panpsychism is a 'complete myth' (McGinn 2006: 93), and emergent naturalist Philip Clayton has critiqued panpsychism for 'making a robustly metaphysical move…' which 'cuts it off from the evidential considerations that science could otherwise provide' (Clayton 2004: 130). However, it is not only naturalists who have found panpsychism to be an untenable position. The substance dualist J.P. Moreland has suggested that panpsychism amounts to nothing more than a *label*; it does not come close to being an *explanation* for the existence of consciousness (Moreland 2009: 39).[9]

Despite these negative remarks, there has been an increase in interest in the panpsychist and panexperientialist frameworks for dealing with the hard problem of consciousness. The 'naturalistic dualist' David Chalmers has argued that we need to posit fundamental laws in order to explain consciousness and the phenomenological experience that comes with it. Thus, Chalmers writes, '…experience is fundamental, it does not qualify as a *physical* property…' (Chalmers 1996: 128). Similarly, Gregg Rosenberg's book *A Place for Consciousness* argues for developing a theory of mind in relation to *panexperientialism*. This view, argues Rosenberg, is not only logically possible, it is probable (Rosenberg 2004: 91–113). Here, one should also mention Thomas Nagel's controversial book *Mind and Cosmos—why the Materialist Neo-Darwinian Conception of Nature is Almost Certainly False*, in which he argued against naturalist explanations of consciousness, being either via strict psychophysical reductionism or emergence theory (both being committed to a form of causal explanation). Instead, Nagel opted for a 'postmaterialist theory' of consciousness, suggesting that evolution, if it indeed brought about consciousness, cannot be 'just a physical process' (Nagel 2012: 46). The explanation of consciousness, as Nagel puts it, 'may have to be something more than physical all the way down' (Ibid).

Lastly, and this is an important work that indirectly shows the relevance of panpsychism for Murphy's emergent physicalism, we have Galen Strawson's now infamous article 'Realistic Monism: Why Physicalism entails Panpsychism' (Strawson 2006a: 3–31). In this article, Strawson sought to show how physicalism,[10] if it is to be a coherent theory, is committed to a form of panpsychism. Standard

[9] Moreland, in (2008: 114–134), critiques David Skrbina's form of panpsychism for being philosophically inadequate, and suggests that his own dualism is superior to a panpsychist conception of the consciousness.
[10] Strawson received some significant critique for his definition of physicalism.

physicalism (what Strawson refers to as 'physicSalism') fails as an adequate explanation of consciousness as it cannot explain how experiential phenomena can arise from non-experiential phenomena.[11] The logic of this argument is that you can only get like from like, and that strong emergence turns mental properties into miraculous phenomena, in that they simply pop into existence for no apparent reason.

However, as Colin McGinn correctly pointed out in a response to Strawson's article, physicalism *alone* does not entail panpsyhcism. It is when physicalism is combined with emergence theory that one could argue for a panpsychist entailment (McGinn 2006: 92). Strawson, I suggest, does *not* seem concerned with how a physical fact and a mental fact can be one and the same, which is a physicalist's concern. Rather, he seems to concentrate on the metaphysical problem about how experiential facts can arise, or emerge, from non-experiential facts, and this sounds a lot like the metaphysics of emergence, not generic physicalism.

I suggest that we have before us several claims that should make the Murphy-type emergentist consider panpsychism: The rejection of combinatorial emergence in favor of *sui generis* emergence, unexplainability (or bruteness) of emergent properties, and the intrinsic goal-directedness of lower level biological entities, such as single-celled organisms (Murphy 2006: 85–87).[12] Adding these three claims of Murphy together suggests that mind is not a *resultant* property,[13] but a *basic* property of reality.[14] Thus, Murphy's view is open to panpsychism.

A possible reconstrual of Murphy's view, incorporating panpsychism, could run as follows: The coming into being of full-blown human consciousness (or macro-consciousness) depends on the potentialities of the micro-subjects to form into wholes. Hence, when the interrelatedness between micro-subjects has reached a specific threshold (or a certain level of complexity) macro-consciousness will be instantiated. In this way, consciousness can still be seen as a higher-level phenomenon that is related to the specific complexity of a particular individual. Nevertheless, this approach rejects strong emergence (and the notion of ontological novelty) as mind-like properties (such as

[11] What Strawson opts for instead is a form of monism, or a 'dual-aspect view', whereby experiential and non-experiential properties 'exist in such a way that neither can be said to be based in or realized by or in any way asymmetrically dependent on the other…' (Strawson 2006b: 241–246).

[12] For Murphy, goal-directedness is not confined to higher-level organisms. Indeed, 'even at the level of single-celled organisms we find a degree of self-direction' (Murphy 2006: 86).

[13] For an explanation of resultant properties, see Kim (2010: 8–49).

[14] Other emergence theorists seem to hold to a view of emergent properties as basic. Timothy O'Connor, for example, writes that 'The basic properties and relations of our world will be those properties whose instantiation does not even partly consists in the instantiation of distinct properties by the entity or its parts. *It is the thesis of emergentism that some basic properties are had by composite individuals*', (O'Connor and Wong 2005: 665). Philip Clayton and Stuart Kauffman have suggested that agency is present even on the molecular level. However, they do not mean that we have full-blown consciousness on the molecular level, only that molecular agents meet five minimal physical conditions (reproduction, work cycles, boundaries for reproducing *individuals*, self-propagating work, and constrain construction) and choice and action that have evolved to respond to food or poison, which would justify the use of agential language in biological discourses. Hence, ontological emergence is implied by the presence of agency at the molecular level (see Kauffman and Clayton 2006: 501–521). This way of arguing for agency in the natural order bears some resemblance to the panpsychist D.S. Clarke who argues that mentality can 'be attributed to all natural forms having an appropriate level of unified structural organization that maintains themselves over a period of time against their environments' (see Clarke 2003: 12). This idea of enduring individuals or subjects possessing minds is also evident in the writings of panexperientialist David Ray Griffin (see Griffin 2000: 137–178; Griffin 2001: 94–128).

experience) are still present at the fundamental level. Consciousness, as a higher-order feature, is not ontologically novel, but is present at the lower level, albeit to a lesser degree. In some ways, my proposal comes close to David Ray Griffin's theory of *compound individuals*. On Griffin's panexperientialist account, the physical is imbued with an experiential aspect. The panexperientialist rejects the strong emergentist thesis of mind, or experience, arising from purely physical phenomena. Nevertheless, it allows for a form of weak emergence, given that 'occasions of experience can come together to form spatiotemporal societies', and so higher-level occasions of experience (Griffin 2001: 120). In these compound individuals, then, 'there *are* experiences of a higher and more inclusive type that give the society as a whole an experiential unity', the kind of unity encountered in robust consciousness (Griffin 1998: 186). Thus, in a sense, consciousness emerges, but its emergence or instantiation is made possible by the experiential character of the physical constituents.[15]

By ascribing mind-potentialities (in a panpsychist fashion) at the subvenient level, Murphy can avoid the agnosticism in her current proposal, and therefore bridge the gap between lower and higher-levels of reality. Now, we can also see more clearly the potential relationship between panpsychism and weak emergentism that was suggested above. They are not mutually exclusive, they might even invite each other. Panpsychism in conjunction with weak emergence provides an interesting explanatory framework for the hard problem of consciousness.

Further Considerations for the Panpsychism/Emergence Combination Thesis

A panpsychist reading of emergence theory (as exemplified by my critique and solution for Murphy) will have its benefits, but also its costs. Panpsychism plus weak emergence carries certain advantages, both metaphysically and epistemologically. If we take mind-like properties as fundamental properties of reality, then the emergence of consciousness does not appear miraculous anymore, and we have no longer any reason to consider the fact of consciousness as an ontological anomaly that somehow interrupts the 'smoothness of the evolutionary process' (to paraphrase William James). This shows the metaphysical strength of P+E (panpsychism+emergence).

One critique I aimed at Murphy's emergent physicalism was that she is unable to provide an explanation for how exclusively physical states can give rise to mind-states, or how mind can be physically realized from the subvenient level. That is, a Murphy-type emergentist is required to provide some kind of systematic explanation of how we get M-states from P-states, but is unable to do so given that emergent properties are essentially unexplainable. One could argue that the panpsychist is not required to give this kind of explanation; hence, panpsychism has the upper hand on emergent physicalism.

[15] My proposal comes close to but should not be equated with Griffin's panexperientialism. Griffin's formulation of panexperientialism is helpful for outlining the fundamentality of the mental. I am largely sympathetic to Griffin's approach. Yet, I am reluctant to label my own approach 'panexperientialism' as I think that Griffin's approach is too focused on experience. I suggest that the subjective dimension that Griffin seeks to retain and protect from reductionism, might include a variety of phenomenal properties, or aspects of qualia (subjective experiences).

The notion that panpsychism is not in the explanation-business (thus it does not share the same epistemic burden as other body-mind ontologies) seems to be expressed by panpsychists D.S. Clarke and David Skrbina. The latter writes the following:

> Panpsychism is a meta-theory of mind. It is a *statement* about theories of mind, not a theory in itself. It only claims that all things (however defined), possess some mind-like quality; it says nothing, per se, about the nature of that mind, nor the specific relationship between mind and matter (Skrbina 2005: 249, my emphasis).

Consequently, in virtue of being only a *statement* about theories of mind, it does not have to produce an explanation of mind.

Clarke argues that panpsychism is best construed as a thesis of metaphysics, given that analogical inference (the most common explanatory strategy employed by panpsychists) can never fulfill the criteria of independent confirmation (Clarke 2003: 15). To put it another way, a panpsychist cannot (and does not need to) absolutely confirm that 'mind' at the lower-level operates in a way analogical to high-level (human) minds. One could therefore say that panpsychism is not trying to propose an empirical hypothesis and so it is not required to produce a systematic explanation. Clarke also writes concerning the expectation that one must explain consciousness:

> Mentality, like matter, simply is a fundamental feature of what is, and all questions about its origins must therefore be dismissed as meaningless (Ibid: 120).

I do not think that this attempt to bypass the issue of explanation is very successful. However, I sympathize with Clarke's point that the pursuit of explanation must stop somewhere, whether in be in brute matter, mind, or the mind of God. Nonetheless, a part of this panpsychist metaphysical thesis of mind is that micro-consciousness (or true individuals) can and do form into complex wholes, giving rise to macro-subjects. It would indeed be epistemically irresponsible to leave such a perplexing metaphysical issue unanswered. Regardless of whether we choose to understand panpsychism as a metaphysical or an empirical thesis, some explanation must be offered. Therefore, I suggest that we are justified in asking for more when it comes to the panpsychist solution to the problem of consciousness.

What I call the 'perplexing metaphysical issue' of micro-to-macro transition is a reference to what some have stated as 'the combination problem' of panpsychism and panexperientialism (Seager 1995: 272–288). This has by some philosophers been taken to constitute the final defeater of panpsychism. However, I suggest that emergence theory faces a similar problem, namely the ontological gap in emergence theory and the problem of explaining mind, given that the ultimate category of reality is mindless matter. But panpsychism, unlike emergence theory, might have the ontological resources for responding to the combination issue in an adequate way, as mind is taken to exist at the fundamental level of reality.

Panpsychism, according to Philip Goff, is not a very economical explanation given that in order to explain the micro-to-macro transition it would have us commit to a number of counterintuitive ideas: hidden aspects of microexperience, unknown phenomenal bonding relations, extra laws of nature, etc. Goff argues that 'In all these cases there is a parallel, non-panpsychist strategy which is more economical and more plausible' (Goff 2009: 310). The

basic thrust of Goff's epistemic argument is that panpsychism is an explanatorily costly choice in the philosophy of mind and that there are less costly alternatives available.

However, even if we concede Goff's argument, it is still metaphysically possible for micro-mentality to combine into macro-mentality, even if it is hard to formulate this into a systematic explanation. I suggest that David Skrbina is correct when he writes: 'The combination problem is significant but not insurmountable; certainly, it is less daunting than articulating a comprehensible theory of radical emergence of mind from utterly mindless matter.' (Skrbina 2006: 156). Panpsychism is still, metaphysically speaking, an interesting and promising alternative in the debate pertaining to the nature and origin of mind.

Concluding Remarks

To summarize, I have called into question the adequacy of non-reductive physicalism as construed by Nancey Murphy. Murphy should be admired for her attempt to defend some of the (often assumed) higher-level properties. Firstly, I argued that the thesis of multiple realizability is too weak to ontologically ground genuine novelty at a higher level. Secondly, I argued that her commitment to supervenience seems to undermine strong emergence and vice versa. Thus, higher-level causal capacities might still be subjected to reductionist explanations. Moreover, the epistemological agnosticism entailed by Murphy's view of emergent properties (the idea that higher-level phenomena are unpredictable and unexplainable) undermines the ontology of emergence. Therefore, supervenience is undermined given that we can no longer assert that higher-level properties are *physically* realized. This epistemology of emergence leads us to ontological agnosticism, not the kind of robust emergence that Murphy is advocating.

In order to help Murphy with the problem of accounting for higher-level properties, I have suggested that there is a 'panpsychist opening' in Murphy's emergentism. According to a panpsychist understanding of Murphy's view, mind-like properties (such as experience or qualia) are not just byproducts of complex configuration between the physical constituents. Rather, such properties might be considered as fundamental, on par with physical properties.

My conclusion with regard to the benefits of a P + E view, compared to just an E view, has been modest: P + E, even though it faces a significant epistemological problem, does at least show the metaphysical possibility of mental states arising from physical states. Emergentism on its own has been shown to have no such possibility. In this way, a weaker version of Murphy's emergentist account of higher-level phenomena, in conjunction with a panpsychist understanding, proves fruitful when discussing the metaphysical issue of the origin and nature of mind. My hope is, therefore, that emergence theory and panpsychism should not be thought of as two diametrically opposing views. Indeed, emergence theory seems to invite a panpsychist understanding of reality.

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