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The Case for Phenomenal Properties

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Introduction

Powers (i.e. the causal tendencies of things) can be simple or complex. Very roughly, a power is (maximally) simple if it has just one kind of manifestation; if it has more than one kind of manifestation, it is complex. However, there are different ways in which a power can be complex. A rubber band, for instance, has both the power to keep its original length after being expanded and the power to break if exposed to cold conditions. These two are the two faces of the power or disposition[1] of elasticity, and we may consider elasticity to be a complex power. Such complexity is not limited to physical properties, however. Some of our phenomenal states, those characterized by "what it is like" to have them (cf. Nagel 1974), are frequently complex ones. A bittersweet experience is one in which one seems to feel joy and sadness at the very same time, and these are two different emotional conditions. Another example is the taste of some wine: a white one may taste green apples and hay. In such a case, we have a complex taste, with two phenomenal properties belonging to the same sensory modality, perhaps by virtue of impinging on different receptors. (cf. Skrzypulec 2021) Complexity is tantamount to a phenomenal state being composed by, or resulting from, two or more phenomenally simple components. Is this the complexity proper of mereology? Inasmuch as there is nothing strictly spatial involved, it seems it is not for, as we will see, the concept of part, at the heart of mereology, requires spatiality. However, it seems that the components of these complex states or properties are "in" the state, are parts of it, such that the nature of the complex state would result modified without them. So, in this sense, they are mereological parts. Possibly, one issue here is that experiences are spatial in a very metaphorical sense, thus undermining them for being mereological entities. However, pain is an experience that has a spatial phenomenology.

The cases of complex experiences lie at the crossroad of two topics: the metaphysics of powers, on the one side, and mereology – that is, the theory

of parts and wholes – on the other. My interest in this chapter is to investigate this crossroad as applied to mental properties, considered powers. In particular, I scrutinize the possibility of taking the phenomenal property of feeling pain as a complex power or disposition. This possibility comes in handy in discussing panpsychism, the view that the ultimate elements of reality are phenomenal properties, which would ground physical properties as well. The link between panpsychism, dispositionalism and phenomenal properties has been clearly described by Hedda Mørch, that stresses that panpsychists think that

> all (or at least most) physical properties are *dispositional*. They then claim that dispositional properties require *categorical* grounds or realizers, and that phenomenal properties are the only categorical properties we know. This suggests that phenomenal properties could be the categorical realizers of all (or most) physical properties—as per what is known as Russellian panpsychism.
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> (2020: 1)

But are phenomenal properties suitable to fill this role? As Mørch herself notes, many have seen this as a *reductio* of dispositionalism, because it would make the theory that every property is captured in dispositional terms, hence relational, to be dependent on nonrelational categorical properties. But, again, is it possible to take phenomenal properties to be categorical and apt for the grounding role of physical properties, or should this role be played by some more fundamental property?

To tackle this question, I consider the views relating phenomenal properties and physical properties, such as emergentism, panpsychism and proto-panpsychism. I then consider how to get to the ultimates of reality by decomposing phenomenal properties into their ultimate elements. In doing so, I consider protopanpsychism as the only view that can be combined with mereology inasmuch as it posits that phenomenal properties manifest themselves in circumstances that could be analyzed along mereological principles. Finally, I consider if such mereological decomposition could take the burden of providing the categorical grounds that are needed by panpsychism to play the theoretical role assigned to it by Russellian monism.

Russellian Monism and Three Views

In order to solve the mind–body problem, Bertrand Russell (1927) argued that ontology is monistic and that there are fundamental entities that ground both physical and phenomenal – or more generally mental – properties. Such categorical bases are needed for grounding physical properties for, Russell argued, physics individuates physical properties by

describing their roles without specifying who is going to fill those roles, thus leaving us with a deep ignorance of the categorical bases of physical properties. Such categorical bases, however, are not only the right properties to fill the roles established by physics, but they also "have a significant role in explaining consciousness or experience" (Pereboom 2011: 89). So, the fruitful solution provided by Russellian monism was to fill the gap between the experiential (or mental) and the non-experiential, that is, physical, with properties good for both while giving full credit to the physicalist view according to which ontology is monistic. The resulting picture is one with three fundamental tenets: physical properties are described in structural and relational terms, that is, by their roles; there are *inscrutables* or *ultimates* that are neither structural nor relational; at least some inscrutables or ultimates are phenomenal or protophenomenal (we will see this in due time; cf. Alter and Nagasawa 2012).[2] As Montero (2010) pointed out, a property is an *inscrutable* just in case we know little about it beyond the theoretical role it is supposed to play. So, ultimates are categorical entities, or *quiddities*, whose identity conditions are independent from, and not in relation to other entities. The general metaphysical framework engendered by Russellian monism leads us pretty naturally toward panpsychism: if phenomenal properties are the necessary grounds for physical properties, whenever a physical property is instantiated, its categorical ground, which is phenomenal, is instantiated as well. So, there is some mentality everywhere there is something physical.

Three different views attribute to phenomenal properties the role of ultimates: panpsychism, emergentism and panprotopsychism. These views take different paths as regard the level of reality at which we should place phenomenal properties (cf. Goff 2017, Goff et al. 2022) and hence assume different relation between ultimates, which are categorical, and role-involving properties, which are dispositional. According to panpsychism, there are conscious phenomena all the way down. Chalmers (2015) considers the possibility that our consciousness is grounded in some simpler forms of consciousness present at the micro-level and calls this *constitutive panpsychism*. Entities such as quarks or others yet to-be-discovered fundamental particles or waves are the kernels of a rudimentary form of consciousness, such that "there is something it is like to be a quark or a photon or a member of some other fundamental physical type" (Chalmers 2015: 246–7). The most relevant consequence of panpsychism is that maximally simple physical properties are identical to maximally simple phenomenal properties. And since there are physical properties all over the natural domain, what there is in the natural domain (all the composing parts of it) is *ipso facto* phenomenal. Maximally simple phenomenal properties, then, are constitutive of reality, and "there is something that it is like to be a physical ultimate" (Goff 2009: 289).

However, it might be very difficult to accept that entities quite far away from us, like quarks, can have experiences as we have. To temper this point, one that determines an "incredulous stare" (Goff 2017), panpsychists may say that even if ultimates are the same kind of entities, experiences of these ultimates need not be of the same kind. We are not forced to admit that there is something it is like to be a quark or a photon: it seems plausible to say that such experiences bear just a theoretical and extremely pale resemblance with ours. To make this clearer, dark matter would be composed of massive particles, so subject to gravity, but the interaction with the gravity of these particles is incredibly far away from that of us and very far from that of super-massive bodies, like black holes. Basically, a difference in quantity could make a difference in quality.

Galen Strawson has argued that the "real physicalist" should not be worried about this view, for she has simply to admit that conscious phenomena are part of the physical world and should not invoke any special miraculous character for these phenomena. Rejecting the idea of an emergence that pins down to be non-deducible, Strawson invites us to change the way in which matter – usually thought to be non-experiential – is conceived, by taking it to be experiential in some sense: "Real physicalist must accept that at least some ultimates are intrinsically experience-involving" (2008: 71). So, in the case of panpsychism, some ultimates and maximally simple phenomenal properties should be identified.[3]

The second option is emergentism, in Chalmers's terms, non-constitutive panpsychism. Following the positing of maximally simple phenomenal states, emergentism argues that conscious phenomena, absent at some level of physical reality, *emerge* once the relevant physical entities get to a sufficient level of complexity and are in the proper interaction. This view entails a radical form of *coming into existence*: from nonconscious entities we arrive at the conscious ones. In such a case, there would be an "ontological jump". Emergentism has that reality is composed by different levels and new fundamental powers come into existence at many levels. According to Strawson, this is the weak point of emergentism, because emergence cannot be *brute*: "For Y truly to *emerge* from X is for Y to arise from or out of X or be given in or with Y *given how* X is. Y must arise out of or be given in X in some essentially non-arbitrary, and indeed wholly non-arbitrary way" (2008: 66). Moreover, emergent novelty entails, in some way, the violation of the principle of causal closure, according to which in the natural world, if an event has a cause at time t, it has a purely physical cause at time t (cf. Kim 1998; Wilson 2021). Emergentism takes conscious states or properties as qualitatively different from nonconscious ones.

A middle path is steered by a third option: *panprotopsychism* (Chalmers 2010, 2015). Nonconscious states or properties have the disposition, in a given condition of interaction, to manifest conscious states or properties.

The hypothesis stems from recognizing that phenomenal properties are somehow structured and dynamical. Consider the complex taste of our white wine or the listening to a musical passage: the perceptual experience has a structure and a dynamics that directly derive from the source of the experience itself and so from the structure and dynamics of the taste of the wine or the musical passage itself. If these phenomenal properties are so structured, then there are properties constituting them. These constitutive elements are called *protophenomenal* properties and are described as "properties that collectively constitute phenomenal properties when organized in the appropriate way" (Chalmers 2010: 151). Regarding this collective composition, "we need a much better understanding of the compositional principles of phenomenology: that is, the principles by which phenomenal properties can be composed or constituted from underlying phenomenal properties, or protophenomenal properties" (Ibid.: 136). So the passage from the nonconscious to the conscious is determined by principles or rules that we may discover. It is now time to take stock and compare these three doctrines in order to understand how the distinction between categorical and dispositional properties is considered and that, among these views, could give to phenomenal properties a dispositional role.

First, panpsychism takes simple entities to be conscious without this being a matter of dispositionality: being conscious is a categorical property. Second, panpsychism may offer a way to explain the different varieties of consciousness: the more the entities and their interactions, the more complex consciousness is. According to panprotopsychism, vice versa, simple entities are not conscious in themselves, not even in some minimal or rudimentary form: they are disposed to generate consciousness when interacting or summing up in certain ways. Consciousness is there just in potency, but some conditions or interactions are required for it to manifest.[4] One strain of emergentism, too, takes simple entities not to be conscious, but it takes them not to have the disposition to give rise to consciousness either; rather, consciousness is the result of some *ontological jump*, a radically nondeducible, hence unforeseeable, difference.

Both panpsychism and panprotopsychism accept the presence of constitutive elements of consciousness, elements that panpsychism takes to be sufficient for phenomenal experiences, while panprotopsychism takes these elements as necessary composing parts of conscious experiences; both panprotopsychism and emergentism take the phenomenal experiences we are used to as a *sui generis* phenomena, either not present at lower levels (emergentism) or not properly manifested (panprotopsychism); both panpsychism and emergentism take phenomenal properties to be categorically different from all other kinds of properties and fundamental, with panpsychism positing fundamentality all the way down and emergentism positing it at some point in a yet-to-be-clarified ladder of levels. In the terms of our

discussion on maximally simple phenomenal properties and ultimates, only panprotopsychism clearly distinguishes between phenomenal properties and ultimates, with panpsychism and emergentism not being clear on that distinction. Moreover, only panprotopsychism fits with the dispositional view of pain proposed, in particular with the idea that pain is the combination of a simpler form of consciousness. So, let's discuss panprotopsychism further.

As we have already seen, according to panprotopsychism ultimates and maximally simple phenomenal properties are different: the former could arrange, according to principles and law, so to give rise to the latter. And it is only in panprotopsychism that mereology could be applied as a methodology that allows to better understand how phenomenal properties manifest themselves in the proper circumstances. Chalmers also argues that protophenomenal properties are not necessitated by physical properties even though they necessitate phenomenal properties, which are not fundamental:

> There are two possibilities here. First, it could be that consciousness is itself a fundamental feature of the world, like space-time and mass. In this case, we can say that phenomenal properties are fundamental. Second, it could be that consciousness is not itself fundamental but is necessitated by some more primitive fundamental feature X that is not itself necessitated by physics. In this case, we might call X a protophenomenal property, and we can say that protophenomenal properties are fundamental.
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> (Chalmers 2010: 125)

So, if we do not consider consciousness as fundamental in itself, we have physical properties not necessitating protophenomenal properties while these do necessitate the phenomenal ones. Moreover, Chalmers insists that protophenomenal properties are "special properties that are not phenomenal (there is nothing it is like to have a single protophenomenal property) but that can collectively constitute phenomenal properties, perhaps when arranged in the right structure" (2015: 260). So, we would have that constituting would be necessitating. In line with Russellian monism, Chalmers stresses that the

> underlying neutral properties X (the protophenomenal properties), [are] such that the X properties are simultaneously responsible for constituting the physical domain (by their relations) and the phenomenal domain (by their collective intrinsic nature) … [where] One could give the view in its most general form the name panprotopsychism, with

either protophenomenal or phenomenal properties underlying all of physical reality.

(2010: 134)

So, these protophenomenal properties, to be identified with the ultimates, could be the dispositional elements that, in the appropriate circumstances, necessitate, while constituting, the maximally simple phenomenal properties. At this point, we should consider two questions: one is whether and how mereology plays any role in making sense of the resulting metaphysical picture; the other is the metaphysical role that maximally simple phenomenal properties and their constituting protophenomenal parts play. Let me face these issues in turn.

Experiences and their Parts

Consider bodily pain. According to many scholars, pain is not a unitary phenomenon (see Corns 2014). Indeed, pain has, at least, both a proprioceptive and an affective component, also referred to as somatosensory and experiential, so it has two or more simpler phenomenal properties.[5] While the former is responsible for the location and the spatial structure of pain – it can be modeled as a spot, an area, or a volume – the second one determines the axiological or hedonic value of pain, its being bad or unpleasant for us. At least one specific pathological condition, asymbolia for pain (see Grahek 2007), give us empirical evidence that the two can be taken apart, as some individuals are on average in saying where their pains are but are not affected by them: they don't care about their own pains. Nonpathological individuals feel pain as having these two features or properties.

Beyond being complex, pain can be regarded as a power or disposition. The dispositionality of pain, in particular, is revealed by its being the manifestation of our sensitivity toward certain phenomenal stimuli, those that appear most salient to us while impinging on our body and such to trigger potential self-care states.[6] One may also support the dispositionality of pain indirectly by either adopting pandispositionalism, the view that all properties are dispositions (Mumford 1998, 2004; Mumford and Anjum 2011), or the identity view, according to which the distinction between dispositional and categorical properties is a superficial one and the two have to be identified (Molnar 2003; Heil 2012; Jacobs 2011). Taking the two assumptions together, pain being complex and being a disposition, we get to consider pain as a power composed of simpler powers: detecting and representing locations on the body and evaluating the most salient stimuli impinging on the body as of affective or having a hedonic nature and prompting for self-care.

We briefly introduced the concept of a simple phenomenal property, something we may call a phenomenal atom. A phenomenal state that is not simple in the given sense will be phenomenally complex or molecular, to add a piece of terminology. Taking phenomenal properties as atomic or molecular suggests that molecular phenomenal states can be considered as mereological entities, that is, entities that can be analyzed in terms of parts and wholes. Usually, mereology is applied to concrete entities, such as statues, books and the like, and phenomenal properties or states can be hardly considered in this way. However, many have applied or used mereology also to understand the internal relation among properties (Williams 1953; Paul 2002; Forrest 2016) So, we can use the relation of parthood, the fundamental relation of mereology, to analyze the components of our phenomenal states. We could say that the taste of hay is part of the taste of this white wine and that the tasting experience is composed by it and by the taste of green apple. Similarly, the feeling of pain is part of the overall feeling of pain-in-the-thumb, as I am considering sensory pain.[7] So far, I have referred to simple phenomenal properties as our mereological atoms, the constitutive minimal elements that participate in some complex experiences as we have them. What is it to be such an atom? Here is a proposal:

> [ATOM] A phenomenal atom a – or a maximally simple phenomenal state – is a state such that any modification of it would change its phenomenal nature, either by undermining it (there is nothing that it is like to have a modified a, as a^*) or by changing it.
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> (from a we would get to b)

If atoms are as defined, since pain is structured, it is composed by more than one phenomenal atom, hence it is a phenomenal molecular property. Since I don't think that phenomenal states can be free-floating, if they are tokened, it is in virtue of them being the content of someone's experience. So, the tokening of a phenomenal property, either atomic or molecular, determines a corresponding phenomenal state. Notice that it is the content of an experience that is complex, not the *quale* in itself. When we are in pain, we experience both an affective (or hedonic) *quale* and a proprioceptive *quale*: these two determine the molecularity of our experience. Had we suffered asymbolia for pain, we would have experienced only the proprioceptive quale, thus having an atomic experience.

Now, can these atoms play the role assigned to them by Russellian monism and by the various doctrines related to it? In particular, can they be the elements that ground everything else? The answer lies, in part, in whether mereology can help us in understanding how from these atoms we can get to molecular or complex states.

Mereology for Pain (or the Combination Problem)

In order to tackle the so-called combination problem (how constitutive mental elements compose phenomenal states, we may take phenomenal atoms to be the new way to identify *qualia*.[8] Since there are different types of *qualia*, there should be as many type-different phenomenal atoms. We may think of phenomenal atoms either as endowed with a structure or not. If phenomenal atoms have a structure, then the ultimates, or protophenomenal properties, are the elements of this structure. To secure this result there are two options: either there are type-different ultimates, so that each type plays some specific role in composing a phenomenal atom, in analogy with physical subatomic particles and atoms, or the ultimates, while belonging to the same kind, in terms of determinability, are different in terms of determinate: say, they are all red but have a different shade. Their difference would make for the difference in the phenomenal atoms.

If phenomenal atoms do not have a structure, we may think of them as mereologically flat, and in such a case, the simple sum of the ultimates is enough to give rise to type different phenomenal atoms, where such a sum would not count as either structural or functional. The contrast between sums versus structural/functional relations is a way to meet what Lando describes as the literal versus the metaphorical interpretation of mereology. The basic tenet of classical mereology is the relation of *being part of*, and this relation is reflexive, transitive and anti-symmetrical. So, reflexivity has that everything is part of itself; transitivity is such that if x is part of y and y part of z, then x is part of z; finally, antisymmetry is as follows: if x is part of y and y is part of x, then the two are identical or, to put it conversely, two distinct things cannot be part of each other (Lando 2017; Varzi 2019). Lando takes these formal features to characterize the relation of *being part of* along with two further principles: spatiality and nonselectivity. According to spatiality, being a part involves having a spatial feature, so having a physical location. Nonselectivity involves having clear boundaries without a specific function or role to be played: the left-uppermost brick of a wall has a location but not a specific function, so it is nonselective. John the trumpeter is part of the band, but he has a specific function, playing the trumpet, and so is selective. Hence, mereology is more literally construed if the three principles of formality, spatiality and nonselectivity are literally respected.

Now, a mereological sum meets the three principles: the bricks of a wall are such a mereological sum. The subatomic particles of a physical atom, vice versa, are not a mereological sum; they rather obey structural relations, because they violate, at least, nonselectivity. Clearly, also the bricks bear some relation to each other or to the wall as a whole (the left-uppermost brick bear specific relations to the wall and other bricks), but this is not

intrinsic to them, for one can replace or relocate any brick, and no change either in the bricks or in the wall follows.[9] So, apart from being parts of the wall, or constituting it, they do not bear any specific structural or functional feature. This is not the case with phenomenal atoms, and what is crucial in the structural and functional view of the phenomenal atoms is selectivity. The reason this is so is that in many phenomenal cases, we recognize the presence of a structure or a potential one.

Let's think about phenomenal atoms in analogy with type-different physical atoms. We need to imagine some difference in their protophenomenal elements, in analogy with the subatomic particles, so to justify why the atoms are different as well. We know that in the case of subatomic particles, there is a mix between type difference and summative difference: two atoms are type-different in virtue of a different number of type-different constituents, namely, electrons, neutrons and protons. So, we can say that phenomenal atoms have a structure realized also in terms of the number of elements. Imagining the protophenomenal elements as type-different does not necessarily leads to a regress, for we may take these as the ultimates and simply postulate that there are type different ultimates, whose combination is the subvenient base for type different phenomenal properties. The crucial upshot here is that there cannot be differences in phenomenal properties without differences in the protophenomenal ones.[10] So, a supervenience relation holds between the phenomenal and the protophenomenal.

Having these distinctions in place, we should consider the possible structure of phenomenal properties. Think again at the sip of white wine: the flavor is composed by the taste of green apple and that of hay. At the same time, that experience is stimulated by a single experience, and it is a taste having a composition, hence a structure. Let's apply this point to the case of pain. We saw that pain is considered to be composed of two components: a perceptual and an affective one. The perceptual is about locating the pain, the affective is assessing it as determining self-care and to be negative on an axiological ladder (possibly in relation to its intensity). So, the instantiation of the phenomenal property of feeling pain is the instantiation of the properties of feeling a location as painful (location as primary) and having an affective or hedonic negative value as located (painfulness as primary). Can we take these two composing elements of pain as its protophenomenal composing properties? If we consider protophenomenal properties as non-experienceable, as Chalmers does, there is a sense in which the composing properties of pain could be experienced in isolation, as the case of asymbolia for pain reveals (Grahek 2007). As we saw, asymbolic subjects are on average in spotting the location of inflicted pain, even for those painful stimuli not directly observable (as those occurring at the center of the back), but they are not emotionally affected by them: the nocive

stimuli do not bother them. Since these properties are experienced, whether both or not, they aren't admissible as protophenomenal properties. Rather, since these properties *prima facie* are not further decomposable, we may take them as phenomenal atoms.

We could consider a potential issue by reasoning in disjunctive terms. Either pain is a molecular phenomenal property, with two composing phenomenal atoms, or those suffering from asymbolia experience a different phenomenal atom with respect to what non asymbolic subjects. Now, we can dismiss this second option by considering the following argument. If asymbolic subjects have a different phenomenal atom of pain as compared to that of non-asymbolic subjects, their protophenomenal properties would be different because, we established, phenomenal properties supervene on protophenomenal properties. Consequently, they would have different protophenomenal properties constituting the phenomenal atoms of pain. However, it seems that we have no reason, beyond the mere evaluation of simplicity itself, to suppose that the atoms are different. The only upshot of taking them to be different is in order to argue that the phenomenal is independent from the protophenomenal, which would be a step closer to say that the phenomenal is independent from the physical, as per Chalmers's conceivability argument. So, postulating different phenomenal atoms begs the question about whether phenomenal properties are autonomous or reducible with respect to physical properties. Therefore, we should abandon the option of having different phenomenal atoms for pain and consider pain as a phenomenal molecule. ~~If this is the case, then~~ the phenomenal atoms are two: one is the feeling of a location as painful (location as primary), and the other is the negative affective value as located (painfulness, the affective component prompting for self-care as primary). The asymbolic differs from the non-asymbolic in not feeling the second atom. If these are the atoms, what is their structure? Or, to put it in other terms, what are their protophenomenal components?

In discussing what are the ultimates, Derek Pereboom (2011: 97 et passim) proposes *perfect solidity* as the categorical ground for all the physical properties that impenetrability, as a disposition, manifests. The proposal makes evident that the ultimates are to be thought of more as abstract and logical features rather than as precursors of our experiences. They have to fill the role established by the dispositions that manifestation we have described in psychological terms.[11] However, we want that these ultimates, in the proper circumstances, give raise to experiences. In the case at hand, then, we can imagine that the ultimates underneath the phenomenal atoms of location and affective value are relative to self-location and self-safety. Here, "self" does not mean that there has to be an ultimate that refers to its own individuality as such but simply a logical feature such that the location or the affective value in question are to be related to some other

ultimate.[12] Once these ultimates are in the circumstances in which, to make a case, the individual bearing them may take stance and action with respect to their occurrence, then these can be felt, thus determining the occurrence of a phenomenal atom. So, I am suggesting that the proper circumstances in which a protophenomenal property gives rise to a phenomenal one are those in which the subject of experience may take a stance – for instance, judging it in need of self-care or taking it to have a negative hedonic component – or may act – avoiding or searching again in the proximity of her own body – with respect to the content of the experience.[13] The logical structure here is one of saturation; it is one in which a protophenomenal component of the form "x needs to take care of x with respect to stimulus a" and "point y is in need of care with respect to stimulus a" are saturated by x and y being replaced by the sense of the self and the sense of one's own body of the very same individual, respectively. So, a phenomenal atom of having pain is one in which the protophenomenal property of something nocive for the body one has is considered as in need of care for one, and this occurs as a phenomenal atom and similarly, for a location where a point, area or volume of own's body is considered as in need of action. Once these two occur together, we have the phenomenal molecule of, say, pain in the thumb.

One of the crucial elements lurking behind this issue is whether ultimates or protophenomenal properties have a categorical nature, one that takes their nature to be independent of the way in which these ultimates are related to anything else. However, it is crucial to understand that the proper circumstances that determine the passage from the ultimate as a protophenomenal property to a phenomenal atom are part and parcel of what these ultimates are. So, this ultimate cannot be categorical all the way down. This brings us back to the fundamental question of this chapter and to the metaphysical structure imagined by Chalmers with respect to panprotopsychism.

The Metaphysical Place of Phenomenal Atoms

We saw that, according to Chalmers (2015), protophenomenal properties are not experiential; there is nothing it is like to have them. However, these properties necessitate and constitute phenomenal properties, which are fully experiential. Hence, there is a passage from the nonexperiential to the experiential. How can this passage be accounted for? Unless one endorses the identity thesis by Molnar (2003) and Heil (2012) – which somehow resolve the problem by *fiat* – or adopts a form of Russellian monism, the one invoked by Strawson – that requires the base properties to have some form of experientiality thus denying both Chalmers's tenet on ultimates not being experiential – the only option left is to suppose that there is some

(to be determined) law or principle bringing, with some form of necessity, from the nonexperiential to the experiential.

This problem has been recently debated by Alter and Coleman (2020) reacting to a double attack on Russellian monism by Brown and Morris. According to Brown (2017) and Morris (2016), protophenomenal properties are partly individuated by their role in constituting fully phenomenal properties. On the contrary, Alter and Coleman note that "protophenomenal inscrutables need not be individuated by any roles they play. … Instead, they might be individuated just by what they are in themselves, that is, by their intrinsic natures – natures that might be physical and not experience specific" (2020: 413) So, protophenomenal properties would be categorical properties, that is, *quiddities*, individuated by their intrinsic nature.

Our original question, whether phenomenal properties or some more fundamental properties can ground physical properties, is now clarified, for phenomenal properties are grounded in the ultimates and by transitivity of grounding we should consider whether ultimates can play the role of grounding the physical and the experiential, as well, while being categorical.

One familiar path followed by those who favor the idea of having quiddities as grounding properties, as David Armstrong, is to insist on the contingent nature of the relation established by these properties. The role that quiddities may happen to fill in a specific world is, typically, contingent. For, it could well be the case that the intimate nature of electrons, to make a classical example, is to stay in some repelling relation to same-kind particles in this world and in an attracting relation to same-kind particles in another world. Whether electrons turn out to be attracting or repelling to other same-kind particles depends on the laws of nature holding in the world they inhabit. (cf. Schaffer 2005) So, their quidditistic nature, their having the specific nature that characterize them, is contingently linked to the roles they play. The same, then, should hold for ultimates.

Now, according to Chalmers, phenomenal properties are *necessitated* by protophenomenal properties. Consequently, if protophenomenal properties are quiddities and quiddities are contingently linked to the role they play, it seems that these protophenomenal properties can only contingently determine the phenomenal properties, contrary to the assumption. Therefore, either we abandon the idea that these properties are quiddities or we abandon the idea that they necessitate phenomenal properties, in particular phenomenal atoms. Perhaps Chalmers may weaken his view and take protophenomenal properties only to contingently necessitate phenomenal properties. This would mean that there could be different ways in which the protophenomenal could compose the phenomenal so to justify the iterated modality. The picture would be (put in possible worlds terms): in this world, necessitation goes according to certain laws of nature, but in some

other world, inasmuch as it is governed by different laws of nature, other principles rule the passage from the non experiential to the experiential. The weakening can be formulated as follows: protophenomenal properties *nomologically* necessitate the phenomenal ones, and laws of nature are contingent with respect to a variety of necessity stronger than nomological necessity. So, what is needed at this point is some formulation for how to make sense of this nomological necessitation.

The view just sketched reminds of Armstrong's view on the relation between properties and laws of nature. According to Armstrong (1983, 1997), properties are quiddities because they lack any modal character: there is no necessary entailment in virtue of having property P and property P is not necessarily entailed by any other property. At the same time, the laws of nature are contingent second-order relations on first-order properties, and they at most say that whenever something has property F it has property G, but no stronger modal relation is foreseen.[14]

Now, suppose to stick with Armstrong's model, as Chalmers seems to do. How is it that the ultimates or protophenomenal properties necessitate a phenomenal property? To necessitate is to necessarily bring about. In the case of physical entities, this is tantamount to necessarily causing. Consider the protophenomenal component of location in the case of pain. This property has the intrinsic nature of determining a location, it is a pointer to a location. Once this encounters or interacts with a further protophenomenal ultimates of the proper type, one that attaches to the pointer a phenomenal value, it should necessarily bring about the phenomenal property of feeling some location as x. If the other ultimate is a negative affective value, one hedonic value that determines some self-care, then the location is a feeling of the location as one necessitating care because of a negative phenomenal value; if the other ultimate is a smell, the experience is one that locates the origin as a positive or negative smelling location, and similar for sounds and other phenomenal modalities.[15] This tentative solution entails abandoning the quidditistic nature of protophenomenal properties. For, given the proposed solution, the ultimates are intrinsically relational: the locating ultimate is a spatial feature relating a place to something else; the phenomenal value ultimate has some axiological content, and these features are not independent from everything else; they do establish entailment relations, for the location establishes itself in a structural space while the axiological in a ladder of values. So, if protophenomenal properties are considered as elements composing powers – perhaps they are proto-powers – then we have a route for the necessitation of phenomenal properties and powers out of proto ones. But if the quidditistic nature is deemed nonnegotiable, then such a route is blocked because the modal character of the ultimates clashes with the modal character of their role. Finally, notice that the way in which I have imagined the role that the

ultimates have to fill is not phenomenal *per se* but, as needed, protophenomenal. It is a double role: a tracking one, the location, and an imposing one, if negative you should do this and that.[16] Clearly, the imposing role may hold also in case of pleasure: you won't get rid of the signal, but rather, you may want it to continue.

Individuating ultimates through their roles allows one to repeat the classical Russellian's move against anti-physicalist conceivability arguments. Those arguments maintain that we can conceive a world that is molecule by molecule identical to the actual one but is deprived of any phenomenal property, hence consciousness-free. However, duplicating the actual world entails also duplicating the ultimates of this world, and since these necessitate phenomenal properties, these properties would be tokened as well.

To sum up, in this chapter, I provided reasons to maintain that some phenomenal properties, as the property of feeling pain, can be considered complex dispositional properties composed of simple phenomenal atoms. These atoms can be framed in the context of present-day discussions on Russellian monism and panpsychism. In such a framework, these properties are, in turn, composed of protophenomenal properties, which need to be individuated in relational terms, thus abandoning the quidditistic constrain that many want to impose on them. If taken as relational, protophenomenal properties allow the fulfilling of the typical Russellian reaction toward anti-physicalist arguments, such as the conceivability argument, thus vindicating physicalism.

Acknowledgments

Notes

1 I will use *power* and *disposition* interchangeably.
2 From now on, I use "ultimates", for it seems that many non-ultimates could be inscrutable.
3 He parts company from views as those by Humphrey and Tim O'Connor. See also Strawson (2015) and Coleman (2006).
4 Vetter (2015) has that disposition may simply manifest even if no specific stimulus triggers them.
5 Assessing the phenomenal property as bad distinguishes it from other very intense properties, such as sexual pleasure. My view on the components of pain is tripartite: I take pain to be composed of three specific features: intensity (modeled as a quantity), location and dynamics (whether a burning, a pulsing or a throbbing pain, to name a few case). Finally, I take something as bad if it prompts for self-care dispositions (cf. Gozzano 2021). However, to keep things simple, in this chapter, I consider only the bipartite view.

6 My view in noncommittal with respect to the relation between manifestation and stimuli: it could be the case that pain is sensitivity to certain phenomenal stimuli, as per the classical model of disposition (Mumford 1998), or that pain is the easiness in sensing certain phenomenal conditions, if the Vetter (2015) model is preferred.

7 Notice that I am here discussing phenomenal atoms from the same sensory modality (two tastes composing my phenomenal experience of wine tasting), but if one considers a phenomenal property as originating from different sensorial modalities, this problem is well recognized in the literature on consciousness as the *binding problem*, that is, the problem of explaining the sense of unity that we have in experiencing things through different sensory modalities, such as the taste, smell and color of the wine. Kant thought of this as the synthetical capacity of the mind, the one providing us with a single experience composed of different, and presumably autonomous, parts. More recently, Tim Bayne has elaborated a mereological theory of the unity of consciousness (Bayne 2010). All these theories, however, take for granted what are their fundamental parts.

8 See James (1890) and Chalmers (2017).

9 This entails denying composition as identity, for one may think that changing the position of a brick changes the wall as a whole, determining a new wall. See Lando for a defense of this view.

10 A further option is the following: while the phenomenal atoms are kind different, their composing elements are not: the difference in the atoms is given by the amount of protophenomenal ultimates composing them. We all know, for instance, that some sugar could be nice, too much sugar could be disgusting. So, a difference in quantity can determine a difference in quality, that is, in the qualia we experience.

11 Mørch (2020), with Chalmers (1996, 2010), takes these to be the positive and the negative conceivability: a negative one specifies only the theoretical role; a positive conception specifies how that role can be filled or imagined to be filled.

12 This presupposes that ultimates can be fully individuated. However, it is doubtful that, for instance, elementary particles can be so individuated. For instance, there is no clear sense, if not an outright falsity, for giving an electron a determinate position in space.

13 For the view that pain is a command for the body to act, see Klein.

14 Against such a general view, Alexander Bird (2005) has argued that it is untenable. Either it collapses in a regularity view ("whenever something has F it has G"), and so losing any explanatory force, or it involves a vicious regress of weakly necessitating relations.

15 See Gallagher (2000) for taking ownership and action as basic elements in our cognitive life. See Coleman (2013) for the idea that phenomenal properties have both a qualitative and a subjective component that he thinks can be taken apart.

16 This is pretty much in line with Klein's (2015) view according to which the content of our pain states is a command to the body, something like "Stop having this!" or "Remove the hand from that" and the like.

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