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Evaluating Strong Emergentism: An Argument for Non-Physical Substantial Strong Emergentism[1]

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Research Article

Abstract

Physicalists and dualists have failed to provide a convincing answer to the mind-body problem. This is because they, respectively, sacrifice mental causation and neglect the close relationship between the mind and the body. To tackle this, some contemporary philosophers, such as Timothy O'Connor and Jonathan Jacobs, have turned to the concept of strong emergentism. This perspective views the mind as an emergent physical substance with autonomous causal powers. If this standpoint is tenable, it holds promise for resolving the mind-body problem. Nevertheless, the idea of strong emergentism faces substantial challenges. This article aims to achieve two objectives. First, it addresses these challenges and asserts that, even in the face of the most serious concern, "the collapse problem", a specific interpretation of strong emergentism remains unthreatened. Second, we contend that while O'Connor and Jacobs present a thought-provoking proposal, its clarity is hindered, and a thorough understanding is only possible when we perceive the emergent substance as more than merely physical.

Keywords

Strong emergentism, Mind-body problem, Timothy O'Connor, Jonathan Jacobs, Substance dualism, Physicalism, Mental causation.

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Introduction

"Emergentism", is one of the responses to the mind-body problem which serves as a middle ground between monism and dualism and traces its roots back to some Greek philosophers (O'Connor, 2020). In the 20th century, British philosophers further developed this concept, with a primary focus on its epistemological aspect. Charlie Broad, for instance, defined an emergent property as one that cannot be *predicted* solely by considering lower-level properties (Broad, 1925, pp. 61-64). However, this article delves into ontological emergentism, specifically focusing on the existence of new properties, where the criterion for attributing these features is not epistemological but ontological–signifying the distinctive existence of those properties. Three types of ontological emergentism can be discerned: logical emergence, weak emergence, and strong emergence. Logical emergence pertains to a property that is the logical or mathematical outcome of the components of a set, like John's weight, which results from the sum of the weights of John's body parts. Weak emergence characterizes a new property in a system that arises from the interaction of its components, such as the fluidity of liquid water, resulting from the interaction of its constituent molecules. Finally, strong emergence refers to a property with causal power that is not reducible to the causal powers of the components of a set. In other words, property P is strongly emergent in relation to set S if property P has independent and autonomous causal powers compared to the causal powers of set M, and these causal powers are original and irreducible (Searle, 1992, pp. 111-112).

Despite the skepticism many philosophers express regarding strong emergence, recent years have witnessed a proposal to turn to this type of emergence as a solution to the mind-body problem. Neither physicalist views nor traditional substance dualism can adequately explain the causal relationship between the mind and body. Physicalists, in order to maintain the principle of causal closure, are compelled to regard the mind as epiphenomenal, leading to a denial of mental causation. Substance dualists, on the other hand, distance the mind and body to such an extent that they struggle to elucidate the causal relationship between them.

In contrast, philosophers like Timothy O'Connor and Jonathan Jacobs propose considering the mind as an emergent substance with irreducible causal power, while still maintaining its fundamentally physical nature. This article aims to achieve two goals: First, to demonstrate that, despite the criticisms directed at strong emergence, this idea, at least in a specific interpretation,

is coherent and defensible. Second, to formulate an argument against philosophers like O'Connor and Jacobs, asserting that if we conceive the mind as an emergent substance, interpreting the substance as merely physical is inadequate.

In pursuit of these two goals, the initial segment of the article will address four criticisms leveled against the concept of strong emergence, providing responses to each critique. Among these, we consider the "collapse criticism" the most significant, positing that strong emergence appears to be immune to it if we conceptualize the emergent substance as mental. After scrutinizing each criticism, the subsequent section will articulate our argument asserting that a robust comprehension of strong emergentism emerges when we avoid perceiving the emergent entity as merely physical. The crux of our argument revolves around an emphasis on the concepts of strong emergence, substance, and property. It becomes evident to us that delving into the relationship between substance and property, along with the independent and autonomous causal power of strong emergence, poses a substantial challenge to the physical form of strong emergence. Consequently, a clear understanding of strong emergence seems attainable only when we regard the emergent entity as not merely physical.

Evaluating the criticisms of the idea of strong emergentism

In this section, we aim to assess the concept of strong emergentism regarding the mind, addressing what we perceive as the four most crucial criticisms.

Is the concept of strong emergentism coherent?

The initial critique revolves around the conceptual consistency of strong emergentism, as posited by Karen Bennett (Bennett, 2017). She contends that the concept lacks clarity and, consequently, is indefensible, presenting a principle:

"If one thing builds–constitutes, composes, realizes, grounds–another, then the former is more fundamental than the latter. Builders are more fundamental than what they build." (Bennett, 2017, p. 40)

According to Bennett, strong emergentism contradicts this principle, as how can one thing depend on another while simultaneously serving as its basis? Timothy O'Connor, however, provides a compelling response to this criticism (O'Connor, 2018, pp. 369-376). He argues that the above principle is only true if we have a specific meaning of "*fundamental*" in mind. According to O'Connor, the first meaning of being fundamental is ubiquity. An object is

considered fundamental if it does not depend on another being of a different kind for its existence. O'Connor refers to this meaning of groundness as "basic." However, O'Connor believes there is another meaning of groundness, which he terms "*fundamental*." According to this perspective, an object is fundamental if it is not solely derived from the internal relations of its parts but involves something beyond the arrangement of those parts. According to O'Connor, Bennett's principle only considers the first meaning, basic, stating an evident principle: something originating from another is necessarily dependent on the initial entity. In this context, the strong emergent object, emerging from the relations of lower-level objects (e.g., the mind emerging from the brain), is dependent on it. Thus, the emergent object *did not* exist from the outset but came into being at a specific time, making the first object (the brain) more basic than the emergent one (the mind). However, the key distinction lies in recognizing that the emergent object might not be a product of the arrangement of the components of the lower-level object but may possess other aspects beyond the internal relations of the first object, rendering it *fundamental*. By separating these two meanings, the concept of strong emergentism appears not to conflict with Bennett's principle. Consequently, it becomes understandable, and Bennett's criticism seems unwarranted.

Does strong emergentism ultimately collapse?

One of the primary criticisms against strong emergentism argues that emergent causal powers ultimately collapse to the lower level, as these seemingly strong and irreducible powers are deemed to exist at that lower level. This critique, initially posited by Elanor Taylor (Taylor, 2015), has been further addressed by Baysan and Wilson, who presented four responses aiming to refute the collapse criticism (Baysan & Wilson, 2017). However, we contend that only one of these responses appears to be persuasive.

Baysan and Wilson's primary solution suggests that this criticism can be addressed by differentiating between direct and indirect forms of possessing causal powers (Baysan & Wilson, pp. 78-79). According to their argument, the lower level does not directly exhibit the causal properties of the emergent level. While the lower level is a prerequisite for the emergent level, it functions merely as a condition for the existence of the new causal powers at the emergent level.

However, it appears that the differentiation between direct and indirect powers may not be adequate for the proponent of strong emergentism to address the collapse objection, as the exact same distinction can be applied to

weak emergentism. The lower level of weak emergence (e.g., liquid water molecules) does not directly possess the causal properties of the novel level of weak emergence (fluidity). Nevertheless, we can still trace back the causal properties of the emergent level to the causal properties of the lower level. The fluidity of liquid water exhibits specific causal powers, such as the wave behavior of water, which are not evident at the level of water molecules (lower level). The lower level possesses these causal powers only indirectly. As a result, this distinction does not provide a solution to the collapse objection for the defender of strong emergentism. However, there may be a problem. One can argue that there are not two distinct levels in weak emergence; rather, there is one underlying phenomenon considered from two perspectives: the micro perspective and the macro perspective. Therefore, the example of weak emergentism constitutes a false analogy, and the distinction between direct and indirect powers applies only to strong emergentism. Consequently, Baysan and Wilson's answer remains defensible.

However, while it is true that if we do not consider weak emergence to have two distinct levels *in a literal sense*, we cannot attribute the distinction between direct and indirect powers to it. The crucial point, however, lies in the fact that the distinction between direct and indirect powers alone cannot address the collapse objection. The reason for this lies in the fact that what truly addresses this objection is the distinction between the two genuine levels that only exist within strong emergentism. In other words, in this scenario, the distinction between direct and indirect powers is meaningful only if the distinction between the two levels of emergence is real (which is a hallmark of strong emergentism). Consequently, what prevents the collapse of the novel, autonomous causal powers at the emergent level into the basic level is not the distinction between direct and indirect powers but rather the actual differentiation between the two levels of strong emergence, which does not exist in other forms of emergence. This claim sets the stage for addressing the criticism of collapse, which we will revisit in the evaluation of Baysan and Wilson's fourth response. However, what is currently crucial is that solely adhering to the differentiation between direct and indirect powers does not appear to resolve the collapse problem. Consequently, their initial answer remains unconvincing.

Baysan and Wilson's second solution is to emphasize the distinction between having a lightweight and substantial disposition (Baysan & Wilson, pp. 80-81). According to their argument, while it is true that the lower level of strong emergence, in the sense of lightweightedness, possesses the causal

dispositions of the emergent level, this meaning of having those properties merely serves as a precondition for the occurrence of the autonomous causal characteristics associated with strong emergence. In other words, only the emergent level truly wields its causal powers in a substantial manner, and the role of the lower level is limited to providing the initial conditions necessary for the existence of these properties—nothing more. By differentiating between a substantial and a lightweight disposition, strong emergentism can defend itself against the collapse objection.

However, it appears that this solution alone cannot adequately address the collapse criticism. The issue with the initial solution can also be reimagined here. Let's consider the dispositional property analogous to the rolling of a round object, such as a ball. If we assert that the atoms and structure of this ball possess the property of rolling, we attribute this property to them only in a lightweight sense. In other words, the substantial sense of rolling belongs exclusively to the ball itself, not its individual parts. Consequently, the distinction between substantial and lightweight fails to elucidate the unique nature of the fundamental and irreducible causal powers associated with strong emergence. To explain why strong emergent causal powers do not collapse to the lower level, we must identify a distinctive feature that exists solely in the relationship between the lower level and emergent level within strong emergentism. General features, such as the direct and indirect distinction or the substantial versus lightweight distinction, which are also present in weak emergentism, do not suffice for this purpose.

The third solution proposed by Baysan and Wilson posits that emergent causal powers are novel in relation to the set of fundamental physical interactions. This fact allows us to postulate specific new causal powers at the emergent level (Baysan & Wilson, pp. 83-89). Generally, the causal powers of any entity are grounded in fundamental forces or interactions. For instance, an object's ability to fall is contingent upon the fundamental force of gravity (as opposed to other fundamental forces). Consequently, fundamental interactions serve to explain the existence and behavior of phenomena. Baysan and Wilson argue that while physicalists maintain that all fundamental interactions are purely physical, proponents of strong emergentism can entertain the idea of an additional category of fundamental interactions—namely, non-physical ones (such as mental interactions). If we accept this premise, the defender of strong emergentism can assert that although all strong emergent causal powers can be accounted for if we consider both fundamental physical and mental interactions, focusing solely on physical interactions renders these emergent

causal powers robust and irreducible at the lower level. In other words, the claim of strength by strong emergentists is relative: when viewed in relation to the physical level, these powers appear novel and inexplicable, but when considered alongside the physical and mental levels, they become explicable. Therefore, the collapse objection loses its effectiveness. This objection contends that all strong emergent causal powers ultimately collapse into physical-level interactions, which, as we have observed, is not the case.

While Baysan and Wilson's third solution appears to be the most substantial among the three proposed answers, it *alone* cannot fully shield strong emergentism from the collapse objection. The adverb '*alone*' is crucial because it prompts us to consider whether what emerges is a substance or a property. Assuming that what emerges is a property (without any new substance or object), we find ourselves dealing with emergent properties of physical objects (such as the brain). However, understanding this claim presents challenges. How can we accept that this emergent property adheres to independent mental laws—laws distinct from those governing the physical object (the brain)? Let's delve deeper into this question.

Let's examine Baysan and Wilson's argument. They propose that a strong emergentist can counter the collapse objection by asserting that if we solely focus on the fundamental interactions and physical laws of the actual world, we cannot adequately account for the emergent causal powers associated with the mind. Consequently, to explain these causal powers, we must incorporate mental laws into our equations. As a result, these mental causal powers emerge as novel and irreducible in relation to the physical world and its laws, thus falling under the category of strong emergence. However, the issue with their proposal lies in the fact that this assertion alone cannot stand independently; it must be tethered to another assumption. Specifically, this assumption pertains to whether what has emerged is a new substance or object, rather than a mere property. The crux of the matter lies in understanding how an emergent entity—presumably a property—can be governed by distinct, irreducible mental laws. In other words, how can a property be subject to novel laws that the object carrying that property is not subject to? This perspective appears paradoxical. Properties define an object's nature, and their adherence to laws should align with the laws governing the objects themselves. Introducing laws from a different level—one that is not reducible to the lower level—seems implausible. If these reasons for rejecting Baysan and Wilson's aforementioned claim do not resonate with you, let's temporarily set it aside and revisit it later. The crux of their recent assertion

lays the groundwork for the argument we will delve into in the next section, advocating for non-physical substance strong emergentism. We shall return to this topic in greater detail shortly.

Baysan and Wilson propose a fourth response to the collapse objection: the emergence of a new object or substance. According to this view, strong emergent properties must find instantiation in a fresh object or substance. In essence, strong emergent properties imply the involvement of a novel entity. This interpretation appears to be the sole reading of strong emergentism that can withstand the collapse objection. Consequently, our assessment of Baysan and Wilson's responses leads us to conclude that emergent causal powers can only evade collapse into lower-level causal powers when we regard the emergent entity not merely as a property, but as a distinct object or substance. In the subsequent part of this article, we will delve deeper into this issue.

Having evaluated the collapse objection, let us now turn our attention to the third criticism of strong emergentism.

Does the idea of strong emergentism really solve the problem?

Brendan Rickabaugh contends that the concept of emergentism serves as merely a label for the mind-body problem, without truly resolving the underlying issue (Rickabaugh, 2018, pp. 73-86). According to him, both the emergentist and non-emergentist approaches acknowledge the correlation between mind and body, attributing mental phenomena to physical processes. However, this explanation lacks the explanatory depth needed to address the fundamental 'why' question. Despite this critique, it appears that Rickabaugh's argument may stem from a misinterpretation of emergentism's nuances.

Emergentists do not claim that the concept of emergence can fully explain the 'why' question regarding the mind-body correlation, especially when we consider this question in terms of providing a mechanistic explanation. The mind-body problem delves into the intricate relationship between the mind and the body. For instance, proponents of identity theory attempt to resolve this problem by asserting that these seemingly distinct entities are, in fact, one and the same. On the other hand, Parallelists propose that the mind and body exist independently, with a divine connection ordained by God (Kulstad, Mark, & Laurence Carlin, 2020). Additionally, scholars like Jonathan Lowe (Lowe, 2010) and William Hasker (Hasker, 2018) suggest that the mind emerges from the body—specifically, the brain—while retaining certain irreducible causal powers. Each of these perspectives provides an answer to the 'why' question at a particular level.

However, let us also consider an alternative interpretation of the 'why' question. Rickabaugh may argue that these answers fail to fully explain the 'why' question, as true resolution requires demonstrating the necessary connection between mental and physical states. However, if this is indeed Rickabaugh's perspective, we can pose a counter-question: Do we possess a comparable level of explanation concerning the relationship between physical objects? This inquiry holds significant importance. Consider the scenario of two identical poles of a magnet repelling each other. In this case, our observation reveals a mere succession and correlation between these two events. Essentially, we must acknowledge that these two objects inherently possess the ability to exhibit this correlation, and we can delve no further. A more fundamental explanation eludes us. Interestingly, emergentists propose a similar level of explanation for the mind-body correlation. When the constituents of the brain attain a certain complexity and interconnectedness, they give rise to an entity known as the mind. Yet, just as we cannot explain why the identical poles of a magnet repel rather than attract, we remain uncertain about why the brain generates a mind—specifically, when it reaches a particular level of complexity—instead of producing an entirely different creature. Therefore, this matter does not constitute a unique weakness exclusive to emergentism; rather, it reflects the broader epistemological limitations inherent in human understanding of causality, whether in the context of physical-physical or physical-mental interactions.

Sorites problem

The Sorites problem presents a metaphysical paradox that revolves around the concept of vague predicates. Specifically, it challenges our ability to define clear boundaries for terms like "heap" and "bald." Let's delve into this intriguing puzzle. Imagine a heap of sand, composed of a million grains. Now, consider the process of removing grains from this heap, one by one. Initially, we can confidently call the object in front of us a heap. But as we continue this gradual removal, we reach a point where only a single grain remains. At this juncture, it no longer seems appropriate to label that solitary grain as a heap. The crux of the matter lies in determining precisely when we transition from heap to non-heap. Brendan Rickabaugh has further explored this enigma within the context of emergentism (Rickabaugh, 2018, p. 80).

Rickabaugh posits that, according to emergentism, a specific level of brain complexity, at a particular moment, triggers the emergence of consciousness. Let's explore this intriguing scenario: Imagine that God, possessing

omniscience, embarks on the creation of a human mind. With meticulous care, God assembles the brain's structure atom by atom. Each grain of the brain contributes to its intricate complexity. As the process unfolds, the brain's architecture reaches a critical point: if God places the final atom in its precise position, emergence occurs—the birth of consciousness. Now, consider the following: Initially, we assume that a total of n atoms is necessary for this emergence. However, intriguingly, the current count stands at n-1 atoms. Rickabaugh claims that:

> There is no metaphysically significant difference between having n-1 atomic simples behaving in a certain way and having n atomic simples behaving in a certain way. The two cases do not differ in a metaphysically significant way at all. However, according to emergent dualism, the soul comes into existence once 1 is added to n-1. (Rickabaugh, 2018, p. 80)

Rickabaugh asserts that our intuitive understanding does not require a distinction between n and n-1 for determining the existence or non-existence of the mind. Consequently, he argues that strong emergentism is flawed.

However, it appears that Rickabaugh is conflating two distinct types of dispositions: the binary "zero-one" dispositions and the more nuanced "spectral" dispositions. Let's define a 'zero-one disposition' as a state that doesn't exist at time t1 but abruptly emerges at time t2. For instance, think of an electric current in a circuit—it either exists or it doesn't. While the current's intensity can fluctuate, at any given moment, it's either present or absent. But let's consider the ability to roll. Imagine a billiard ball rolling smoothly. Now, let's remove an atom from its surface. Even with this tiny alteration, we can still consider it a rolling object. If we continue this process and remove a quarter of the outer surface of the billiard ball, it can still roll—albeit with less vigor. Let's call this unique disposition 'spectral.' Now, let's shift our focus to the mind emerging from the brain. We can posit that the brain's atomic dispositions must reach a certain threshold for emergence to occur. If even one atom falls short of this level, emergence will not take place. It's akin to an electric current that won't function if there's even a minor disruption in its circuit. With these explanations in mind, let's revisit Rickabaugh's assertion. According to Rickabaugh, the difference between having n-1 atoms and having n atoms in the brain is not a crucial metaphysical distinction that can determine whether the mind emerges from the brain. However, Rickabaugh's error lies in confusing *the instant of emergence* with *the subsequent moments*

that follow. It is indeed true that we not only rely on strong intuition but also possess sufficient experimental evidence. This evidence demonstrates that increasing or decreasing a significant number of brain atoms does not significantly impact the functioning of the brain and mind. However, this phenomenon occurs because if an atom or even a portion of the brain is destroyed, and its function is crucial for a person's survival, other brain atoms seamlessly take over that function. It is precisely based on this fact that we intuitively recognize that having n-1 brain atoms is metaphysically irrelevant to the emergence of the mind. But it's essential to note that this intuition arises from the moments after emergence, and we must not conflate it with the precise moment of emergence. Just as an electrical circuit must be fully closed and connected for a current to flow through it, the brain must attain a specific level of complexity and proper interaction among its components to facilitate the emergence of the mind. Allow us to delve deeper into this explanation.

Let's consider the number of atoms (n-1) in the brain as the set A. Imagine that A contains, for instance, one hundred atoms, and these atoms play a crucial role in the emergence of the mind. Now, if one of these atoms were to be missing, a compensatory adjustment would need to occur in the dispositions of the remaining 99 atoms. This compensation aims to fulfill the loss of dispositions caused by the absent atom. From these considerations, we can grasp the rationale behind the dualistic claim: there must exist a certain level of complexity—or, in Charles Martin's terminology, a network of dispositions—within the brain for it to generate consciousness. In essence, there is a specific arrangement of atoms, a requisite level of intricacy, necessary for the emergence of the mind.

In the preceding section, we undertook an evaluation of the most significant criticisms directed at the concept of strong emergentism and demonstrated that none of these critiques hold substantial weight. In the subsequent section, we will present an argument in favor of non-physical strong emergentism.

An argument for non-physical strong emergentism

In this section, we begin with two presuppositions: First, we assume our commitment to strong emergentism. Secondly, we posit that concrete objects must possess a substance that encompasses both physical and mental properties, thereby rejecting the Bundle Theory concerning objects. Given these assumptions, we aim to argue that coherence can only be achieved if we conceive of the emergent entity as not merely physical. In other words, our argument opposes thinkers like O'Connor and Jacobs, who accept strong

emergentism while also regarding the emergent entity as a substance—albeit a physical substance. This argument relies solely on conceptual analysis, delving into the concept of strong emergentism, its underlying assumptions, and its implications. First and foremost, let's address two preliminary points that bear striking resemblance.

John Heil presents the initial point, drawing from his flat ontology (Heil, 2012, ch. 2). Despite diverging from the prevailing current in contemporary philosophy, Heil's ontological perspectives warrant careful consideration. Unlike many of his contemporaries, he rejects the notion of reality as layered, opting instead for a flat conceptualization. According to him, the layers we encounter in reality emerge from our descriptions, rather than being inherent to the nature of reality itself. While we won't delve into a detailed exposition of his perspective, it's essential to highlight that, in his view, structural properties are not fundamental properties. Instead, they constitute the very arrangement itself (Heil, 2017, p. 49). To illustrate this assertion, let's consider the concept of God and pose the question: Can God create the atoms and molecules of a soccer ball individually, yet the resulting soccer ball cannot roll? If our answer to this query is negative, it implies that we should not regard the structural properties of objects as fundamental properties existing independently of the arrangement of their constituent parts. Instead, we should view these properties simply as outcomes arising from the specific arrangement of those parts. O'Connor and Wong also emphasize a similar perspective, albeit with distinct reasoning. They define structural properties as follows:

> A property, S, is structural if, and only if, proper parts of particulars having S have properties not identical with S and jointly stand in relation R, and this state of affairs *is* the particular's having S. (O'Connor & Wong, 2005, p. 663)

According to this definition, there exist two types of properties: basic physical properties and structural properties. Structural properties are essentially arrangements of components that possess fundamental properties. In other words, there is nothing more to having a structural property than being composed of parts with specific other properties and bearing certain relations to one another—it is ontologically reducible (O'Connor & Wong, 2005, p. 663). For instance, consider the fluidity of water. It arises from the dynamic arrangement of water components. However, the strong emergent property is not the arrangement itself; rather, it is a fundamental property.

However, if we accept this assertion, it leads us to the conclusion that emergent properties necessitate emergent *individuals*—what O'Connor and Wong refer to as *composite individuals*. In simpler terms, these new properties, being fundamental, rely on fundamental *individuals* or *substances*.[1]

We cited the two points from Heil, O'Connor, and Wong, not to build our central argument on accepting every aspect of their views. Instead, our intention was to highlight that these distinct lines of reasoning converge toward a relatively common conclusion: *fundamental properties necessitate a fundamental substance.* In other words, if strong emergent properties transcend mere arrangement (as assumed by the irreducible causality of strong emergentism), they inevitably require an individual or substance distinct from the arrangement of parts. This individual or substance serves as the bearer of these fundamental properties. However, in the context of structural properties, since these properties essentially constitute the parts themselves, there is no necessity for a new substance. But if strong emergent properties extend beyond the mere arrangement of parts and, in this sense, are fundamental metaphysically, there must necessarily be a new bearer or substance to which that property belongs. According to Heil, the truth-maker for structural properties does not lie beyond the arrangement of parts. However, if an object is assumed to possess a property with independent causal power (as per the strong emergentism assumption), a distinct truth-maker separate from the initial object is required to account for this causal influence.

Now, based on these considerations, here is the argument:

1. Properties represent the ways of existence for the substance that bears them (a metaphysical assumption).

2. Mental properties are fundamental; they are not mere epiphenomena and possess independent causal powers (the strong emergentist assumption).

3. Fundamental properties necessitate fundamental substances (an assumption of substance emergentism).

4. The mind exhibits strong emergence (according to the substance strong emergentism assumption).

5. Therefore, the mind qualifies as an emergent substance.

6. The substance carrying these fundamental and non-epiphenomenal mental

1. Heil also acknowledges this entailment. According to him, every substance must be simple (whether we interpret the simple substance as Spinozian, Democritus, or otherwise). Since structural properties are not fundamental properties, genuine emergence will only manifest when a simple and emergent substance coexists (Heil, 2012, ch. 2).

properties cannot be *merely*[1] physical (as stated in our initial claim).

7. Consequently, the mind is a mental or non-physical substance.

The sixth premise of the argument presents a challenge. In the following, we will attempt to clarify this premise. Let's consider the following argument:

1. Properties represent the ways of existence for the substance that bears them (a metaphysical assumption).

2. Mental properties are fundamental; they are not mere epiphenomena and possess independent causal powers (as per the strong emergentist assumption).

3. The fundamental way of being of a thing cannot differ in nature from that very thing (our new claim).

4. The substance carrying these fundamental and non-epiphenomenal mental properties cannot be *merely* physical (as stated in premise 6 of the above argument).

The central premise of this argument lies in premise 3, which introduces our new claim. When contemplating mental properties as fundamental, we encounter two potential paths. First, we may regard the emergent substance as physical, akin to the perspective of O'Connor and Jacobs. According to their proposal, this substance corresponds to a human organ—a body with a specific function. However, this function dissipates upon death, leaving behind a lifeless corpse (O'Connor and Jacobs, 2003). Alternatively, our stance posits that the emergent substance cannot be merely physical in nature. Charles B. Martin aptly notes, 'a philosophical position draws strength from the weaknesses of the positions opposed to it' (Martin, 1979, p. 10). Let us now explore the clarity and acceptability of O'Connor and Jacobs' proposal.

It appears that understanding their proposal remains elusive. How can we assert that a physical substance possesses a fundamental yet non-physical mode of existence (i.e., property)? In simpler terms, how can an object's *fundamental* and *irreducible* way of being *diverge* from its inherent nature? If we were to disregard mental properties entirely, neglecting their irreducible causal powers, we would circumvent the aforementioned dilemma. In such a scenario, mental properties would cease to be the *fundamental* way of being of a substance; instead, they would either align with physical properties (akin to reductionist theories) or exist in a parasitic and epiphenomenal manner (akin

1. The term "merely" is crucial here, as we do not aim to disregard the assertions of individuals like Jonathan Lowe. Lowe contends that the mind is fundamentally a physical-mental substance, implying that despite its simplicity, it possesses both physical and mental properties. Therefore, it is not merely a mental substance.

to epiphenomenal theories). However, when we view mental properties not only as entities that inherently exist but also as possessing irreducible causal powers (a strong emergentist assumption), we encounter a paradox. These fundamental mental properties cannot be merely equated with physical properties. Charles Martin aptly describes properties as 'things *about* things' (Martin, 1980: pp 9-10). The question arises: How can something that pertains to an object imply a nature different from that very object? In other words, how something about something is not really about it. When we consider the concept of property and substance, it becomes evident that an original and fundamental property alone cannot fully reveal the nature of the substance that possesses it. Now, let's focus on mental properties. If these properties possess additional, irreducible causal powers, then these powers must be associated with a new substance—one that goes beyond the purely physical. This conclusion arises because if mental properties were *merely* physical, all their causal effects would ultimately be *reducible* to the physical level. However, this contradicts our initial assumption regarding strong emergentism.

If these pseudo-arguments cause you to question the clarity of your comprehension regarding O'Connor and Jacobs's assertions, then this article has fulfilled its purpose. It would be considerably simpler and more understandable if we refrained from regarding emergent substance as merely physical. In this context, it becomes evident that *if* we embrace strong emergentism, it would be at least much more *understandable* if we refrained from regarding the emergent entity as merely physical but rather as a substance that necessarily incorporates some mental and non-physical aspects.

Conclusion

This article addresses two key problems: a) whether the concept of strong emergentism is defensible, and b) whether the emergent entity can be regarded as merely physical. In response to the first issue, we meticulously examined the most significant criticisms leveled against strong emergentism. Our analysis demonstrates that none of these critiques fundamentally undermine the idea. Strong emergentism remains intelligible, and the substance-based version of this concept remains robust. Furthermore, the sorites problem can be resolved by distinguishing between the moment of emergence and subsequent moments. Regarding the second problem, we scrutinized O'Connor and Jacobs' proposal in light of the property-substance relationship. Our argument contends that a clear understanding of strong emergentism emerges when we refrain from viewing the emergent entity as merely physical.

Conflict of Interests

The authors have no competing interests.

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