

# **Emergentism and Sadra's Psychology; A Common Physicalistic Challenge**

## **Abstract**

This paper first explores in detail a regenerated theory in philosophy of mind, known among late philosophers as “emergentism”. By distinguishing strong and weak versions of the theory, I explain two important explanatory challenges presented by physicalists against this theory.

In the following, I provide a brief overview of Mulla-Sadr's theory of the incipience and degrees of the soul, examining similarities and differences between this theory and strong emergentism. Then, underlining the main aspects of similarity between the two theories, I consider the challenges presented by physicalists against emergentism as reconstructible against Mulla-Sadra's theory.

Surveying some explanations by Sadraean philosophers of the soul-body relationship, I ultimately argue that Mulla-Sadra's theory is inadequate in face of the objections and doubts raised by contemporary physicalists. My assessment is that Mulla-Sadra's philosophy is in need of further development to meet those explanatory challenges.

## **Keywords:**

Emergentism, Mulla-Sadra, Corporeal incipience of the soul, Physicalism, Mental causation, Mind-body problem

## **Introduction**

According to emergentism, emergent entities (both substances and properties) emerge from more basic and fundamental entities, to which they are indeed irreducible. Although the emergent entities only exist as long as the relevant basic entities exist, the former are, nevertheless, distinct and different from the latter. Tim Crane defines two components essential to the emergentist position: "dependence" and "distinction"; that is, mental properties are properties belonging to physical objects and dependent on them but different from physical properties (Clyton, 2004, pp. 38-39).

According to emergentism, there is a hierarchy of complexity in material levels, including physical, chemical, biological, and psychological levels in an upward order. Material kinds at each level are fully compounded from a variety of lower-level kinds ultimately ending up in particles of the fundamental level. Thus, physics is at the basic level of the hierarchy of science. Material substances at each level have certain relations – specific to their own level – and any science is partly concerned with the study of these specific organizational relationships at a given level to formulate the rules governing them - emergent laws that emerge from the rules governing the lower levels and are by no means derived from them or reducible to them. (See Mclaughlin, 2008, pp. 19-21)

## **Non-reductive Emergentism vs. Materialistic Emergentism**

Emergentists are often counted as physicalists in the sense that they just believe in physical substances and reject such a thing as a metaphysical substance (like Cartesian souls). Thus, from an emergentist point of view, the realm of the actual world – or at least the human beings – remains within, and does not go beyond, the limits of physical substances. But, there is no consensus among them on whether mental properties – and not mental substances – are physical or nonphysical. A group of emergentists consider emergent mental properties as nonphysical and irreducible to the level of physics, while the other group still insists on the physicality of these properties.

How, then, can an emergent property be independent of, and irreducible to, the base and origin of its emergence? The fact is that, for non-reductive emergentists, an emergent phenomenon is a coin with two sides; on one side, it is dependent on its physical basis, and on the other side, it is independent of it. In the literature, independency of an emergent entity has been articulated in different ways, including the ideas that the emergent phenomenon is irreducible to, inexplicable and unpredictable from, or multiply realizable at, the base level. (Bedau & Humphreys, 2008, p. 10)

Such properties are applied to the whole system but are not applicable to its single components. For example, the word "liquid" cannot be applied to a water molecule. Likewise, a single monomer does not possess the property of

"elasticity", but when a number of monomers connect in a chain, the resulted polymer has the elasticity property. This sense of holism is often considered as a component of emergentism.

### **Strong and Weak Emergentism**

Pointing to the confusion resulted from uses of the term "emergentism" in science and philosophy, David Chalmers distinguishes between at least two different notions thereof: "weak emergentism" and "strong emergentism". On his view, it can be said that a high-level phenomenon "strongly" emerges from a low-level domain if the truths concerning high-level emergent phenomenon are not even deducible in principle from truths in the low-level domain. We can say that a high-level phenomenon emerges "weakly" from a low-level domain if, however, truths concerning that emergent phenomenon derives from the principles and rules governing the low-level domain in some way (see Chalmers, 2006, pp. 244-245).

Clearly, if there actually is a strongly emergent phenomenon, it affects our ontology. However, the existence of a phenomenon that merely emerges weakly from the domain of physics and is in principle deducible from features of the physical world does not threaten the completeness of physical laws. A clear case of a strongly emergent phenomenon in the view of some philosophers, such as Chalmers himself, is the phenomenal consciousness, or according to Thomas

Nagel "what it is like to be a creature". In fact, if consciousness is a strongly emergent entity, the laws of the level of consciousness will not be derived from physical laws. In other words, a possible world can be imagined where the laws of physics are applicable, but there are no laws of the level of consciousness (such a world can be called a "zombie world").

John Searle, having explained two types of emergentism similar to weak and strong versions in Chalmers's view, rejects the possibility of taking consciousness as a strongly emergent entity, however. Searle takes as an example a system, S, made up of elements, a, b, c, ... . There are properties of S that are not necessarily properties of a, b, c ... For example, S might weigh 10 pounds, but none of its molecules weighs 10 pounds. Searle calls such properties "system properties". The shape and the weight of the stone belong to this category of properties.

But certain other system properties cannot be made up merely of the composition or the arrangement of the elements. Such properties have to be explained in terms of causal interactions among the elements. Searle calls this second category "causally emergent system properties". Solidity, liquidity, and transparency are examples of such properties. Thus, "consciousness" is, in Searle's view, a causally emergent property. Consciousness is an emergent character of certain neuronal systems in the same way that solidity and liquidity are emergent characters of molecular systems. This is to say that, in Searle's view, the existence of consciousness can be explained in terms of causal interactions between elements

of the brain at the micro-level, but consciousness cannot be deduced from the sheer physical structure of the neurons without some additional account of causal relations between the elements of the brain.

Searle suggests that the conception of causal emergence – which he calls "emergent1" – has to be distinguished from a stronger conception of emergence – which he calls "emergent2". In his view, a property is emergent2 if and only if that feature is emergent1 and has causal powers that cannot be explained by the causal interactions between the elements of the system. If consciousness was emergent2, then it could cause things that could not be explained by the causal relations between neurons. The raw idea behind such a view is that consciousness springs out due to the behavior of the neurons in the brain, but once it has sprung out, it will then have a life of its own. In Searle's view, consciousness is emergent1 but not emergent2 (see Searle, 2008, pp. 69-70).

### **Emergentism and Mind-body Supervenience**

The main idea of the mind-body supervenience is that objects that are indiscernible in their physical properties will also be indiscernible in their mental properties. Supervenience is a relation, where some properties supervene on other properties such that changes in the base properties cause changes in the supervenient properties, and of course the supervenient properties might, unlike the base properties, be non-physical.

Jaegwon Kim argues that every emergentist has to accept the mind-body supervenience. Consider a situation where a mental state such as pain emerges from a specific combination of neural states. It is unlikely for any prominent emergentist to deny that if a completely identical physiological state reoccurs, a completely identical mental state will emerge too. We must consider supervenience as an essential component of emergentism (See: Kim, 2006, p. 193).

But the main question is whether supervenience laws are fundamental and irreducible laws, or are laws derived from the level of physics? If some of the principles of supervenience are among fundamental laws, then the features of consciousness will be emergent features, but if supervenience laws are derivative (non-fundamental), then the character of consciousness is considered as resultant (rather than emergent).

### **Problems of Emergentism**

While emergentism attempts to preserve its commitment to the general physicalist framework and avoid introducing a domain of nonphysical entities – such as the Cartesian soul – in philosophical ontology, there are, nevertheless, different respects in which it still faces serious problems posed by physicalists. Here, we mention two important problems in this regard:

## **1. Ambiguity in the mechanism of supervenience**

Physicalists note that supervenience merely makes claims about determination or necessitation of a property, b, by a set of other properties, A, without saying anything about how b is derived or resulted from A, or about how the fact that an object has b can be explained in terms of the fact that it has A.

Opponents of emergentism believe that supervenience, while necessary for emergentists, is not sufficient. In Kim's view, supervenience simply expresses an interesting pattern of covariation between two sets of mental and physical (bodily) properties. Irreducibility of emergent properties to their base properties just gives us a negative account. It means that it tells us about "what is not" an emergent entity, while remaining silent about "what it is". Kim believes that emergentists must seek to provide a positive description of emergence that goes beyond supervenience and irreducibility. Unless this is done, the thesis that mind emerges from body remains uninteresting and without much content (see: *ibid*, pp. 197-201).

## **2. Mental Causation**

We all believe that mind has the ability to make causal effects in the physical world; be it a mental-mental causation (e.g. "believing" that ice cream is delicious causes a "desire" to eat it), or mental- physical causation (e.g. the "desire" to read

a book causes the "act" of reading). But how can this be philosophically explained? Mental causation is considered as an issue that every thesis about the mind-body relationship must have an idea to explain.

In his formulation of the problem of mental causation for emergentists, Kim maintains that everyone who wants to talk about the causal effects of emergent properties will be faced with the following pattern: when a mental property M emerges, it supervenes on certain specific physical properties, and the physical property P can causally affect the production of various behaviors without any problem. Now what causal efficacy remains for M? It seems that M is excluded from having a causal efficacy by P. The problem of causal exclusion gives us the impression that mental properties are in a causal competition with their basic physical properties – a competition in which physical properties are connected to physical effects (behaviors) without any problems, and consequently, mental properties must either find a way to do the same action already done by their basic physical properties or face a causal exclusion.

In fact, the affirmation of the causality of M at time t and the denial of the causality of P at t is a clear violation of the principle of physical closure. But to affirm that P has a physical cause as well will lead to the following question: What causal operation remains for M to contribute? Thus, the mental causation will be subject to causal exclusion and the physical causation will have a priority. Besides, the idea of there being a causal relationship between P and M is not

satisfactory, since it faces the problems of mental-physical causation and leads to the violation of the principle of physical closure (see Kim, 1998, pp. 41-44).

“Overdetermination” is a condition in which there are two distinct and sufficient causes for one effect; this means that even if one of the two causes (e.g. the mental cause) did not exist, the effect would still happen thanks to the other cause (e.g. the physical cause). However, this is in serious contradiction with the general intuition about the causation of mental states for physical states.

This argument will either lead to reductivism (the reduction of mental properties/states to a purely physical level) or eliminativism (which just believes in mental concepts, but not mental entities in the world). According to Connor and Churchill, one reply to such a conclusion from the causal exclusion argument is to consider a third option (no reductionism, and no eliminationism, but emergentism). In their view, the rejection of the principle of physical causal closure is enough to block the eliminative or reductive conclusions (see Connor & Churchill, 2010, pp. 48-54). It is clear, however, that critics of emergentism regard the rejection of physical closure as a departure from the completeness and predictability of physics in relation to physical events, and thus, they will not allow it.

Of course, it must be noted here that the pattern of the causal efficacy of nonphysical properties should not be compared with the schema of causal powers at the level of physical properties. Naturally, if, in accordance with strong

emergentism, we believe in a level beyond physics, which is specific to mental properties, then it is quite possible to shape our idea of the manner of interactions between this layer and underlying layers differently from physical efficacies and common formulas about physical causal powers. One level of nonphysical reality might exert its causal interventions through patterns dissimilar to the physical formulas.

However, the above account does not give us a positive idea of what these patterns are. Moreover, the critics of emergentism could still object that the intervention of the level of nonphysics in the level of physics – even through patterns dissimilar to the formula of physical causation – still involves the intervention of the nonphysical realm in the realm of physics. It is unclear how defenders of the idea insist on saying that they have not violated the principle of physical closure.

Advocates of emergentism have, moreover, tried to argue that causation of mental properties for neurochemical and physical properties is not a case of downward causation. They explain that the causation of the mind for the body is what should be called "systematic causation". Of course, this version of emergentism also rejects the layered model of ontology on which the being is divided into a hierarchy of discrete levels. On this view, the universe is not a hierarchy of autonomous levels including atoms, molecules, cells, and the like, but a network of mutually embedded and inextricably interconnected realities. That is, mental

properties are not at a higher level than biological (neurochemical) properties. Therefore, one had better divide the world into systems and subsystems, rather than levels and sublevels. In this approach, the violation of the principle of physical causal closure will no more be a cause of concern (Silberstein, 2006, pp. 204-205).

But it seems that we are still far from the explanation of causal relations between mental properties and physical properties. In any case, we have both physical and nonphysical subsystems in a system. How do these two parts of a system causally interact with each other? We are still speaking of non-physical mental properties that their non-spatiality persists, even when they are placed in a system. Now, how can non-spatial properties – even when placed in a system –causally affect the spatial and directed physical properties within the same system? Replacing layers by systems does not seem to solve this explanatory gap.

### **Mulla Sadra's Plan: Two-fold Monism with a Corporeal Incipience**

Sadr al-Muta'allihin, however, considers the mind as a single substance with two aspects: material (body) and immaterial; that is, in his view, the body is also a degree or an aspect of the mind itself. He distinguishes three kinds of substantial existence: pure material existence, pure immaterial existence, and the existence of the soul. In this classification, Sadra first divides forms into material and

immaterial, and then, he introduces two types of material forms; the forms submerged in matter,<sup>1</sup> and the forms transcending from matter:<sup>2</sup>

"The realms of existence are three: the realm of intellect, the realm of soul, and the realm of nature. The first is entirely immune to multiplicity, the second is immune to spatial plurality and material division, and the third is subject to a range of pluralities, contradictions, and divisions" (Sadr al-Muta'allihin, 1981, vol. 9, pp. 61-62).

Accordingly, the existence of the soul is neither purely material nor purely immaterial. But the main point in Mulla Sadra's view, which is largely consistent with the strong emergentist theory of philosophers from the 20<sup>th</sup> century on, is the "corporeal incipience (*al-ḥudūth al-jismānī*) of the soul". In Sadr al-Muta'allihin's view, the soul has stages and degrees and it starts out with the lowest and most basic level of matter, from which it comes into being. In other words, the soul starts out as purely material and corporeal, but gradually and over time and through its substantial motion, it becomes more intensified in its existence (*al-ḥaraka al-jawharīyya*), existentially expanded, and qualified to possess an immaterial dimension and its graded perfections (Sadr al-Muta'allihin, 1982, p. 235). He analogizes the corporeal incipience and the initial need of the soul for the body and its later independence from the body and its spiritual

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<sup>1</sup> Ṣuwar munghamira fi l-mādda

<sup>2</sup> Ṣuwar murtafi'a 'an al-mādda

survival to a fetus that first needs the womb and its mother, but later gains independence from both (Sadr al-Muta'allihin, n.d, p. 170).

Therefore, in Sadra's view, human souls are material forms, whose incipience is also material. Of course, gradually and after obtaining a certain capacity in matter, they transcend from it to an immaterial state, whilst the very state of immateriality is, in turn, a gradable state that has levels and can become intensified or declined in its existence through a substantial motion. Moreover, it should be noted that immaterial soul and material body must be considered as the two aspects of a single substance, which is the human mind.

### **Affinities and Difference between Sadra's Theory and the Emergentism**

The examination of the idea of the corporeal incipience of the soul reveals that it seems close and similar to emergentist theories; that is, to the strong emergentist theories that consider the mind to go beyond the level of physics, and yet be the result of a certain degree of complexity in physics from which it emerges. In this respect, Sadra's theory is very similar to emergentism, while it was presented about four centuries prior to the introduction of emergentism.

However, the main difference between the views of emergentists and Sadr al-Muta'allihin is that they believe in the supervenience of metaphysical properties on, and their emergence from, pure physical substances, while Sadra does not

consider the mental level as properties of the body; in his view, the soul is *the form and the first perfection* for the natural body that, forms a new natural specie through its inherence in the body. This form and first perfection determine the species, and its attachment to the body is essential (rather than accidental) (Sadr al-Muta'allihin, 1981, vol. 8, p. 12). Thus, the soulhood of the soul – namely its attachment to, and control and manipulation of, the body – is part of its essence. On this view, the body is not even a matter for the form of the soul; instead, the combination of body and soul is a new single substance, whose matter is the preceding form (that is, the form it possessed before it became a human being).

### **The Common Challenges for Sadraism and Emergentism**

Despite its significant differences with emergentism, Sadr al-Muti'allihin's theory faces both aforementioned challenges ("ambiguity in the manner of connection" and "mental causation") that were raised against strong emergentism. Confronted with contemporary physicalists, Sadra's two-fold monism faces the question of how it explains the connection between the immaterial aspect of the mind with its material aspect. Also, which positive model does it deploy to solve the problem of mental causation? Of course, physicalists have not explicitly posed these problems against Sadra's theory, or, for that matter, they have not even referred to or perhaps studied the theory of this Muslim philosopher. But, because of the sameness of the ground of the problem and the commonality of

Sadra's theory with dualism and strong emergentism in this respect, the aforementioned problems can be reconstructed against the theory of Sadra's philosophy.

As to the first problem – the ambiguity in the manner of the connection between the immaterial and the material – to insist that Sadr al-Muti'allihin has argued against Ibn Sina's dualism – by reducing two substances (dualism) to one – cannot be the solution. For, non-physical and physical aspects of Sadra's single substance are in a causal interaction with each other, and confronted with physicalists, he inevitably has to explain this interaction to solve the above problem. Dualists were faced with this question in explaining the connection between two physical and non-physical substances, and Sadraean philosophers are also faced with this challenge in explaining the non-physical and physical levels of the mind.

By studying the work of Sadra and other Muslim philosophers, it appears that in issues pertaining to immateriality of the soul, they usually have sought to prove *why* the soul is non-physical. In parts of their work concerning the faculties of the soul, the main purpose has been to explain the multiplicity of faculties in the unity of the immaterial soul. Even in this part, we do not find any contents concerning *how* the connection between the soul's faculties and the body should be.

Of course, what has always been important in Sadra's philosophy is to provide a rational analysis based on the principality of existence (*aṣālat al-wujūd*),

gradation in existence (*tashkīk al-wujūd*), and substantial motion (*al-harkat al-jowharī*). The connection of the soul with its multiple faculties, and thereby with the body parts/organs, is drawn in the framework of this rational analysis based on the principality of existence, and is not dependent on, or in need of, empirical explanations.

However, Sadra himself has not neglected to provide an explanation based on old physics that can be highlighted regarding the problem posed by physicalists. Sadra and the philosophers before him have talked about the "vaporous spirit" or "animal spirit," which, according to them, plays a mediating role between the material body and the immaterial soul in their causal relationship.

Sadr al-Muta'allihin considers the animal spirit to be in fact a type of "subtle body", which is beyond this "dense dark body" and its subtlety and mediation between the material and the immaterial provide a means for the faculties of the soul with which to flow in the body parts. In fact, the faculties of the soul belong, in the first place, to this subtle vaporous body, and in the second place, they flow in the body parts by means of vaporous soul (Sadr al-Muta'allihin, 1981, vol. 4, pp. 151-152). Elsewhere he grounds the recourse to this subtle substance in evidence by what the physicians of that era called "spirit" (ibid, vol. 9, pp. 75-76).

Of course, today with the progress of neuroscience, it has become clear that the idea of animal spirit is basically false, and what was called so and considered to

have an intermediate nature between the material and the immaterial, can be equivalent to the electrical current generated in neurons to their ends in individual body parts. But, can such a fact account for the relationship between immaterial and material, as Ibn Sina, Sadra, and others tried to?

Indeed, it seems that, regardless of the falsity of the doctrine of old physicians and philosophers about animal spirits, it cannot provide physicalists with a clear explanation of the causal relationship between the non-physical level and the physical level. The reference to a subtle mediatory body, which has some parts of both material and immaterial features, does not answer the question about the rules of the effect of a non-spatiotemporal entity (immaterial soul) on a spatiotemporal entity (subtle body), but rather adds to the ambiguity. Should we consider the space and spatiality as gradational and having varying degrees of existential intensity and weakness within all levels from the material to the immaterial in some way, or should temporality and spatiality finally end at a point, beyond which the entity reaches the level of immateriality? If the latter is the case – which seemingly appears in many statements by Sadra and other Muslim philosophers – the question about the rules and the way of causal connection between the two sides of this border will still exist. Even similar questions appear about the interaction between the subtle body (vaporous spirit) and dense body (material body). In other words, there is a further ambiguity

involved in how a causal force is transmitted from a subtle body (without weight) into/from a dense body.

As to the second question about mental causation, the same challenge posed by physicalists against emergentism and dualism can be reconstructed against Sadra's theory. Of course, Muslim philosophers can point out, and it is indeed the case, that the aforementioned questions under the title of "mental causation" – such as the violation of the principle of physical causal closure and overdetermination – are irrelevant to their ontology. As their ontology begins with the Necessary Existence and pure immaterial world and defines multiple worlds between the material world and the higher-level worlds of existence, it does not make sense to talk about a principle of the closure of the causal chain of physical events. It is natural that, according to their view, many – if not all – of the physical events in some way occur under the causal effect of the non-physical realities, and ontological parsimony and the closure of an entirely physical chain of causes and effects must be put aside.

It is clear that the issue of overdetermination is also dimmed by believing in the correlation between the physical cause and the non-physical cause. Because, on this view, it is not possible for the physical cause to have efficacy without the operation of the non-physical cause, and consequently, we will not have two independent causes that have an effect on a particular physical behavior.

But these arguments are grounded in the intra-paradigmatic grounds of Sadra's philosophy and will be fruitless in a debate within the physicalist paradigm. To this end, it seems necessary for the advocates of Sadra's philosophy to more seriously consider empirical and physical explanations, and seek to amplify and update the explanations offered by Ibn Sina and Mulla Sadra for causal mediation between the soul and the body based on new findings of natural sciences.

## **Conclusion**

By reviewing the strong emergentism and comparing it with Sadra's psychology, we can find fundamental similarities between these two, which are primarily related to emergence of a non-physical level from the physical level.

However, there are significant differences between these two, since in particular emergentism speaks of the supervenience of non-physical properties predicated on the single physical substance (body), while Sadra's theory believes in a unique substance that extends from the material degree to the immaterial degree and forms an entirely single substance.

There are also common challenges before emergentists and Sadraean philosophers when faced with questions posed by physicalists. Most notably, the questions are concerned with the explanation of the causal relationship between the physical and metaphysical levels, and it seems that Sadra's philosophy also

requires some further elaboration and completion in order to have an effective contribution to this literature.

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