



# From the emergent property of consciousness to the emergence of the immaterial soul or mind's substance



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According to property-emergentism, consciousness is an emergent property of certain aggregate neurological constructions, whereas substance-emergentism maintains that the emergence of consciousness depends on the emergence of mental substance or soul. In this article, we presented some arguments supporting substance-emergentism by analysing various properties of consciousness, including the first-person perspective, referral state, qualia, being active, causative, non-atomic, interpretative, inferential and inventive (emanative and innovative). We also explored the impossibility of representing big images on the small monitor and the incapacity of physical entities being conscious because of their intrinsic multiplicity, absence and deficiency. These arguments, which apply the philosophy of Mulla Sadra, could be considered by philosophers of mind and religion, as well as theologians who follow some religious beliefs such as the afterlife on existence and survival of the soul. Also, we attempted to respond to property-emergentists' objections to substance-emergentism.

**Contribution:** This research contributes to prove and accept the emergence of the immaterial soul after the stages of natural evolution of the body. It uses the basics of emergentism, including natural evolution, to link science and religion in believing the existence of the immaterial soul. Demonstrating the immaterial reality of human existence provides the ground for theological issues such as afterlife and religious morality.

**Keywords:** property-emergentism; substance-emergentism; consciousness; mind; soul.

## Introduction

Psychological research indicates that accepting any view of the relationship between the soul and body seriously impacts one's basic religious beliefs (e.g. beliefs in God, celestial beings, the unseen world and the life hereafter). This matter has led to strong dualism – which emphasises that the mind or soul and body are different, entirely independent substances – and emergentism – which maintains that the mind and brain are qualitatively different but interdependent. Both views are positively associated with religious beliefs. Meanwhile, monism, which states that the mind and the brain are fundamentally and physically the same, is negatively associated with religiosity (Rieki, Lindeman & Lipsanen 2013).

Experimental evidence suggests that consciousness has a neural substrate (Koch et al. 2016) and emerges from the appropriate function of an organism (i.e. synergism and the nonlinear bottom-up causation of its components). However, consciousness cannot be found in any given component (or sum of components, such as a group of neurons) in any organism. Thus, consciousness is thought to be beyond even the human's extraordinary brain system. Consciousness is a novel property that possesses top-down causal influences and powers, and it is not merely epiphenomenal.

Property-emergentism accepts the ontological distinction of consciousness, but it does not ascribe consciousness to the immaterial substance of the mind or soul. This view maintains that any given organism takes on new qualitative properties like consciousness during specific stages throughout the evolution of life (Crane 2001:38; Nida-Rümelin 2007:270). From this perspective, there is no need to posit some 'extra ingredient' to explain human feelings, experiences or consciousness, nor is there a need to include the 'mind' as an additional entity or substance (Campbell 2015:284–292).

Substance-emergentism acknowledges this physical substrate but maintains that merely physical substances cannot take on such an ontologically distinctive property. Rather, its realisation requires that a mental substance or soul emerges. In particular, this view was presented by

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William Hasker as the theory of *emergent dualism* (Hasker 1999:171–203, 2014). From this viewpoint, the immaterial soul or self 'is generated by the organic body through a natural process, rather than being inserted into the body from outside' (Hasker 2018:67).

Four centuries ago, Mulla Sadra (an Iranian philosopher, who according to Oliver Leaman [2013:146] is the most influential philosopher in the Muslim world in the last 400 years) argued that the human soul is 'bodily in its origination and spiritually in its subsistence'. He proposed that souls (whether vegetative, animal or human) arise from the nature of an organism's elements and components (the gradual and evolutionary interaction of physical components and the formation of proportional humour). At the initial processes of interaction, the emergent human soul intrinsically belongs to the body, and after passing through developmental processes and substantial motion, it transcends into substantial immateriality. Of course, as long as the soul belongs to the body at this level, this belonging and relationship between physical and mental substances will always be accidental (Mulla Sadra 1981a:347–348).

Mental states are subjective, qualitative, intentional, placeless, timeless and unextended. They are also personal, as they are accessible only to the person having them. They are not governed by physical rules, and they contradict the principles of the causal closure put forth by physics and other sciences. Reductionists omit the conceptual and ontological domains of consciousness, cognition, emotion and memory, as well as other subjective issues that clearly differ from the conceptual and quantitative realms of some properties (e.g. mass, acceleration and force) instead of explaining them (Robinson 2011:50–53).

Similarly, materialist emergentists (Bunge 2010; Searle 2007), who hold that mental states are irreducible to the level of substrate constituents but also assume that they are physical states, only reject calling them 'immaterial'. However, their reluctance to apply this term does not necessarily affect their ontological differences. Therefore, it seems necessary to investigate the different approaches that property-emergentists and substance-emergentists use to understand mental states.

The main problem of this study is that whether mental features of consciousness can be realised without the realisation of the mental substance, or does the whole or a part of the bodily system of the organism (nervous system) bear consciousness? How can we affirm the substantiation of mind by features of consciousness? At first, we study property-emergentist arguments for refuting the substance of mind or soul. Afterwards, using the fundamentals of Mulla Sadra's philosophy, we present some analyses and arguments for the existence of mental substance through consciousness.

## Reasons for denying the mind or soul

Whilst property-emergentists acknowledge the ontological distinction between consciousness from the neural substrate and physical body, they do not confirm non-physical substance or bearer for it. Some of their reasons for this are as follows.

### Correlation between the brain and mental states

Scientific researchers are continually discovering that mental states depend on 'the sub-regions of the prefrontal cortex (that) interact with each other and other regions of the brain'. Therefore, they consider the brain and nervous structures as platforms for consciousness, learning, remembering, deciding, using language, exercising the will and other mental properties (Graves 2008:154–155).

Today, the most common reason for believing that the soul exists is 'localization studies, in which regional structures or distributed systems in the brain are found to be correlated with psychological capacities' (Goetz & Taliaferro 2011:159). Even Jeeves (2004:240) holds that it 'makes a substance dualism harder to maintain without tortuous and convoluted reasoning'.

### Neural and mental disorders

The variety of mental disorders caused by impairments or incapacities of neurological functions (faculties) has also cast doubt on the emergence of the immaterial mind or soul and has led to the acceptance of materialism or, eventually, property-emergentism. As Churchland (1984) argues:

[I]f there really is a distinct entity in which reasoning, emotion and consciousness take place, and if that entity is dependent on the brain for nothing more than sensory experiences as input and volitional executions as output, then one would expect reason, emotion and consciousness to be relatively invulnerable to direct control or pathology by manipulation or damage to the brain. But in fact, the exact opposite is true. (p. 20)

### Systemism

Although property-emergentists recognise consciousness as a distinct emergent property of an organism, they attribute it to the whole system, not to a distinct substance, because of the way mental properties interweave with the nervous system.

Bayne (2018:219) compares this relationship to a photocopier. A photocopier produces photocopies as a whole, and 'what it is for a photocopier to make copies just is for its parts to be appropriately related and for them to perform their various functions'. The meaning of the whole is nothing more than that.

Faye (2019) points out that:

[N]o doubt there are neuronal processes that correspond to the mental act of interpretation, but neurons do not either 'read' or

'interpret' information; what they do is fire (or not fire) when encountering the appropriate stimuli. (p. 287)

He continues that 'it is not the mind that reads, interprets or represents, but it is the organism that does so' (Faye 2019:288).

## Arguments for the immaterial substance of mind or soul by consciousness

Unlike property-emergentism, substance-emergentism argues that the physics of the organism per se cannot bear consciousness. The realisation of consciousness hinges on the emergence of a substance that belongs to the same ontological category of the consciousness property. Following this line of reasoning, some arguments favour the immaterial substance of the mind or soul. Here, we analyse some of these arguments from a new perspective using the potencies of Mulla Sadra's philosophy.

### The difference between first-person and third-person perspectives

First-person and third-person contents are mainly distinguished by the differences between immediate (non-representational) knowledge and mediated (acquired) knowledge. From a 'third-person perspective', external objects (e.g. the earth, sky, trees, other humans and organs of one's body) are absent to us, but we can still acquire knowledge about them by using the senses and reason. Conversely, the first-person perspective is introspective, and it benefits us about our unique and direct consciousness and mental states. From her or his perspective, the knower finds the existence of the self and the existence of her or his mental states. As Peacocke (2017:289) states, the 'subject has mental states with first-person content, but only of a nonconceptual kind'. Furthermore, Baker (2005:381) asserts that 'a first-person perspective is the ability to conceive of oneself as oneself'. Baker (2005:381–382) further claims that 'even if I had total amnesia and didn't know my name or anything at all about my past, I could still think of myself as myself'.

Mental states and thoughts have first-person content, whereas physical states have third-person content (e.g. brain and nervous system functions). It would appear paradoxical to ontologically reduce the first-person content to the third-person content because their contents differ ontologically. As can be understood from Mulla Sadra, we are immediately and presentationally conscious of our essence from the first-person perspective. If this consciousness were accident for bodily substance, we would not have immediate knowledge of our essence and mental states, and we would inevitably recognise ourselves and our mental states via our mediator knowledge of that substance from a third-person perspective, which opposes the assumption. Because we are conscious of our essence intuitively and by immediate knowledge, we refer to ourselves from the first-person point of view

(i.e. using the word 'I') but refer to others from the third-person point of view (e.g. using 'she or he', 'it', 'you' or 'they'). Because we abstract concepts and a mental form from others' existences, they are representational knowledge. Here, my intuition of 'I' is possible by ignoring 'she or he' (Mulla Sadra 1981b:211–212).

Because the physical thing is a compound of elements and an aggregate of several substances, it lacks self-subsistent essence to find itself present and knows itself intuitively, but we find present our self-subsistent essence intuitively and introspectively; however, we acquire knowledge about other things, ranging from external objects and minds to organs, limbs, nervous systems and their functions mediated by the senses or rationality. The existence of what is perceived by presentation directly and for itself (not for something else) is distinct from the existence perceived by acquisition and intermediate. Therefore, an entity perceives that its essence is separate from the substrate. Thus, our essence is a non-physical substance (Mulla Sadra 1975:289–305, 1981: Vol.8: 271–273).

### Qualia

According to Baker (2005:382), the first-person perspective 'is the basis of all self-consciousness'. However, he does not consider the first-person perspective as a signifier of the immaterial existence of the mind or soul (Baker 2005:382). The existence of the mental substance or soul can be made clearer by accepting the immateriality of qualia and confirming that qualia are the raw material for the first-person perspective.

The conscious experience of a qualitative state inherently depends on something for its existence. Thus, such an experience is necessarily privately owned by the person having the experience. It is the consciousness of an entity. Property-emergentism holds that evolutionary processes give rise to the emergence of qualia. However, given the emergence of these qualitative properties, we must also accept the emergence of a subject (experiencer) who precedes and experiences these qualitative properties. According to Searle (1997:212), 'brains have a remarkable biological capacity to produce experiences, and these experiences only exist when they are felt by some human or animal agent'.

If qualia are ontologically distinct from the brain and nervous system, then how are the brain and nervous system conscious of qualia? If the consciousness of qualia itself is ontologically distinct from the brain and nervous system, we cannot ascribe consciousness to the brain because the phrase 'conscious brain' implies two contradictions. The physical substance of the brain is not the conscious experiencer of non-physical qualia, nor is it a person who is pleased with honesty, justice and bravery whilst suffering from unfairness or hearing illogical statements. This must be the case unless we assume the immateriality of the brain, which contradicts our main assumption. It seems we must accept that the

emergence of mental substance precedes the perception of emergent properties of qualia. The substance that experiences and is conscious of qualitative states also experiences feelings and emotions.

Mental states are dependent entities, meaning they cannot exist without another thing. As Mulla Sadra argued, mental-dependent (owned) states (e.g. joy or pain) cannot exist without the acknowledgement of the owner (our mind). However, we sometimes feel our essence even when we do not feel any of these states. This perception of one's essence is also not feasible through thought and reasoning alone. Knowing my actions (my thoughts or doubts) or states requires knowledge of myself.

Logical reasons for the existence of self (e.g. 'I think, therefore I am') represent circular reasoning. If I had no prior subsistence, my thinking would not be related to it. I must acknowledge that I exist. Then, I can say 'I think' (Mulla Sadra 1981a: Vol. 8:43–44, Vol. 9:111). Thus, we have knowledge of our own selves before making any introspection into our own perceptual experiences and qualia.

Following the above argument, the soul is neither an object of outer sense nor one of inner sense. It precedes our senses. Kant considered empirical objects, like the body, as objects of outer sense that are located in place and relatively standing and abiding despite changing their positions and states (Longuenesse 2017:110–111). From Kant's (Longuenesse 2017) standpoint:

[T]he concept 'soul' is the concept of the object of inner sense (the object whose states are, for each of us, the sequence of our mental states, accessible through inner sense). (p. 110)

He (Longuenesse 2017) concludes that:

[T]he concept of a soul turns out to be empty. Unlike the concept 'body', it does not refer to any entity I might identify and reidentify as relatively permanent whilst its states change, as I can do in the case of bodies, whose continuing existence I can track in space whilst their states and positions change. (p. 111)

However, Kant's argument is not acceptable. We now understand that the soul is a self-subsistent and essentially conscious existent; inner senses and outer senses are its faculties, and consciousness of mental qualities (qualia) confirms and reflects its existence. As Mulla Sadra (2006:389) asserted, 'what perceives others than itself perceives its essence inter alia'. Therefore, without the emergence of this perceiver subject, it is impossible to experience qualia or perceive others. The emergent property of referral and projection state would also be impossible without this subject.

Jalal al-Din Rumi, a Persian poet (1207–1273), states that 'Consider not the world that exists without, for the true world is within the eye; when you have shut your eyes on the world, the world will not remain' (Jalal al-Din Rumi 2008:119).

Interestingly, this statement has also been mentioned by Kant (1724–1804):

[I]f I were to take away the thinking subject, the whole corporeal world would have to disappear, as this is nothing but the appearance in the sensibility of our subject and one mode of its representations. (Kant 1998:433)

## The interpretative and innovative nature of consciousness

Mulla Sadra (1981b:31–32) argued that the soul in its rational, sensory and imaginative perceived objects is more similar to an inventive agent than a passive endowed recipient. Sensory images do not automatically transfer from the nervous system to the mind (Mulla Sadra 1981a: Vol. 8:181, 1982). Rather, the soul converts them into knowledge through creativity after considering its sensory inputs (Mulla Sadra 1981a: Vol. 8:181, 1982).

This argument remains valid today. The primary sensations that are encoded as nerve impulses and electrochemical processes of neurons in the brain (when one has subjective experiences and all kinds of consciousness) are preparatory causes, not creative causes, of consciousness. Objective electrochemical activities that occur in the brain only provide the raw materials needed for experiences, perceptions and consciousness. It is the mind and its faculties that make meaning out of the electrochemical changes in neurons.

We, as the subject (mind or soul) perform creatively subjective acts, such as analysing, organising, interpreting and intending raw sensory inputs, stimuli and coded signals of nerve cells, which give rise to consciousness, love, language, art and so on. These acts are beyond passive and deterministic streams of the neural substrates, and all kinds of consciousness are ontologically distinct from the electrochemical processes of neurons. These electrochemical processes lack meaning, consciousness, emotions and other subjective states.

As an illustration, the reader makes meaning of the lines written in a book (which themselves lack meaning). Thus, the reader actively achieves conscious perceptions from the brain's electrochemical currents and the firing of neurons and their configurations. All these activities signify the subject and the substance of an ontologically distinct mind. Whilst the brain receives and encodes the information provided by objective nerve impulses, the mind decodes them as subjective consciousness and mental states.

According to Goodman and Caramencio (2013:39), 'all our perceptions are active, constantly filtering and integrating, charting rhythms'. Avicenna (1959) posited the same interpretive action of the mind in sensory perceptions a 1000 years before:

[W]e find in our perceptions meanings that are not sensed... As for those that are sensory, we see something golden and take it to be honey, and thus sweet. But that's not what the senses tell us immediately. Sweetness can be sensed, but it's not what we're perceiving now. We anticipate sweetness, but we're not



tasting it now. We've just made a judgment about it that might actually be mistaken. [The translation here is Lenn E. Goodman's.] (pp. 166–167)

This innovative aspect is clearer in intellectual abstractions and inferences, reasoning, and true and false conclusions based on pieces of evidence, indications and clues.

It is the active, autonomous and generative substance of the mind that creatively decodes and conceptualises neural codes of sensory inputs like sound waves. Several active consciousness features are because of the ability of this substance to derive meanings of limited heard voices and embody unlimited meanings from limited terms and, subsequently, to apply them in self-talks or when talking to others.

If mental states originate from brain matter without the realisation of any active or creative mental substance, particular brain states, arrangement of molecules or configuration of neurons, then the related electrochemical activities should create a particular mental state and consciousness. An example is the thought, 'Tehran exists in Iran'. However, firstly, how does the physical brain apply these emergent mental properties consciously? Secondly, how do identical thoughts exist in different brains and brain states? Thirdly, how do consciousness, inferences and postulations, as mental properties, actively change brain structure, neuron configurations and neural wiring? (Menon 2014:203). These problems mean that the subject involves activities beyond the brain and signify the mental substance. As Nida-Rümelin (2007) highlights:

No change in consciousness properties is nomologically possible without a simultaneous change in corresponding physical properties of the subject's body. No two nomologically possible individuals (whether in the same world or different worlds) can differ in their consciousness properties without a difference in the physical properties of their respective bodies. (p. 270)

Thus, the raw sensory receptions of organisms and electrochemical changes that occur and are coded in the brain depend on a conscious and creative agent beyond this system to innovate all types of consciousness.

### Monitoring visual representations and imagined and dreamed images

Perceptual images are provided by the soul, not implanted inside it (Mulla Sadra 1981a: Vol.1:266). Doubtlessly, as an individual observes passengers riding in an aeroplane, a similar image is represented inside the individual's mind, and she or he directly perceives the image. Furthermore, by mediating that image, she or he knows the passengers who ride in the aeroplane.

We have an internal monitor that displays imaginary images, like a 100-meter-tall giant; visual representations (the images of objects that we see), like an aeroplane and its

passengers; and dreams during sleep. Obviously, the images on the retina and on the TV screen (or any other physical substance) are not real. The photoreceptors that are activated in the retina, certain activated pixels and the neuronal patterns that are activated in the brain are not 3-D represented perceptual images. We represent and judge the sizes of all the images we perceive, even the images bigger than our whole body.

Where do these images exist? These visual representations, mental images and their monitor cannot be physical entities – if this were the case, the brain and body could not contain the images. Yet, we intuit these images and acknowledge their large sizes. Following the rule of the impossibility of impression of a big object on a smaller one (Mulla Sadra 1981a: Vol. 3:475–476), the monitor of these images cannot be the physical body or brain.

Moreover, no such images are represented anywhere inside the brain or body. How, then, can the nervous system be their monitor? The lights that strike the photoreceptors of the retina and neuronal processes are not mental or meaningful representations. The immaterial agent of the mind creates mental images from the physical and neural processes and depicts images larger than the entire body.

Obviously, physical memories lack any real perception and understanding of the images and their size. They are stored in the form of physical modifications that are unlike the mind, where the images are represented and perceived. Even the mind can compare the sizes of several images, signifying that the mind enjoys all these non-physical images in their real sizes and actively evaluates them.

These represented images and their conscious monitor are non-physical. There is no physical representation of imaginary, visual and dreamed images in the brain. No one can impress and copy the whole earth onto an A4-sheet by keeping its original dimensions and scale.

### Unity substratum of consciousness

Taking it for granted that certain configurations of neurons cause meanings, rational, general or particular concepts, perceptions, conscious mental states and emotions to emerge and be represented, the following questions arise. Where are these consciousness realised? What is aware of a plurality of emergent conscious states as a unified whole? Is it contained in a single neuron, an atom or across all components, neurons and atoms of a being? Furthermore, 'the unity of consciousness poses a difficult question: what is this single thing that has auditory and olfactory and visual and tactual and gustatory sensations?' (Zimmerman 2011:170–172).

All mentioned forms of consciousness are simple, non-compound and indivisible, and they lack position, form, quantity and volume. Whatever inheres in the composite body or subordinate to it must (either intrinsically or accidentally) assume a certain position, form, quantity,

volume and size; it must also be divisible, spatial and distributed amongst the plurality of its physical parts. Physical accidents like blackness, taste, pleasant smells, warmth and magnetism are such subordinates to their physical substrate (Mulla Sadra 1981a: Vol. 9:111–112).

Also, no kind of consciousness is self-subsistent or exists for itself. If consciousness had self-subsistent and for-itself substances, then, contrary to the claim of property-emergentists, such consciousness would not be properties (physical or body accidents), as they would be substances. Also, we would find ourselves as subjects of this consciousness such that we may be empty of them – however, the body or brain cannot find itself, and a bundle of conscious phenomena is not one subject. Therefore, the mind is the substance and substratum of consciousness, concepts, imaginations and mental qualities (Mulla Sadra 1975:297–298).

As Hasker (1999:190) claims, 'A conscious experience simply is a unity, and to decompose it into a collection of separate parts is to falsify it'. The brain is composed of about 100 billion neurons, and each brain region is specific to particular mental and psychological perceptions and activities. Accordingly, it seems impossible for a unified and indivisible consciousness to be accidental to a body and perceived by that body (Hasker 2011:207–209, 2018:69–70). Nevertheless, consciousness must eventually be realised inside something. According to Hasker (1999), consciousness is realised inside the non-compound (simple) substance of the mind or soul.

Furthermore, Mulla Sadra argues that the physical object is inherently multiple (i.e. it is an aggregate of several substances). Because physical objects have position and location, their essence is mixed with lack and absence. Each part of a physical object possesses a specific position and location whilst lacking the particular position and location of others. Thus, no part possesses another part, nor does any part possess the whole. Rather, they lack each other (Mulla Sadra 1981a: Vol.3:447, 2006:389).

If someone accepts some of the theories of systemism to justify the inconsistency of the brain's bearing of the unitary consciousness, difficulties will arise. For example, consciousness subordinate to this physical locus would possess a position, divisibility, volume and interference, and its existence would be atomic, not simple. Another point is that, according to the rational rule of the impossibility of impression of a big object on a smaller one, one cannot confirm that big represented images have been accidents in the brain (see the 'Monitoring visual representations and imagined and dreamed images' section for a full discussion).

Therefore, the problem remains unresolved even when the global workspace model is accepted as the substrate of consciousness because this global workspace comprises

intrinsically composite substances. The composite physical system in which the components themselves are absent from each other and lack the integrated presence for themselves and each other may not bear the integrated and non-compound presence and representation of consciousness. Whatever property, accident or action are inhered in the physical composite system is distributed amongst the plurality of the substances. Thus, it is not qualified for consciousness or other simple, non-compound or immaterial states.

Furthermore, anything that does not directly access its essence and does not find or intuit its essence is incapable of being conscious of its accidents, properties, actions and representations of objects. Analogous to the light, which is bright and brightens other objects, the mind or soul knows or finds itself essentially (because of the absence of barriers) and also knows or finds other (granted, of course, that there are no barriers for this knowing or finding). The reality of the mind or soul is the same as appearance, presence and consciousness. Here, the phenomenon is the same as noumenon.

Thus, in contrast to Bayne's (2018:219) holistic view, the best interpretation for the unity of consciousness is a non-compound substance. Therefore, the mental substance or soul should initially emerge from this integrated physical system to enable the emergence of perception and consciousness. According to Lycan (2013), if the subject and bearer of the emergent property of consciousness is body or brain:

How does the subject obtain knowledge of those of her own mental states that have the immaterial properties? A Cartesian mind knows its own immaterial properties either because they are merely modifications of it or because they are directly presented to it in acquaintance, but a brute physical brain seems the wrong sort of thing to be acquainted with immaterial properties, even if the property-instances have the spatial location. (p. 54)

### **The dependence of the object's action on its existence**

If an entity does not need something for an action (creating), then it does not need that thing for its being either because creation is based on and subsistent through existence. If an object does not exist, it cannot do anything. Thus, if an entity needs or depends on another thing for its existence, it also inevitably needs that thing to do anything – if A depends on B and B depends on C, then A depends on C. (Mulla Sadra 1975:300).

Even though the mind is created by the brain, the mind can operate independently of the brain to some degree. Not everything it does is determined by the attributes of matter. The mind does some things that the brain cannot. The mind, in some of its actions – such as decoding encoded nerve impulses, conceptualisation, creating, innovating, thinking, considering several options and their expected outcomes and

then making a choice – does not behave deterministically according to the laws of matter. Conscious, directed and willed mental activities can clearly and systematically alter brain function. Then, by proving the needlessness of our mind to the body for some of its actions, we will prove its needlessness to the body for its existence.

The outside objective world is not anything except the presence of existents, but the mind is the perceiver agent of all its conscious states and efficient cause of some. The mind or in better words, the soul, possesses ontological faculties such as efficiency, agency, design, creativity, abstracting, will, etc.

## The conscious mind and psychiatric disorders

Some scholars have trouble accepting the self-subsistent mind or soul's substance because damage to different regions of the brain and neural system leads to different disorders in the mental domain and states (Gennaro 2019). Despite their acceptance of the soul, Swinburne (2004) and Hasker (2011:216–223, 2015:160–161) consider its survival after death to be a divine miracle based on their observations of the influence of brain damage on mental disorders. Furthermore, Goodman and Caramenico (2013:237–238) propose that the 'intimate linkage of souls with brains argues against equating substantiality with separability'.

On this matter, it is necessary to consider some points. For one, different degrees of the soul (having life) emerge from different organisations of natural beings and their hierarchical complexity. The soul has an instinct interdependence on the body in the initial stage of its emergence (i.e. at vegetative life level). After substantial motion or evolution or perfection, it becomes substantially independent from the body, especially at the intellectual life level. During this stage, its interdependence with the body until death is accidental (Mulla Sadra 1981a: Vol. 9:219). The soul inherently belongs to the body at the vegetative level, even after the soul's perfect substance emerges.

Initially, the soul depends on the body, similar to how a foetus depends on its mother. The foetus will die without belonging to the mother. This foetus is influenced by the mother whilst also influencing her hormones and psychological states. After the growth process is completed, but before the foetus exits the mother's womb, the relationship between the foetus and the mother is like an accidental property. During this stage, some mutual influences still exist between the baby and mother – though, of course, in an accidental form.

Because of inherent belonging to the body at the vegetative (or even animal) level, the soul is intrinsically influenced by the body and cannot survive without it. The soul, after achieving perfection, substantiality and autonomy, still has an instinct relation with the body at the vegetative (or even

animal) level and continues to be essentially influenced by the body.

Also, by integrating some parts into a system and via the emergence of new properties at the system level, some properties become submerged. For example, water is wet even though its constitutive elements (i.e. oxygen and hydrogen) are not wet. Thus, wetness is a property of the combination of oxygen and hydrogen. This combination also eliminates these elements' property of flammability (Rousseau 2011:406–407).

If minds and bodies are two distinct entities that become united in one system, then some of the properties of the integrated system of humans will emerge. Meanwhile, because of the texture of the system, some mental and bodily properties will be obscured (submerged), restricted or constrained. As long as the soul belongs to the body (regardless of whether this dependence is instinct or accidental), this dependence has emergent influences on the mind or soul. Its soundness and health cause positive properties to emerge, whilst its malfunctioning causes negative properties to emerge. They are just emergent properties for the mental substance.

Based on the above argument, the argument for the inexistence of the substance of the mind based on observations of the neural and physical substrates of mental states and the direct influence of the physical substrate on these properties is a clear fallacy.

## Conclusion

We argue that the emergence of consciousness cannot be accepted without acknowledging the emergence of the immaterial substance of the mind or soul. The emergence of the mental substance from the complex relational network of neurons and the structure of humans is supported by several features of consciousness. These features include the ontological differences of the observer of the first-person and third-person perspectives, the inherent dependency of qualia, the unavoidable perception of one's own essence through the perception of qualia, the ontological unity of consciousness (despite the essential plurality and the absence of physical substances). Also the issues like the impossibility of the representation of big images in the body show that consciousness does not have a physical position. Consciousness's simplicity and indivisibility, active nature, creativity, and innovative and top-down causal influences also play a role.

In some stages of its evolution, the soul is completely dependent on the body and, therefore, must be considered as an emergent property (similar to cell life or vegetative life). However, after it has completed its evolution and ontologically achieved immaterial substance and autonomous agency (like intellectual life), it has only an accidental, not instinctual, dependence on the body at this level. Psychiatric disorders emerge in the substance of the mind or soul as properties

because of this accidental dependence and instinct dependence at the vegetative level. Such disorders subsist as these dependencies on the body continue.

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### Competing interests

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### Authors' contributions

Both A.E. and M.A. contributed equally to this research.

### Ethical considerations

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### Data availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

### Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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