The Self and Its Time: Islamic and Neuroscientific Perspectives in Conversation

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This article conducts a comparative analysis of the seventeenth-century Iranian philosopher Mullā Ṣadrā's perspective on identity and change with that of the German philosopher, neuroscientist, and psychiatrist Georg Northoff. A key element of Mullā Ṣadrā's philosophy is the concept of substantial movement (al-ḥaraka al-jawhariyya). By bridging neuroscientific considerations with Islamic philosophy, this study ventures into uncharted territory, presenting an innovative, interdisciplinary, and transcultural approach to the topic. The project's uniqueness lies in its juxtaposition of Mullā Ṣadrā's and Northoff's perspectives, fostering a framework for interdisciplinary discourse and cross-cultural dialogue.

Bridging neuroscientific considerations with Mullā Ṣadrā's philosophy enhances our understanding of consciousness and allows for a deeper exploration of the relationship between mind and body. With its emphasis on the unity of being and the dynamic nature of reality, this philosophy provides a rich framework for interpreting neuroscientific findings about brain function and consciousness. Integrating empirical evidence with metaphysical insights cultivates a comprehensive, holistic and enriched perspective.

Key words: Mullā Ṣadrā; Georg Northoff; change and personal identity; substantial movement

1 Introduction

In this article, seventeenth-century Iranian philosopher Ṣadr al-Dīn Muḥammad Shīrāzī (known as Mullā Ṣadrā) will be brought into conversation with western neurophilosophy, and in particular, into dialogue with Georg Northoff's view on the spatiotemporal ontology of human brain. Mullā Ṣadrā's[1] philosophy is a transcendental philosophy influenced by the mysticism of Ibn ʿArabī and built on Shiʿite reasoning. A central aspect of his philosophy is the thesis of substantial movement (*al-ḥaraka al-jawhariyya*). Here, Mullā Ṣadrā's approach to identity and change will be compared with Northoff's view. By linking neuroscientific issues with Islamic philosophy, this article will explore a previously untrodden path and investigate an interdisciplinary and transcultural approach to this topic, thus opening up a new framework for a cross-cultural dialogue. Exploring this previously untrodden path through a transcultural and interdisciplinary lens offers the unique benefit of integrating diverse viewpoints, fostering innovative solutions, and deepening cultural understanding. It bridges theoretical knowledge with practical application, reveals overlooked connections, and encourages collaboration across different fields and cultures. This approach provides a holistic understanding of complex issues. Ultimately, it demonstrates that combining

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diverse cultural perspectives and disciplinary approaches leads to richer, more nuanced insights and highlights the importance of cross-cultural dialogue and interdisciplinary collaboration in tackling global challenges.

This article is organized into three main sections. The first section addresses John Locke's (1632–1704) concepts regarding personal identity and explores their insufficiency in reconciling change and continuity in personal identity. The second part delves into Northoff's perspective, that the self (identity) and brain share a similar connection between continuity and discontinuity through their relationship to the world, emphasizing the ecological nature of the brain. The study then illuminates how trauma can affect the temporal aspect in the brain and the potential it has to interrupt the continuity of identity.[2] Finally, the third section of the article examines Mullā Ṣadrā's perspective on change and the persistence of personal identity and proposes a solution for coping with trauma based on Mullā Ṣadrā's ontology.

2 John Locke's Theory of Personal Identity

As one of the first European philosophers to explicitly address the question of personal identity, Locke formulates the problem as follows:

> One instance where the mind often engages in comparison is the essence of existence itself or, in other words, the very being of things. When we consider something existing at a specific time and place, we inherently compare it to its own existence at another time, leading to the formation of concepts like identity and diversity. This means that when we observe an object in a particular place and time, we confidently assert that it has the same identity as before, despite potential similarities with other objects, as long as its defining character remains unchanged from our previous observation (Locke 1975: 296).[3]

Unique among philosophers, Locke challenged the Cartesian belief that the soul serves as the essence of personal identity. He proposed that personal identity relies on memory, known as psychological continuity (Locke 1975). In essence, the identity of a person is constituted by possessing the same consciousness and the memories of actions. In other words, a person's sameness is defined by possessing the same memory-consciousness over time (Thiel 1983: 55).[4]

For Locke, (self-)consciousness and memory serve as the foundation that allow an individual to extend their identity beyond the present. He expresses this notion as follows: "For, since consciousness always accompanies thinking, and it is that which makes everyone to be what he calls *self,* and thereby distinguishes himself from all other thinking things, in this alone consists personal identity, i.e. the sameness of a rational being: and as far as this consciousness can be extended backward to any past action or thought, so far reaches the identity of that person; it is the same self now it was then; and it is by the same self which this present one that now reflects on it, that that action was done" (Locke 1975: 330).[5] According to Locke, a person's identity is the "sameness of a rational being" (Locke 1975: 302), grounded in memories. In Locke's well-known thought experiment "The Prince and the Cobbler," he explores the scenario whereby the soul of a prince, retaining the consciousness of the prince's life, inhabits the body of a cobbler. Locke posits that upon the prince's soul entering the cobbler's body, the cobbler would become identical to the prince, and would only be responsible for the actions carried out by the prince. He extends

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his argument by asserting that the essence of a person, and particularly the continuity of personal identity, is rooted in consciousness—specifically, the awareness of one's thoughts and actions: "Nothing but consciousness can unite remote existences into the same person" (Locke 1694/1975: 464, and Wagner/Northoff 2017: 337–38).[6] Locke takes the concept to the extreme by suggesting that if a person's little finger were severed, and consciousness were to accompany it, leaving the rest of the body, then that little finger would constitute the person—the same person that was associated with the entire body just before the separation (Locke 1694/1975, 459–460). Building upon these premises, both Locke and contemporary thinkers following in his footsteps assert that wherever one's mental life goes, the identity of the whole person accompanies it (Wagner/Northoff 2017).

One could critique the aforementioned points by stating that Locke's view is too static and fails to account for the dynamic nature of individuals. The central question concerning the relationship between human change over time and personal identity is, can change and identity be reconciled rather than viewed as contradictory?

Before delving into Northoff's perspective, a brief overview of Whitehead and process philosophy will be provided.[7] This introduction is crucial to understanding Northoff's views within the context of process philosophy.

3 Whitehead and Process Philosophy

Kant proposed that the world originates within the subject, but philosopher Alfred North Whitehead (1861–1947) saw this relationship between the subject and the world as reversed, suggesting that the subject is constituted and originates within the world. He avers, "The philosophy of organism is the inversion of Kant's philosophy" (Whitehead 1929/1978: 88).[8] Whitehead's ontology aligns with what can be termed a process-based ontology. But what does this mean?

In chapters 9, 10, and 11 of his book *The Spontaneous Brain*,[9] Northoff explores two distinct ontologies: process-based ontology and property-based ontology. Throughout the history of western philosophy, prevailing ontologies have predominantly embraced the property-based perspective, positing that entities have specific properties or substances, whether physical or mental. In a departure from this mainstream trajectory, more tangential philosophical paths have given rise to relational forms of ontology, such as process ontology (as exemplified by Whitehead) or what Northoff refers to as relation-based ontology (Northoff 2014).[10] This distinction becomes crucial in understanding the nature of the brain, self, and the world. The property-based ontology assumes fixed properties or substances attributed to entities; in contrast, the relation-based or process-based ontology considers the dynamic and interrelated nature of entities. This philosophical stance aligns with empirical findings, particularly the observed scale-freeness[11] of the brain, self, and the world. How the property- or relation-based ontology proves to be more consistent and aligns with empirical discoveries will be explored below.

Northoff develops a neuro-ecological model of the brain based on Whitehead's ideas. This model shifts the perspective from subject (Kant) versus world (Whitehead) to a process-based ontology. Just as Whitehead overturned the Kantian notion of the subject by challenging the reformist

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subjectivist principle, Northoff also argues for a similar reversal based on empirical brain evidence (Northoff 2016).[12]

According to Kant, the subject is perceived as a fixed, static, and enduring entity that maintains its identity over time. In contrast, Whitehead rejected this perspective, defining the subject as dynamic and introducing his theory as the "reformed subjectivist principle" (Whitehead 1929/1978: 157, 160, 167, 189). Whitehead argued that 'actual entities' are ongoing processes characterized by continuous change, as opposed to being fixed and static. These actual entities represent the ultimate real components composing the world. For instance, Whitehead posited that God is an actual entity (Whitehead 1929/1978: 18).

According to this perspective, the subject is not viewed as a static entity, as in the Kantian framework. Instead, it is conceptualized as an occasion undergoing continuous change. In this worldview, everything in the world is transient and lacks enduring stability.

In his principal work *Process and Reality*, Whitehead occasionally references the brain, often within the context of diverse modes of perception (Whitehead 1929/1978: 120, 323–24). In another instance, Whitehead characterizes the brain as the 'organ of novelty' (Whitehead 1929/1978: 339; also see 105–06). To put it succinctly, an ontology based on substance or property is not only fixed, static, and timeless but also lacks relational aspects. Whitehead, therefore, discusses what he terms the 'fallacy of misplaced concreteness' (Whitehead 1925: 58[13], also see 50–1; Whitehead 1985: 39).[14].

Northoff shifts from an ontological framework of a property-based ontology and transitions to a process-based ontology when describing the brain. He rejects the portrayal of the brain as a substance or property-based ontology because this necessitates depicting the brain as non-temporal, static, fixed, and devoid of relational aspects. A process-based ontology enables us to understand the brain's existence and reality in a manner that aligns with the empirical characteristics of its spontaneous activity: dynamic, temporal, and spatial, changeable, and relational.

The assumption that the brain's spatiotemporal scale or range is ideally suited for bilateral interaction with the environment aligns well with Henri Bergson[15] and Whitehead's characterization of the brain. The concept of 'spatiotemporal exchange' between the environment and the brain may facilitate what Whitehead refers to as novelty: "It is by reason of the body, with its miracle of order, that the treasures of the past environment are poured into the living occasion" (Whitehead 1929/1978:119).

4 The Brain as Process, Not as Property-Based Ontology

Drawing on Whitehead's ideas, Northoff challenges the notion of the brain's 'simple location' and its characterization as discrete points in external time and space, as commonly observed. Whitehead contends that this approach leads to a 'fallacy of misplaced concreteness,' where the brain, as observed in external space and time, is erroneously regarded as a mere object within that same framework. Rejecting the concept of 'simple location' implies the inadequacy of any property-based ontology for the brain.

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Northoff asserts that, in accordance with Kant's assertion on internal and external time, as outlined in the first part of *The Critique of Pure Reason*, the brain's inner time corresponds to the outer time. A significant correlation exists between Whitehead's process philosophy and Northoff's perspective. Process philosophy employs distinctive terminology, emphasizing that continuous change is inherently temporal. This stands in stark contrast to Anglo-American and European ontologies, which typically assume a static entity that then ensures stability. This presents a paradox: stability is preserved only through change. As the world evolves, adapting to it ensures the maintenance of one's stability, thereby establishing a stable identity through the ongoing relationship with the changing world.

Northoff employs the analogy of Russian dolls to illustrate that, in the larger spatiotemporal scale of the world, the brain is nested within its own spatiotemporal scale. However, the reverse relationship, with the brain containing the world, remains impossible. The spatiotemporal relationship between the world and the brain is thus characterized by 'spatiotemporal directedness' from the world to the brain rather than vice versa. This leads to the conceptualization of a 'world-brain relationship,' where the sequence of terms reflects that the world encompasses the brain, as opposed to the brain containing the world, which would be termed a 'brain-world relationship.'

Northoff posits that the self is intertwined with the world, as the brain's long-range temporal correlations (LRTCs) are influenced by environmental factors. Traumatic events disrupt these brain correlations, highlighting the brain's integration with the world. This interconnectedness forms the basis of the neuro-ecological foundation for the self (Northoff 2022).[16]

In summary, to bridge the empirical realm of neuroscience with the ontological realm of philosophy, Northoff adopts a process-based ontology influenced by Whitehead. This approach allows him to characterize the brain within an ontological framework (Northoff 2016).[17]

Having elucidated Whitehead and his process philosophy, the subsequent discussion will delve into Georg Northoff's theory of identity through change, aligning with the empirical concept of the brain. Following this exploration, Northoff's theory of personal identity, encompassing the imaging of the future and the past through the cortical midline structure, will be expounded upon.

5 Northoff and Personal Identity, Imaging the Future and the Past (Cortical Midline Structure)

The notion of physical continuity proposed by McMahan (McMahan 2002)[18] was supplanted by relational continuity in Northoff's work (Northoff 2004).[19] This asserts, as long as a person maintains an ongoing relationship with the world, their identity remains intact, even when changes occur in their brain and its physical continuity. However, this relational continuity presupposes a different ontology. Process ontology regards continuous change, dynamics, and the flux of being as the most fundamental aspects of existence and reality. In this framework, ontology is fundamentally dynamic, emphasizing continuous change across time and space.

According to Northoff's theory, mental characteristics are all temporal. He refers to the ancient Greek philosopher Heraclitus, who said that under no circumstances can a person step into the same river twice, i.e., everything is dynamic. Analogous to the river, the neuronal activity of our

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brain is also constantly changing, so that we never encounter the same brain twice. This principle also applies to our self or our consciousness. We never experience the same thing twice in our consciousness; our experience is constantly changing. Change over time, and thus the concept of mutability in general, is the core of our mind. If there is no change, the mind, including consciousness, disappears. The mind is dynamic by nature. The dynamics of the world-brain relationship are the key to the constitution of our mind. In other words, Northoff says that "[t]he mind is thus essentially temporal and dynamic" (Northoff 2023: 7).[20]

This dynamic also applies to Mullā Ṣadrā's philosophy, in which the soul itself becomes an intellect by transforming itself from an imaginative faculty into an intellectual one. However, while Mullā Ṣadrā's dynamics of movement are based on an increase in being and, based on his philosophy on intentionality (as will be explained later), Northoff's dynamics and time component have no intentionality, but are instead concerned with explaining our relationship in the world and to the world (Northoff 2023: 31)

The time component Northoff mentions, refers to pure dynamics without yet having intentionality. There are different layers of time and dynamics without and with intentionality. More abstract and shorter time scales display greater distinction between discrete points in time, which correlate with more intentionality of cognition, whereas longer and more continuous time scales correlate with less distinct intentionality. Northoff believes that dynamics are pre-intentional or proto-intentional. The brain takes on an active role and creates its own inner time component, adapting itself to the time component of the environment. In doing so, the brain becomes like a neuronal surfboard, riding the waves of the body and the world (Northoff 2023: 10).

Despite all these changes, however, the individual still experiences itself as one and the same self. This is what Northoff calls the "time paradox of self" (cf. Northoff 2023: 59). This time paradox of the self posits that the self embodies both sameness and difference. Although our self is in a perpetual state of change, evident in its continuous physical and mental transformations, our sense of self, as we experience it, remains consistent. Consequently, our self appears to encompass both sameness and difference simultaneously. From a logical perspective, the coexistence of sameness and difference appears paradoxical; however, when it comes to the self, this paradox is evidently true. The self embodies both constancy and change simultaneously. This internal time of the self, known as duration, introduces another dimension—the inner time of our brain and the cortical midline structure.

What is the cortical midline structure, and what is its relationship to the self and to personal identity?

The cortical midline structure (CMS) holds significant importance and is consistently active in processes involving future imagination and the recollection of past events (Northoff 2017).[21] Northoff emphasizes the temporal dimension of identity, and it is essential to note that the CMS plays a pivotal role in terms of maintaining self-continuity. Specifically, when discussing the numerical identity of the self, the CMS assumes a critical role. During processes related to the self, regions in the anterior midline, such as the ventromedial prefrontal cortex (vmPFC) and pregenual anterior cingulate cortex (PACC), as well as posterior regions like the posterior cingulate cortex (PCC), along with various other regions both within and outside the CMS, exhibit consistent activation (Northoff 2017).

Northoff proposes that the temporal characteristics of spontaneous CMS neuronal activity translate into corresponding temporal features at the psychological level of the self, specifically

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manifesting as "self-continuity," which forms the core of our identity (Northoff 2017: 123). It should be mentioned that the CMS does not localize the self; more important is relational alignment, or the dynamic interplay between various brain regions, which are involved in self-related functions and results in the experience of the selfhood.

The implication of such spatiotemporal integration for our concept of identity is that it effectively explains how earlier occurrences, such as traumatic life events, persist neurologically within the spatiotemporal pattern of CMS neuronal activity. This self-continuity at the core of our identity is inherently temporal, rooted in the temporal features of neuronal activity in the CMS, and is not synonymous with memories. It operates at a more fundamental level, preceding and existing independently of cognition. This deeper temporal continuity is necessary but not sufficient for memory. In other words, disturbances in this deeper layer disrupt memory and personal identity, but an intact deeper level with disrupted memory does not lead to a disruption of personal identity.

Before we move into the next paragraph, it is important to mention that, as we have seen, Locke's theory of personal identity, which relies on the continuity of consciousness and memory, falls short in light of recent neuroscientific insights. Neuroscience, we refer here to Northoff, reveals that memory operates as a reconstructive process, rather than existing as a continuous, uninterrupted flow. Furthermore, research shows that changes in the brain can profoundly impact personal identity, challenging Locke's idea that identity is based solely on psychological continuity. Therefore, Locke's theory does not adequately account for the complex relationship between the brain's biological mechanisms and the persistence of personal identity.

6 Substantial Movement and Change from Mullā Ṣadrā's Perspective or, the Self as a Multidimensional Entity

Mullā Ṣadrā, also known as Ṣadr al-Dīn Muḥammad Shīrāzī, emerged as a prominent seventeenth century Iranian philosopher, theologian, and mystic. Understanding his ontology is essential, as delving into his doctrine of the soul necessitates a comprehensive examination of his broader philosophical framework. In Mullā Ṣadrā's doctrine of substantial movement, the concept of movement or change extends beyond accidental determinations like quantity, quality, place, and time; it encompasses a transformation within the substance itself. Transformation refers to a fundamental and dynamic process that encompasses the entire existence of beings. It encompasses a dynamic and continuous process of change and evolution, involving both material and spiritual dimensions. It is intricately connected to the metaphysical principles of existence, unity, and the unfolding of divine potentialities within beings.

This unique form of movement pertains to the alteration in the potential (*quwwa*) for actualization (*bi-l-fiʿl*). The 'I' or the self of an individual remains constant. According to Mullā Ṣadrā, it is only the soul that undergoes change in the context of a spiritual process, with the ultimate objective of perfecting itself. Consequently, as an individual navigates substantial movement, the expeditious transformation of the potential names and attributes of God within them into actuality is achieved.[22]

Through the process of substantial movement, the soul undergoes a gradual progression through various stages of the intellect. It is crucial at this juncture to conceive of humans as initially corporeal but evolving towards the spiritual realm through the realization of their spiritual potential, as manifested in substantial movement. This concept is encapsulated in the thesis known

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as "*al-nafs jismāniyyat al-ḥudūṯ rūḥāniyyat al-baqā*": the fundamental task for all individuals is to strive towards perfection and the augmentation of being. In this perspective, the life of every human is an internal journey towards this perfection, directed towards the intellect.

Mullā Ṣadrā's philosophical approach is rooted in Islamic Shiʿa theology, manifesting in his philosophical framework known as transcendent theosophy or as transcendental philosophy of being (*al-Ḥikma al-mutaʿāliya*).[23]

Similar to Northoff, Mullā Ṣadrā adopts a dynamic, process-based perspective. However, it is essential to note that Mullā Ṣadrā's dynamic approach appears to carry a strong teleological aspect, a feature that differs from Northoff's standpoint.

For Mullā Ṣadrā, the principle is that existence precedes essence, rather than the reverse (*aṣālat al-wujūd*). His *wujūd* doctrine, or doctrine of being, centers on the ontological concept of the unity of being (*waḥdat al-wujūd).* Within Mullā Ṣadrā's transcendent theosophy, a fundamental concern is the belief in a necessary being that aligns with perfection, and he perceives God as the absolute and pure being. Every existent being participates in existence to a certain degree. Essentially, being embodies both identity and difference simultaneously, as beings are differentiated by the varying presence of being.[24]

The *nafs,* or soul, performs diverse functions while maintaining its unity. In this context, the human being does not ascend from a higher level through a connection with qualities from a lower level. Instead, as Mullā Ṣadrā has previously emphasized, it involves the perfection of the self (*al-istikmāl al-ḏātī*), which exhibits a plurality within unity and a unity within plurality (Mullā Ṣadrā, *Asfār* VIII: 221).[25]

The human being possesses various levels of the self, and its primary spiritual objective is the continual transformation of the self towards perfection. The notion that "selfhood is an ongoing and ever-changing manifestation of the divine names, and full actualization of this reality demands a disciplined body, mind, and heart" (Faruque 2021: 233),[26] underscores the dynamic nature of this process. It appears that the concept of the self as a multidimensional being, with different stages encompassing both negative elements (*al-nafs al-ammāra* or the evil-inciting self) and positive dimensions (*al-nafs al-mutmaʾinna*), is drawn from the teachings of the Qurʾan (cf. Faruque 2021: 233–34).

The creation of humanity unfolds across various stages (*martaba*) outlined in the doctrine of substantial movement. These stages are categorized as the states of inanimate matter (*martabat al-ǧamād*), flora (*martabat al-nabāt*), the animate world (*martabat al-ḥayawān*), and finally, man (*martabat al-insān*). In the embryonic stage, the actuality (*fiʿl*) reflects the state of flora while carrying the potentiality (*quwwa*) for animal sentience. Yet, it also encompasses the potential for the other stages. Shortly before birth, the individual actualizes the stage of awareness via the senses, a state shared with animals, and retains the potential for human intellectual capacities. As the child develops towards higher thinking, they actualize the inherent abilities of the thinking soul. According to this theory, when an individual attains the capacity for advanced thinking, they progress to the stage of *ʿaql bi-l-fiʿl*—the actualized intellect. At this point, the intellect is activated and no longer remains at the level of potentiality.

A graduated connection exists between the stages of the soul and the corresponding powers or abilities associated with each stage. Each level of the *nafs* corresponds to a specific human power

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or ability. The *nafs-i nāṭiqa* represents the thinking soul of a person and is consequently linked to the cognitive capacity or intellect (cf. Sabziwārī 1383/2004: 84).[27] Below this lies the realm of imagination and ideas. The lowest tier of the *nafs* pertains to the world of sensory perception. Through the process of substantial movement, the soul undergoes various developmental stages, eventually reaching the ultimate and highest stage—the stage of intellect (Cf. Sabziwārī 1383/2004: 69 f.).

Concerning the question of personal identity, the 'I' of a human being is not fixed at a concrete level or station. Instead, the human self encompasses various levels and dimensions (*maqāmāt wa-darajāt*) and exhibits both antecedent and subsequent modes of being (*wa-lahā nashaʾāt sābiqa wa-lāḥiqa*). In each station and world, the self assumes a distinct form. This is encapsulated in the expression:

> My heart has become capable of every form:
> It is a pasture for gazelles and a convent for Christian monks (Faruque 2021: 45).[28]

Hence, an individual can undergo continuous transformations in their identity based on their acquired abilities and the path they choose. Identity, in this context, serves as a manifestation of one's potentiality. At birth, a person lacks a predetermined and individual identity. In contrast to other living beings, which possess fixed identities from their creation, humans are indeterminate, unfixed potentialities with the capacity to become anything—they can descend lower than animals or ascend higher than angels.

According to Mullā Ṣadrā, the world consists of three distinct ontological levels: the world of the intellect (*al-ʿālam al-ʿaql*), the world of the imagination (*al-ʿālam al-khayāl*), and the material world (*al-ʿālam al-maddah*) (cf. Mullā Ṣadrā, *Asfār* III, 504 and 506). Similarly, humans also harbor within themselves an *al-ʿālam al-khayāl* or *al-ʿālam al-miṯāl* (a world of likenesses, images, or imagination). This is evident in phenomena such as dreaming during sleep and the bodily resurrection after death in the world of the *barzakh*.[29] Mullā Ṣadrā also posits that the self possesses a singular identity (*huwiyya wāḥida*) consisting of various modes of being (*nashaʾāt*) (cf. Mullā Ṣadrā, *Asfār* IX: 68).

Mullā Ṣadrā introduces the concept of substantial movement, a notion that elucidates the process of movement or change across the entire world.[30] According to this perspective, everything in the world is in a state of motion, and nothing remains exempt from it. This movement extends beyond accidental determinations like quantity, quality, place, and time; even the substance itself is subject to change. This idea diverges from the classical understanding of substance, traditionally regarded as fundamentally unchangeable and, in the context of Islamic philosophy, considered extra-temporal or eternal. The unique form of movement proposed by Mullā Ṣadrā pertains to the transformation of potential (*quwwa*) into actuality (*fiʿl*), a perpetual process occurring everywhere. This shift is aptly described as 'the renewal of the renewing itself' (*tajaddud al-mutajaddid*) (Cf. Mullā Ṣadrā: 1378/1999: 119).[31]

The individuating aspect of the soul, marking our identity as 'I' or an individual over time, remains unaltered, according to Mullā Ṣadrā. Only the soul undergoes change in the form of a perfection process aimed at achieving the soul's ultimate perfection. A simple analogy to grasp this concept is the potentiality inherent in an apple seed, which, under favorable conditions, may develop into an apple tree and produce more apples (cf. Hajatpour 2021: 942).[32] Essentially, the potential for the apples and their subsequent generations is already present in the apple seed. Through the process of substantial movement, this potentiality in the seed can be actualized.

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However, it is important to note that this analogy serves only as an illustration to better understand the idea of substantial movement. In a broader sense, this concept signifies a worldview wherein everything (except the individuating soul) is in a perpetual state of change and creation. In essence, creation experiences no discontinuities; it is an ongoing process of actualizing the potentiality bestowed by the Creator. Through this constant creation, the Creator manifests Himself in the world. This situation presents a paradox regarding the self and identity. On one hand, our sense of self and identity remains consistent over time, while on the other hand, it undergoes continuous change. One might question how these notions of change and stability can be reconciled. Mullā Ṣadrā addresses this by asserting that the aspect of the soul responsible for our identity, our self-awareness or 'I' consciousness, remains unaltered throughout our lives. This unchanging aspect ensures that despite the various transformations and developmental stages we experience, we retain recognition of ourselves as the same individual. While the core identity remains steadfast, the essence or substance of the soul undergoes significant transformation. Mullā Ṣadrā perceives the soul not as a static entity but as continuously evolving towards an ultimate state of perfection.

It is crucial to view the human being as initially corporeal, but one who undergoes development towards the spiritual realm by realizing their spiritual potential through the process of substantial movement. This development can only be achieved if the point of reference remains constant, preserving the conceptualization of the individual being as unchanged. According to Mullā Ṣadrā, there is no transcendence or elevation beyond the physical in the context of substantial movement. The transformation can be likened to changing from one dress into another," (*lubs baʿda l-lubs*), akin to exchanging an old garment for a new one (cf. Anṣārī Shīrāzī 1387/2008: 160).[33]

In employing this analogy, Mullā Ṣadrā alludes to the incidental attributes of a human being that are not inherent to their essence. An individual possesses numerous 'inner garments,' encompassing character traits, beliefs, and sensations, which may undergo changes throughout their development. However, as substantial movement encompasses not only the accidental features but also the bodily substance (*jawhar*) of human beings, it signifies not just an incidental movement (al-*ḥaraka al-ʿaraḍiyya*) but also an upward movement (*Ṣuʿūd*). In alignment with Mullā Ṣadrā's concept of unity, this implies that the human body forms a unified entity with the soul (cf. Shīrāzī 1387/2008: 387).

In summary, the *nafs* requires the body in order to be able to act and thereby actualize the potential inherent in it, eventually developing through substantial movement *(al-ḥaraka al-jawhariyya)* to perfection *(kamāl)*.

In the following, one important aspect of perfection and personal identity, namely trauma and its neuroscientific role as a disruption of personal continuity, will be explained. Mullā Ṣadrā's account, unlike Locke's, provides a framework for understanding the neuroscientific disruptions of personal continuity caused by trauma. While Locke's theory of personal identity is grounded in psychological continuity and memory, Mullā Ṣadrā's concept of substantial motion movement *(al-ḥaraka al-jawhariyya)* allows for a dynamic and evolving self that can integrate traumatic experiences into a coherent personal identity and this perspective aligns with contemporary neuroscientific findings.

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7 Trauma and Memory

According to current research, trauma disrupts personal continuity (Wang 2021).[34] If the traumatic experience is exceptionally severe, integrating the past with the ongoing changes in the present becomes challenging for the individual. The traumatic event becomes isolated from other experiences, resulting in a clear break in the individual's timeline—a temporal disruption affecting the past, present, and future. The temporal continuum is disrupted, leading to difficulties envisioning oneself in the future. This is akin to the disruption of the flow of a river.

In the above-mentioned current research, the study explored the correlation between the time perspective of early traumatic childhood life events and depressive symptoms in individuals with major depressive disorder (MDD) and those without. The findings indicated a notable alteration in time perspective. Firstly, there are significant disparities in early traumatic childhood life events and the time perspective of past, present, and future events between individuals with acute MDD and those who are healthy. Secondly, the researchers delved into the relationship between the three dimensions of childhood trauma, temporal perspective, and depressive symptoms to assess the validity of the two proposed models, namely, mediation models I and II. Lastly, they explored the therapeutic impact of transcranial magnetic stimulation (TMS) on both depressive symptoms and changes in time perspective, specifically at the dorsolateral prefrontal cortex (DLPFC) (Wang 2021).

The findings indicate a notably higher prevalence of early traumatic life events in individuals with major depressive disorder. MDD is typically characterized by alterations in time perspective concerning both the past and future, particularly exhibiting an abnormal fixation on the past. Simultaneously, those with MDD experience a diminished ability to imagine the future.

The differentiation between these two models hinges on whether changes in time perspective result from depressive symptoms, as proposed in numerous cognitive theories of depression, or if they betray a fundamental disturbance preceding the onset of depressive symptoms, as posited in phenomenological perspectives (Northoff 2018).[35] Positioned within the triangular relationship involving early traumatic life events, these alternatives give rise to two distinct models: changes in time perspective either function as a mediator between traumatic life events and depressive symptoms or, conversely, emerge as a consequence of the interplay between traumatic life events and depressive symptoms (Wang 2021).

The key question then arises: What solution does Northoff propose for coping with traumatic events? In his framework, trauma is perceived as a disturbance in the spatiotemporally nested hierarchy of both the brain and the self. In one of his recent works, he suggests that the solution lies in integrating the trauma with the broader context of the brain and mind (Scalabrini 2022).[36] According to Northoff, the self is formed by a brain-based nested hierarchical three-layered structure, encompassing the interoceptive, proprio-exteroceptive, and mental layers of the self. This structure may face disruption when traumatic experiences occur. Northoff posits that various levels and intensities of traumatic experience correspond to disruptions in the topography and dynamics of this hierarchical structure of the self in the brain.

There are three distinct layers of trauma: The first and most fundamental level, termed "early relational trauma," is associated neuronally with various cortical and subcortical brain regions within the limbic system, including the insula, amygdala, and orbitofrontal cortex. Disturbances in the interoceptive processing of these regions result in significant disruptions in the basic sense of

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self, specifically the ability to relate to stimuli arising within the body. The second level, labeled "maltreatment and abuse," involves events that often go beyond the "normal" boundaries of human experience, such as maltreatment, severe emotional and physical deprivation, incest, and other forms of abuse. These experiences can profoundly impact the individual's sense of self. The third layer of trauma involves the topographic-dynamic reorganization of the mental or cognitive self. Events like genocide, war, and rape/abuse fall outside the "normal" range of human experiences and can lead to significant disruptions in the mental or cognitive aspects of the self (Scalabrini 2022).

How does the brain and self respond to such extensive cumulative traumatic experiences? The goal, according to Northoff, is to maintain a continuous, temporally extended, and integrated sense of self and a sense of relatedness, allowing the individual to process traumatic input and relationships in a non-threatening and non-disruptive manner. The approach involves working through synchrony, space, self-relatedness, and affective regulation to create a comprehensive and extensive operational framework This field encompasses affective, social, and cognitive functions within a larger context, aiming to shape the temporal, dynamic flow of neural and psychic activities. The objective is to reorganize the traumatized self and bring about a change in the baseline organization of the self and its spontaneous psychic and neuronal activities.

It is not solely the trauma itself, however, but how our brain responds to the trauma that determines individual outcomes. Even when exposed to the exact same traumatic event, one person might develop post-traumatic symptoms while another might not. Therefore, the negative event in isolation is less of a determining factor than the individual brain and individual reactions to that event, which can be influenced by mindset, worldview, and life circumstances, among other elements. Hence, having provided a brief overview of Northoff's perspective, the subsequent discussion will present Mullā Ṣadrā's insights into coping with traumatic events.

8 Mullā Ṣadrā's Suggestions for Coping with Trauma Based on his Ontology

Drawing on Islamic Shia theology, Mullā Ṣadrā proposes a practical theological solution for coping with trauma and adversities in general. His philosophy addresses the issue of trauma within the practical context of human lives, and thus, his approach to dealing with trauma is not only theoretical but also practical. He intertwines his distinctive theological approach with a mystical dimension. God, the creator of all, is deemed the necessary being (*wājib al-wujūd*), and everything emanates from Him as the absolute good. Notably, even in the context of unfortunate events, it is crucial to highlight that individuals still possess the capacity to shape their destiny for the future, with the exception of the most extreme circumstances. Humans have the potential to transform negative occurrences into positive experiences, based on the concept of *badāʾ* (Jahangiri 2023).[37]

A negative event can be perceived in various ways: as a potential for approaching perfection, as a response to our negative actions, or as an examination, for instance. Successfully passing such an examination significantly contributes to the development and perfection of the human soul. Some argue that negative incidents paradoxically contain inherent elements of goodness (Muṭahharī 2020).[38] Nevertheless, an individual's ability to navigate life's challenges and adversities is greatly influenced by their own actions. Mullā Ṣadrā suggests that it is the choices and deeds of individuals that determine whether a test results in an augmentation or diminishment of their being (*wujūd).*

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Since, from Mullā Ṣadrā's perspective, the aim of creation for everything is gaining more being, if the human being has achieved a high level of intellectuality and has connected with the active intellect, then the coping with trauma would be easier, and a trauma is then not necessarily a trauma, but one knows that God is the creator of everything.

The experience of trauma and negative events in an individual's life has been observed to potentially contribute to spiritual growth, as indicated in recent research (Lala and Alwazzan 2023).[39] The Qurʾan emphasizes that Allah burdens a soul only to the extent it can bear (Q 2: 286). Considering the limitations and impatience of human beings, determining what is ultimately beneficial or harmful for them may not always be clear-cut (Q 17: 11). From the standpoint of Islamic philosophy, all events in life are inherently good on a universal, cosmic level, as existence itself is regarded as inherently good (*khayr*).

In Islamic philosophy, an evil occurrence is also viewed as a test (Q 21: 35). Every evil is considered a trial, and the development and perfection of the human spirit are said to hinge on such trials (Q 67: 2). The Qurʾan illustrates this through the story of the Prophet Job, who undergoes traumatic experiences. According to Mullā Ṣadrā, when the self becomes complete and resilient, diminishing its reliance on the body, the individual returns to their origin, finding lasting peace and happiness (Mullā Ṣadrā 1990: VIII, 123–24). Thus, these trials are not inherently negative; rather, they are laden with hidden blessings. Events that may initially be perceived as negative (Q 2: 216) sometimes hold intrinsic goodness for individuals. Some trials also serve an educational or training purpose (Q 7: 130).

In Mullā Ṣadrā's theory of self-progress and substantial motion towards perfection, particularly in relation to the concepts of evil, negative events, and trauma, a central emphasis is placed on the belief that only God possesses absolute power and goodness. Evil (*sharr*) is deemed inherent in everything except God and is advised to be avoided as much as possible, while goodness or *khayr* is actively sought in every aspect of perfection. Mullā Ṣadrā asserts that nothing in the world, aside from God, is exempt from a mixture of evil, as everything undergoes a striving for perfection through its substantial motion. Until attaining union with their archetypal reality in the spiritual realm, there exist elements of non-being that hinder complete goodness (Mullā Ṣadrā VII 1990: 58). The deficiency of the soul or imperfection is perceived as *sharr*, while *khayr* is fervently pursued and eagerly sought (Mullā Ṣadrā IX 1990: 241; Jahangiri 2023).

In Mullā Ṣadrā's philosophical framework, being (*wujūd*) is depicted as the origin of goodness (*khayr*), and since God is the necessary being (*wājib al-wujūd*), only goodness can emanate from Him. *Sharr*, according to Mullā Ṣadrā, does not stem from God or being but from *māhiyya*, representing an inferior state of being. Mullā Ṣadrā's theory of substantial movement asserts that our creation is bestowed with the blessings of being (*wujūd*) by God. Each human being follows a unique path, and by fulfilling their responsibilities and progressing in accordance with substantial motion, they can access blessings from both celestial and terrestrial realms.

Moreover, Mullā Ṣadrā's perspective suggests that trauma can be viewed as an opportunity for spiritual growth and an expansion of one's existence or being (*wujūd*). This perspective contrasts with the materialist viewpoint, where the self is reduced to the brain and the brain is seen as influencing the self. In the reductionist and materialist understanding of human beings, psychopharmaceutical drugs are often regarded as facilitators of happiness, pleasure, joy, and relief from suffering. Ṣadrā's philosophy would not likely reject their usage outright. Instead, it might advocate for their careful use under the guidance of knowledgeable medical professionals, while

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also emphasizing the importance of addressing spiritual and moral dimensions of human life alongside physical health.

9 Northoff and Mullā Ṣadrā on Trauma

Both Northoff and Mullā Ṣadrā adopt a process-based ontology, emphasizing transformation, change, development, and growth in their philosophies. However, they diverge in their perspectives on the directedness or teleology or, in other words, purposefulness of change. While Northoff considers this aspect as unimportant, Mullā Ṣadrā places a significant emphasis on the direction of movement as a key factor.

In Northoff's philosophy, the self is viewed as interconnected and embedded in the environment, whereas in Mullā Ṣadrā's perspective, the development of the self is dependent on the individual. Northoff posits three layers of the self, while Mullā Ṣadrā asserts that human beings possess multiple levels of the self, with the primary goal of striving continuously towards the transformation of the self towards perfection. The motion of this self is perpetual, constituting an ongoing and uninterrupted process. One might argue that Mullā Ṣadrā's ontology is more expansive than Northoff's through its integration of theological elements, though this assertion requires further examination.

In addressing trauma and its coping mechanisms, both Northoff and Mullā Ṣadrā share the belief that the impact is not solely determined by the traumatic event itself but rather by how the individual's brain and worldview respond to it. In Northoff's framework, trauma is seen as an interruption in the tempo-spatial hierarchy of the brain and the self, and the proposed solution involves integrating the trauma within the broader context of the brain and mind. On the other hand, Mullā Ṣadrā perceives trauma as an opportunity for spiritual growth and expansion of one's being, suggesting that coping depends on achieving intellectuality and establishing a connection with the active intellect.[40]

10 Conclusion

Both Northoff and Mullā Ṣadrā share the fundamental concept that change, and transformation are integral to their philosophies, though the directedness and teleological aim of the movement differ. In Northoff's perspective, personal identity evolves through change, while for Mullā Ṣadrā, the self is in a constant state of flux with the aim of gaining more being. The level of existence an individual chooses to maintain depends on their personal preferences. Moreover, both philosophers acknowledge that the impact of trauma is contingent on an individual's characteristics.

Mullā Ṣadrā's theory of substantial movement and the connection of the soul with the active intellect suggests that individuals can better navigate trauma through transformative processes. This may enhance coping mechanisms, potentially preserving personal continuity and averting disruption. Mullā Ṣadrā's theory of substantial movement posits a profound connection between

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the soul and the active intellect, suggesting that individuals possess the capacity for transformative processes to navigate trauma. According to Ṣadrā, the soul undergoes continuous movement and evolution, facilitated by its interaction with the active intellect, which acts as a catalyst for spiritual growth and enlightenment. In the context of trauma, this theory implies that individuals have the inherent ability to undergo profound psychological and spiritual transformations in response to adversity.

By engaging in these transformative processes, individuals may develop enhanced coping mechanisms to effectively navigate and mitigate the effects of trauma. This could involve such strategies as introspective reflection, seeking meaning in suffering, or cultivating resilience in the face of adversity. Individuals may be able to preserve their personal continuity and prevent the disruption of their sense of self. It should be added that regarding the sensitive subject of trauma, no claim is being made here that these intellectual approaches could be a replacement for a therapist, if needed. This is only regarded as a suggested view for coping with less extreme negative occurrences or stressful situations in life such as everyone experiences. Trauma is a highly sensitive topic and should be dealt with carefully.

Furthermore, Ṣadrā's framework suggests that trauma can act as a catalyst for spiritual growth and self-discovery. By confronting and processing traumatic experiences, individuals may gain deeper insights into themselves and their place in the world, leading to greater self-awareness and inner harmony. Consequently, trauma transcends mere suffering and becomes also an opportunity for personal transformation and spiritual awakening.

In essence, Mullā Ṣadrā's theory of substantial movement and its connection with the active intellect offers a compelling perspective on how individuals can navigate trauma through transformative processes. By embracing the potential for growth and enlightenment inherent in adversity, individuals may find resilience, and a renewed sense of purpose in the face of life's challenges.

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1 Mullā Ṣadrā combines different philosophical streams with each other to create a new direction. This is why he is considered to be the peak of Shiʿite Islamic philosophy. His new direction will be introduced below.

2 It should be mentioned at the outset that Mullā Ṣadrā's understanding of time in the present context is dynamic, not static. Time is central to his process-oriented view of reality, where the universe is seen as a continuous process of change and transformation. This understanding is deeply intertwined with his broader metaphysical framework, where time is an active participant in the continuous process of becoming and transformation. Time reflects the dynamic nature of existence, where everything is in flux and evolution, moving towards its ultimate perfection. This will be explained in greater detail later.

3 John Locke, *An Essay Concerning Human understanding*, ed. Peter H. Nidditch (Oxford: Clarendon, 1694/1975).

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4 Udo Thiel, *Lockes Theorie der personalen Identität im Kontext der zeitgenössischen britischen Philosophie* (Bonn: Bouvier Verlag Herbert Grundmann, 1983).

5 John Locke, *Of Identity and Diversity: Essay Concerning Human Understanding*, repr. John Perry, *Personal Identity* (Berkeley: University of California Press, 1975), 329–33.

6 Niels Frederick Wagner, and Georg Northoff, "Personal Identity and Brain Identity," in *The Routledge Handbook of Neuroethics*, ed. L. Syd M. Johnson and Karen S. Rommelfanger (New York: Routledge, 2017), 335–51.

7 The transition from Locke to Whitehead might appear unusual, but it is essential for comprehending Northoff's perspective, who employs Whitehead to construct a relational, dynamic, process-based ontology. Locke was utilized above to provide background information and an opposing viewpoint, as the two offer markedly different perspectives on time.

8 Alfred North Whitehead, "Process and Reality: An Essay in Cosmology," ed. David Ray Griffin and Donald W. Sherburne (New York The Free Press, 1929/1978).

9 Georg Northoff, *The Spontaneous Brain: From the Mind-Body to the World-Brain Problem* (Cambridge: The MIT Press, 2018).

10 Georg Northoff, *Minding the Brain: An Introduction of Philosophy and Neuroscience* (Palgrave McMillan, 2014).

11 Scale-freeness means that the brain's connectivity is not uniform, but rather refers to the hierarchical structure where some regions have many connections, while others have fewer connections. This helps for efficient information processing, and disruptions in connectivity may contribute to neurological disorders.

12 Georg Northoff, "Neuroscience and Whitehead I: Neuro-Ecological Model of Brain," *Axiomathes* 26 (2016): 219–52.

13 Alfred North Whitehead, *Science and the Modern World* (New York: Macmillan, 1925/1967).

14 Alfred North Whitehead, *Symbolism: Its Meaning and Effect* (Bronx: Fordham University Press, 1985).

15 Bergson's views on the brain's spatiotemporal scale emphasized the distinct but interrelated roles of the brain and consciousness. He perceived the brain as a spatially oriented organ that facilitates action and interaction with the physical world. In contrast, he placed consciousness and memory primarily in the temporal realm, characterized by a continuous flow that spatial representations cannot fully capture. This philosophical stance challenges reductionist interpretations and highlights the importance of temporal experience in understanding the mind.

16 Georg Northoff, "Non-Reductive Neurophilosophy: What Is It and How It Can Contribute To Philosophy," *Journal of NeuroPhilosophy* 1 (2022): 23-40.

17 Georg Northoff, "Neuroscience and Whitehead II: Process-Based Ontology of the Brain," *Axiomathes* 26 (2016): 253–77.

18 Jeff McMahan, *The Ethics of Killing: Problems at the Margins of Life* (Oxford: Oxford University Press, 2002).

19 Georg Northoff, *Philosophy of the Brain: The Brain Problem* (Amsterdam: John Benjamins Verlag, 2004).

20 Georg Northoff, *Neurowaves: Brain, Time and Consciousness* (Montreal: McGill-Queen's University Press, 2023).

21 Georg Northoff, "Cortical Personal Identity and Cortical Midline Structure (CMS): Do Temporal Features of CMS Neural Activity Transform Into 'Self-Continuity'?" *Psychological Inquiry* 28, nos. 2-3 (2017): 122–31.

22 The Essence of God remains unknown for human beings. However, the names and attributes of God are unveiled through God's creations, which are the manifestations (*tajalli*) of different divine names. These names and attributes are instilled in potential form in every human being, and the

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task of every human being is to transform them into actuality. The meaning of life is the soul's journey to the realization of its potential.

23 The term can be translated as 'sublime wisdom doctrine' or 'transcendental theosophy.'

24 Thus, the formulation *waḥdat al-wujūd* must not be understood as postulating an identity between the world and God as in classical pantheism, for God is never to be equated with the world in Islam. With the pantheistic thought, one does not address a oneness with God or an incarnation. Rather, the phrase *waḥdat al-wujūd* refers to the participation of all living beings in the being given by God. In other words, it is about a gradation of the divine manifestation in everything that exists, whereby everything develops from potentiality to actuality.

25 Mullā Ṣadrā, *al-Ḥikma al-mutaʿāliya fī l-asfār al-ʿaqliyya al-arbaʿa (Asfār)*, vols. III, VII, VIII, IX (Qum: Maktabat al-Muṣṭafawī, 1369/1990).

26 Muhammad U. Faruque, *Sculpting the Self: Islam, Selfhood and Human Flourishing* (Ann Arbor: University of Michigan Press, 2021).

27 Mullā Hādī Sabziwārī, *Asrār al-ḥikam fī l-muftataḥ wa-l-mukhtatam* (Qum: Maṭbūʿāt-i Dīnī, 1383/2004).

28 Quote taken from Ibn ʿArabī: Ibn ʿArabī, tarjumān al-aswāq, trans. R. A. Nicholson (London: Royal Asiatic Society, 1911, XI, 5: 67).

29 Cf. Mullā Ṣadrā, *Asfār* VIII, vol. 9 (Qum: Maktabat al-Muṣṭafawī, 1369/1990), 341, 339.

30 The idea of substantial movement is also explained in Jahangiri (2022), chapter 3. See, Mona Jahangiri, *Das Konzept der Seele bei Mullā Hādī Sabziwārī* (Baden-Baden: Tectum Verlag 2022).

31 Mullā Ṣadrā, *Risāla fī l-ḥudūṯ* (Teheran: Bunyād-i Ḥikmat-i Islāmī-yi Ṣadrā, 1378/1999).

32 Reza Hajatpour, "Die Fortsetzung der Tradition im 19. und 20. Jahrhundert (Seinsphilosophie des Mollā Ṣadrā)," in *Philosophie in der Islamischen Welt: 19. und 20. Jahrhundert: Türkei, Iran und Südasien*, vol. IV.2, ed. Anke von Kügelgen (Basel: Schwabe, 2021), 918–45.

33 Yaḥyā Anṣārī Shīrāzī, *Durūs-i Sharḥ-i Manẓūma-yi Ḥakīm Mutaʾallih Ḥājj Mullā Hādī Sabziwārī*, IV, (Qum: Bustān-i Kitāb-i Qum, 1387/2008).

34 Yingying Wang et. al., "Time is of Essence: Abnormal Time Perspectives Mediate the Impact of Childhood Trauma on Depression Severity," *Journal of Psychiatric Research* 137 (2021): 534–41.

35 Georg Northoff, "The Brain's Spontaneous Activity and its Psychopathological Symptoms: 'Spatiotemporal Binding and Integration'," *Prog. Neuropsychopharmacol. Biol. Psychiatry* 80 (Pt B), (2018): 81–90 (DOI: 10.1016/j.pnpbp.2017.03.019; last accessed on June 26, 2024).

36 Andrea Scalabrini, Clara Mucci and Georg Northoff, "The Nested Hierarchy of Self and Its Trauma: In Search for a Synchronic Dynamic and Topographical Re-Organization," *Front. Hum. Neurosci* 16 (2022) (DOI: 10.3389/fnhum.2022.980353; last accessed on July 5, 2024).

37 Mona Jahangiri, "The Question of Theodicy in Islamic Philosophy—Suggesting a Solution: *Badāʾ*," *Religions* 14, no. 8 (2023): 1047 (URL: https://www.mdpi.com/2077-1444/14/8/1047; last accessed on July 5, 2024).

38 Murtaza Muṭahharī, *ʿAdl-i ilāhī* (Tehran: Ṣadrā Publication, 2020).

39 Ismail Lala and Reham Alwazzan, "Transcendental Happiness in the Thought of Ibn Sīnā and Ibn ʿArabī," *Religions* 14, no. 6 (2023): 729 (URL: https://www.mdpi.com/2077-1444/14/6/729; last accessed on July 5, 2024).

40 It should be noted that licensed therapists would state that intellectual approaches alone will not help trauma survivors without other, more embodied work. The author does not claim in any way to be an expert in psychology or trauma therapy. Of course, the aim of this paper is focusing on intellectuality, which is without doubt only a small factor in trauma recovery. If respected readers are interested in educating themselves on the various modes of trauma recovery and healing, here are some suggested recommendations: *The Body Keeps the Score* by Bessel van der Kolk, which

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describes how trauma takes up residence in the body and offers innovative therapeutic approaches, including mindfulness and neurofeedback, for recovery; *Complex PTSD: From Surviving to Thriving* by Pete Walker, in which the author discusses the symptoms and challenges faced by individuals with PTSD, such as emotional flashbacks and self-criticism, and provides practical strategies for healing; and *No Bad Parts* by Richard Schwartz, which gives practical psychological integration techniques proven successful with trauma patients across the author's forty years of practice as a psychologist.

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