



***Tajallī* or the Computational Theory of Mind? Reconstructing the Ontology of Consciousness in Islamic Philosophy and Cognitive Science**

Fahim Zenab Moghimi*

Khatam al-Nabieen University, Kabul, Afghanistan, 1004

Email: fahim.moghimi@knu.edu.af

Mohammad Dawood Alawi

Khatam al-Nabieen University, Kabul, Afghanistan, 1004

Email: dawood.alawi@knu.edu.af

Adam Shah Hassani

Khatam al-Nabieen University, Kabul, Afghanistan, 1004

Email: adam.hassani@knu.edu.af

Romzie Foroughi

Islamic Institute of Tajikistan, Dushanbe, Tajikistan, 734003

Email: romziefarughi@gmail.com

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Abstract

The ontology of consciousness in contemporary debates arises from the tension between the metaphysical paradigm of Islamic philosophy and the physicalist approach in cognitive science, particularly regarding the explanation of qualia, intentionality, and the unity of conscious experience. In Islamic philosophy, the concept of *tajallī* views consciousness as a hierarchical manifestation of existential reality. In contrast, the computational theory of mind views mentality as the result of symbolic computation and neuronal processes grounded in physical systems. The absence of an integrative framework that explains the relationship between the phenomenological dimension and causal mechanisms leaves the dialogue between the two paradigms fragmented. This study aims to reconstruct a non-reductionist ontology of consciousness through a model of reality stratification that connects the metaphysical and computational dimensions without eliminating the differences in their ontic levels. The study uses a qualitative approach based on literature reviews, employing philosophical hermeneutics, ontological analysis, and comparative-integrative analysis of the main texts of Islamic philosophy, especially the concept of *tajallī*, as well as the latest cognitive science literature on computationalism, representationalism, and predictive processing. The results of this study indicate that *tajallī* operates within a gradational ontology that positions consciousness as an intensification of being with a relational-intentional structure. In contrast, computational theories of mind tend to be reductionistic, treating consciousness as a causal output of symbol manipulation and neuronal activity. The proposed reconstruction yields a stratified ontological model that accounts for the compatibility between phenomenal experience and causal explanation

without reducing consciousness to a purely physical entity. This model broadens the horizon of dialogue between Islamic philosophy and contemporary consciousness studies and offers a conceptual alternative to the dominance of physicalism in consciousness theory.

Keywords: *Tajallī*; Computational Mind; Ontology of Consciousness; Reductionism; Cognitive Science

Abstrak

Problem ontologi kesadaran dalam perdebatan kontemporer muncul dari ketegangan antara paradigma metafisik filsafat Islam dan pendekatan fisikalis dalam cognitive science, terutama terkait penjelasan mengenai *qualia*, intensionalitas, dan kesatuan pengalaman sadar. Konsep *tajallī* dalam filsafat Islam memandang kesadaran sebagai manifestasi berjenjang realitas wujud, sedangkan teori komputasional pikiran memahami mentalitas sebagai hasil komputasi simbolik dan proses neuronal berbasis sistem fisik. Ketidadaan kerangka integratif yang mampu menjelaskan hubungan antara dimensi fenomenologis dan mekanisme kausal menyebabkan dialog kedua paradigma tetap terfragmentasi. Penelitian ini bertujuan merekonstruksi ontologi kesadaran non-reduksionistik melalui model stratifikasi realitas yang menghubungkan dimensi metafisis dan komputasional tanpa menghapus perbedaan level ontik keduanya. Penelitian menggunakan pendekatan kualitatif berbasis studi kepustakaan dengan metode hermeneutika filosofis, analisis ontologis, dan komparatif-integratif terhadap teks utama filsafat Islam, khususnya konsep *tajallī*, serta literatur mutakhir cognitive science mengenai computationalism, representasionalisme, dan predictive processing. Hasil penelitian menunjukkan bahwa *tajallī* beroperasi dalam ontologi gradasional yang menempatkan kesadaran sebagai intensifikasi wujud dengan struktur relasional-intensional, sedangkan teori komputasional pikiran cenderung reduksionistik karena memosisikan kesadaran sebagai keluaran kausal manipulasi simbol dan aktivitas neuronal. Rekonstruksi yang diajukan menghasilkan model ontologi stratifikatif yang menjelaskan kompatibilitas antara pengalaman fenomenal dan penjelasan kausal tanpa mereduksi kesadaran menjadi entitas fisik semata. Model ini memperluas horizon dialog antara filsafat Islam dan *consciousness studies* kontemporer serta menawarkan alternatif konseptual terhadap dominasi fisikalisme dalam teori kesadaran.

Kata Kunci: *Tajallī*; Komputasional Pikiran; Ontologi Kesadaran; Reduksionisme; *Cognitive Science*

Introduction

Consciousness has once again become a central topic of debate in contemporary philosophy of mind, amid the growing dominance of computationalism, which views the mind as an information-processing system based on symbolic representations, neural networks, and adaptive predictive mechanisms (Garcez & Lamb, 2023). This tradition has evolved from classical computational models to connectionism and predictive processing, which position mental activity as the result of formal operations on a material substrate (Colombo & Piccinini, 2024). Functionalism and the strong AI thesis even assert that consciousness can be replicated through algorithmic complexity without the need for a non-material ontological dimension (Đorđević & Ružić, 2024). This framework offers methodological consistency for cognitive science and neuroscience, but fails to explain subjective experience, *qualia*, intentionality, and first-personal reflective consciousness.

Criticism of material reductionism arises because neural causal relations do not adequately account for how conscious experience constitutes phenomenal reality (Wahbeh et al., 2022). This problem demonstrates that the question of consciousness concerns the ontological status of the subject and the nature of reality. Islamic philosophy offers an alternative perspective through the concept of *tajallī*, a multi-level revelation of reality within the emanative structure of being. Unlike Cartesian dualism and eliminative materialism, *tajallī* views consciousness as a manifestation of the intensity of being, moving hierarchically from the material dimension to the level of reflective existence (Putra, Kuswanjono, & Munir, 2021). This framework allows for the integration of metaphysical dimensions and empirical experience without reducing consciousness to a mere computational process. The relevance of this approach becomes increasingly important as modern AI discourse expands machines' claims into the realm of human agency and consciousness.

Developments in artificial intelligence and neurotechnology are intensifying the ontological problem of consciousness by increasingly enabling computational systems to mimic human cognitive functions. The UNESCO (2024) report on the ethics of artificial intelligence emphasizes the need for a philosophical evaluation of the agency, moral responsibility, and autonomy of intelligent systems. A (2019) OECD publication on AI governance indicates that the use of adaptive systems increasingly shapes human decision-making in the economic, security, and educational sectors. The World Economic Forum (2023) analysis also shows the accelerated integration of generative AI across various global strategic sectors, expanding the functional capabilities of machines into activities previously associated with human consciousness. Simultaneously, theories such as Global Workspace Theory and Integrated Information Theory are increasingly used to explain consciousness by integrating neural information and computational complexity (Ferrante et al., 2025). Despite making important empirical contributions, these approaches still fail to address the hard problem of consciousness, as neural correlations alone cannot explain the origins of subjective experience. The dominance of the neurocomputational paradigm ultimately narrows the ontological space of the metaphysical dimension. It drives the need for conceptual models that more comprehensively connect conscious experience, the structure of reality, and empirical findings.

Previous studies have attempted to reconcile Islamic philosophy and cognitive science but have not yet produced a systematic, well-argued reconstruction of the ontology of consciousness based on *tajallī* in relation to modern computationalism. Ibrahim (2020) shows that al-Fārabi's theory of the intellect posits the emanation of the active intellect as a mediator of knowledge. However, his study focuses on epistemology and fails to clarify the ontological status of conscious experience. Kaukua (2021) affirms Ibn Sīnā's flying man argument as evidence of immaterial self-awareness, but fails to relate it to the problem of mental representation and

contemporary computational theory. Wahyudi and Yunus (2024) interpret Suhrawardi's illumination as a gradation of the light of consciousness, but fail to examine its relevance to theories of neural representation and predictive cognition.

Razi (2024) explains Mulla Sadra's concept of *tashkīk al-Wujūd* as the existential basis of consciousness, but does not develop a systematic critique of neurocomputational reductionism. Lahav and Neemeh (2022) review the debate between John Searle and David Chalmers on the hard problem of consciousness and the limitations of functionalism, but do not incorporate Islamic emanative ontology as a conceptual alternative. These studies demonstrate that the discourse on consciousness remains fragmented between Islamic metaphysical approaches and modern cognitive science. No research has specifically reconstructed *tajallī* as an ontological model of consciousness to evaluate the limitations of computational theories of mind and test its conceptual compatibility with contemporary neuroscience findings. This gap highlights the need for a philosophical synthesis that goes beyond historical descriptions of Islamic thought and moves toward formulating an ontology of consciousness that is argumentatively operational within cognitive science discourse.

Based on this gap, the research question is: how can the concept of *tajallī* be reconstructed as an ontology of consciousness capable of critiquing the reductionism of computational theories of mind, and to what extent is this model compatible with developments in contemporary cognitive science and neuroscience? This research aims to build an ontological model of consciousness based on the gradations of being, evaluate the limitations of computationalism in explaining subjective experience and intentionality, and reflect on the conceptual suitability of *tajallī* to the empirical findings of modern neuroscience. The basic argument of this research is that consciousness cannot be reduced to material causal relations or to algorithmic complexity alone, because first-personal experience has an ontological dimension that goes beyond functional description. *Tajallī* is presented as an existential unfolding structure that allows consciousness to be understood as an intensification of being, rather than simply the output of neural computation. The theoretical contribution of this research lies in the formulation of an alternative ontological model for consciousness studies by reinterpreting *tajallī* in dialogue with philosophy of mind and cognitive science. Its practical contributions include strengthening the ethical foundations of artificial intelligence development, epistemological critiques of claims of machine consciousness, and expanding interdisciplinary dialogue among Islamic philosophy, neuroscience, and contemporary AI studies.

Method

This research uses a qualitative approach, grounded in a literature review, with a comparative philosophy and integrative epistemology design, to reconstruct the ontology of consciousness through a systematic dialogue between Islamic

metaphysics and contemporary cognitive science. This approach was chosen to build an epistemic bridging framework that allows cross-tradition analysis without reducing the differences in the ontological horizons of the disciplines. Primary data include the main works of Ibn ‘Arabī, such as *Fuṣūṣ al-Ḥikam* and *al-Futūḥāt al-Makkiyyah*; Suhrawardi’s illuminative thought; Mulla Sadra’s existential ontology; Jerry Fodor’s computational representationalism; and David Marr’s cognitive analysis model, complemented by recent literature on predictive processing and integrated information theory. Secondary data were obtained through a systematic search of the Scopus, Web of Science, JSTOR, and PhilPapers databases using thematic relevance, academic indexing, and publication recency criteria. Data collection was conducted through PRISMA-based literature selection, ontological classification, semantic mapping, and the extraction of conceptual propositions regarding intentionality, mental representation, and subject-object relations. Data analysis was conducted through conceptual reduction, philosophical hermeneutics, comparative ontology-based categorical comparison, and abductive synthesis to formulate an argumentative, coherent, and epistemologically compatible model of consciousness ontology in light of contemporary cognitive science.

Results and Discussion

Tajallī’s Ontological Structure and the Conception of Consciousness as a Manifestation of Being

The concept of *tajallī* occupies a fundamental position in Ibn ‘Arabī’s metaphysics because it explains the ontological relationship between *al-Ḥaqq* and the plurality of reality without presupposing substantial fragmentation or a literal ontic identity between God and nature. *Tajallī* is not understood as a temporal process or a transfer of substance, but rather as an ontological self-disclosure in which absolute being reveals its determinative possibilities through varying degrees of manifestation. The unity of being does not mean the elimination of empirical differentiation, but rather the affirmation that all existence attains actuality through ontological dependence on an absolute source. The distinction between God and nature is maintained through the difference in ontological status between absolute being and its modes of manifestation (Yaqin & Shobah, 2024). This perspective rejects Cartesian dualism, which substantially separates spiritual and material reality, and ontological pluralism, which views empirical entities as independent of one another (Irawan, Nasution, & Coleman, 2021). This formulation allows for a non-dual reading that preserves divine transcendence without reducing the reality of human experience to a metaphysical illusion or a simple monistic identity.

The concept of *tajallī* is systematically articulated through the relationship among absolute being, *a’yān thābitah*, and empirical actuality. *A’yān thābitah* has the status of an intelligible possibility within the knowledge of God and serves as a principle of ontological differentiation. This structure explains how plurality emerges without breaking the unity of being, because differentiation occurs at the

level of the determination of manifestation rather than in the essence of being itself (Chittick, 1998). According to Corbin (1969), this model fundamentally differs from Neoplatonic emanation, which presupposes a linear causal flow and a decline in ontological perfection with metaphysical distance from the first source. *Tajallī* does not result in ontological degradation because each level of reality continues to reflect the totality of being in accordance with its respective receptive capacity. Akbarian cosmology thus constructs a gradational ontology that maintains coherence between unity and plurality without falling into metaphysical reductionism (Iyer, 2023).

This ontological framework provides a conceptual basis for discussing consciousness as a mode of being's reflexivity. Human consciousness is not understood as an autonomous substance that independently produces reality, but rather as a locus of ontological participation where being reveals itself through the reflective capacity of conscious beings (Akhmetova & Tutkysheva, 2025). This position differs from subjective idealism, which holds that consciousness is the creator of reality, and from reductionist materialism, which views consciousness as merely a product of biological activity consciousness that operates on the basis of the differentiation of object and subject (Goldreich, 2025). Consciousness emerges through the intensification of the participatory relationship between the human inner structure and *tajallī*, so that conscious experience represents an ontological openness to the manifestation of being (Chittick, 1994). This perspective demonstrates a close affinity with non-reductionist approaches such as panentheistic consciousness and phenomenological ontology, which understand consciousness as an existential openness to reality rather than simply neural computation (Peebles, 2021). This participatory structure allows consciousness to be understood as ontological reflexivity without erasing the epistemic limitations of the human subject or literally identifying the subject with an absolute source.

The concept of humans as microcosms gains philosophical relevance because the structure of human interiority allows the reflexivity of being to reach its most comprehensive form within the empirical realm. The idea that humans are the locus of being's self-knowledge does not presuppose that God requires humans to be aware of Himself, but rather suggests that human consciousness is the point of articulation at which divine names and attributes are reflectively manifested within the horizon of existential limitations. The problem of consciousness is then no longer understood solely as a matter of mental representation, but as an ontological openness between the subject and reality. This framework has important implications for contemporary philosophical debates because it rejects the assumption that subjectivity is closed and entirely localized to neuronal activity (Kreter-Schönleber & Wolf, 2025). Consciousness is understood as a dynamic of existential receptivity that enables reality to manifest through the intensity of inner openness.

The human inner structure is articulated through the integrative relationship between the intellect, the heart, and the spirit as three modes of conscious receptivity to *tajallī*. The intellect functions through conceptual abstraction and universal representation, producing a form of reflective-discursive consciousness that operates based on the differentiation of object and subject. The heart transcends these representational patterns by serving as a center of intuitive integration, enabling a direct connection between consciousness and the ontological meaning of reality. The function of the heart refers to a reflexive mode of awareness that simultaneously reconciles experience, meaning, and existential openness. The spirit marks the deepest dimension of consciousness as the principle of life that maintains human ontological orientation toward the source of being (Putra et al., 2021). The relationship between these three elements is integrative-hierarchical, neither additive nor dualistic. Gradations of consciousness are measured through the intensity of existential openness to *tajallī*.

The *tajallī*-based model of consciousness also faces important philosophical problems regarding the status of error and illusion, as well as the fragmentation of conscious experience. If consciousness is a reflection of *tajallī*, then erroneous experiences cannot be explained by the absence of being, but rather by the limitations of the subject's ontological receptivity. Distortions of consciousness arise when the inner structure fails to maintain an integrative openness to reality, resulting in partial, fragmented perceptions of manifestation. This explanation differs from rationalistic epistemology, which views error as merely a failure of mental representation (Khemlani & Johnson-Laird, 2017), because the primary problem lies in the quality of the existential relationship between subject and being. This perspective demonstrates a closeness to contemporary phenomenology, which understands consciousness through the horizons of intentionality and existential attunement (Chernus, 2021). However, Ibn 'Arabī's metaphysics retains theological foundations not found in secular phenomenology. Consciousness is not understood as a closed interior space, but rather as a relational configuration that constantly changes with the degree of human ontological openness to reality.

The conceptual distinction between *tajallī* and emanation has direct implications for the theory of the subject and the ontology of consciousness. Neoplatonic emanation generally proceeds through a hierarchical causal chain that connects the primary source to a multilevel reality via ontological overflow (Güler, 2025). *Tajallī* does not follow this model, as manifestation does not signal a weakening of substance or an existential separation from the absolute source. Each entity remains fully dependent on the absolute being without losing its particular character. Consequently, the conscious subject cannot be understood as a closed substance, as the Cartesian self assumes, nor as an autonomous computational system, as the computational theory of mind assumes. The subject's identity is relational-participatory and continuously formed through the dynamics of openness

to *tajallī*. This perspective offers an implicit critique of reductionistic naturalism that identifies consciousness with mere material activity.

The reconstruction of the ontology of consciousness based on *tajallī* ultimately demonstrates that Ibn ‘Arabī’s metaphysics is not merely a traditional mystical exposition but rather provides an alternative theoretical framework for contemporary philosophical debates. Consciousness is not reduced to symbolic computation or mere biological activity, because conscious experience involves a participatory dimension that connects subjectivity to the ontological structure of reality. This model maintains the transcendence of absolute sources while affirming the reality of empirical plurality without falling into dualism or simplistic monism. This position opens the possibility of a productive dialogue between Islamic metaphysics, the phenomenology of consciousness, and non-reductive philosophy of mind. *Tajallī* provides a conceptual foundation for understanding consciousness as an existential reflexivity that unfolds through ontological openness, rather than as mere mental representation or algorithmic calculation. This formulation also serves as a critical basis for assessing the limitations of modern computational ontology, which tends to ignore the intentional, relational, and metaphysical dimensions of human conscious experience.

Computational Ontology of Consciousness in Cognitive Science

The Computational Theory of Mind develops from the assumption that mental processes are identical to the manipulation of formal symbols, carried out through structured algorithmic operations. Jerry Fodor (1975) and Hilary Putnam (2010) position the mind as a representational system that operates through syntactic relations among symbols, while mental functions are determined by causal patterns rather than by their constituent materials. This framework establishes an ontological commitment to the view that mental states possess functional identities that can be realized across biological and artificial media. David Marr (1982) reinforces this assumption by distinguishing among the computational, algorithmic, and implementational levels, thereby preventing explanations of the mental from being reduced to neurobiological descriptions. Nevertheless, the ontological status of computation remains problematic because the concept of an algorithm refers to an abstract mathematical entity whose existence depends on an interpretive system. Ambiguity arises when formal patterns are treated as independent realities without adequate explanation of the metaphysical basis that allows symbols to acquire intrinsic meaning without the involvement of an interpretive subject.

The commitment to symbolic representationalism positions the mind as a system that constructs an internal model of external reality through referential relations. Mental representations are understood as internal states that carry semantic content about specific objects (Headley, Wright, & Meier, 2021). Ontological problems arise when relations of aboutness or intentionality are attempted to be explained through purely syntactic mechanisms. John Searle (1980)

pointed out that symbol manipulation based on formal rules is insufficient to yield meaningful understanding because syntax does not inherently contain semantics. This criticism is reinforced by the symbol grounding problem, which questions how symbols acquire reference without circularly relying on other symbols (Dushkin, 2022). Efforts to naturalize meaning through Fred Dretske's informational semantics and Ruth Millikan's teleosemantics attempt to explain mental content through causal history and biological function, but these approaches struggle to account for the normative dimensions of representation, particularly regarding the possibility of error, distortion, and truth conditions that cannot be reduced to mechanistic relations.

The principle of multiple realizability supports the claim that mental identity is determined by functional structure rather than material substrate. The brain is treated as a biological device that realizes abstract computational procedures, so artificial systems could, in principle, have similar mental states if their causal organization is identical (Francén & Stråge, 2025). This view gave rise to computational functionalism, which posits that consciousness arises from the organization of information rather than being an intrinsic property of biological matter. Ontological issues arise when the computational level is treated as having autonomy independent of neurophysiological dynamics. Research by Raoul and Grosbras (2023) shows a close interconnection among specific biological structures, bodily affect, and conscious experience, so that the assumption of multiple realizations is no longer universally accepted. Critics of embodied cognition reject the sharp separation among mind, body, and environment because cognitive activity is understood to be shaped by organic interactions with the world (McCaffrey, 2024). Consequently, computation cannot be understood as a closed symbolic procedure, but rather as dynamic process always bound by biological and ecological contexts.

The classical computational paradigm also faces serious challenges from predictive processing and dynamical systems theory approaches, which reject reducing cognition to the manipulation of discrete symbols. Andy Clark (2013) and Karl Friston (2005) view the brain as a predictive system that continuously updates its model of the world by minimizing prediction errors, rather than simply a syntactic machine executing fixed formal rules. This shift transforms mental representations from static symbolic entities into inferential processes shaped by organic relationships between the body and the environment. While predictive processing retains a representational element, this approach demonstrates that epistemological explanations of information processing do not automatically yield ontological explanations of consciousness. Tension arises when the success of predictive models in explaining cognitive behavior is taken to be sufficient to prove the nature of mentality. Functional explanations of inferential mechanisms only reveal how the system operates, while the question of why these activities give rise to subjective experiences remains unresolved.

Computational models of consciousness, such as Bernard Baars' Global Workspace Theory and David Rosenthal's Higher-Order Thought Theory, attempt to explain consciousness through the relational configurations between representational subsystems. The global workspace model understands consciousness as a process of broadcasting information to a broad cognitive network, thereby making mental states available for reporting, decision-making, and action control (Ferrante et al., 2025). Higher-order theory posits consciousness as a second-order representation that monitors primary mental states (Brown, Lau, & LeDoux, 2019). Both approaches maintain the assumption that consciousness can be reduced to relational structures and access to information. Problems arise because functional accessibility is not identical to the phenomenal character of experience. Giulio Tononi's Integrated Information Theory seeks to avoid pure reductionism by defining intrinsic integration. However, it faces criticism for equating the quantification of information with subjectivity without an adequate metaphysical argument. The relationship between computational integration and the subjective sense of experience remains correlative, thus failing to explain the ontological basis of phenomenality.

The problem of qualia demonstrates the conceptual limits of computational reductionism when conscious experience is understood as a higher-order representational state. Qualia refer to phenomenal character accessible only from a first-person perspective and therefore not fully amenable to objective description (Cohen, 2025). The inverted spectrum argument suggests the possibility of two systems having identical functional structures despite differing phenomenal experiences (Montgomery, 2018), while David Chalmers' (1996) zombie argument demonstrates that computational duplication does not logically guarantee the existence of subjective consciousness. This condition indicates that functional identity is insufficient to explain why specific experiential sensations accompany certain processing. Keith Frankish's illusionist approach rejects the reality of qualia to maintain the consistency of naturalism. However, this strategy actually sacrifices the phenomenological data that underlie the investigation of consciousness. Predictive approaches to phenomenality also fail to explain why errors in prediction or information integration give rise to subjective sensations rather than simply changes in the system's computational state.

The hard problem of consciousness clarifies the distinction between causal and ontological explanations of consciousness. Computational explanations successfully describe the mechanisms of attention, information integration, and introspective reporting, but this success does not automatically explain why physical processes give rise to subjective experiences. The emergent formulation is often used to maintain naturalism without falling into dualism, but this concept raises new metaphysical problems. Weak emergentism renders consciousness entirely determined by physical structures, thereby depriving subjectivity of its independent

ontological status. In contrast, strong emergentism demands new properties that are irreducible to the original laws of physics (Feinberg & Mallatt, 2020). Russellian monism and panpsychism attempt to address this gap by positing that phenomenal properties are intrinsic to physical reality (Hashemi, 2025). Philip Goff (2019) argues that matter cannot be fully understood through structural descriptions because conscious experience has intrinsic dimensions that symbolic computational models do not capture.

The overall evaluation indicates that computational ontology is highly coherent when it focuses on explaining cognitive behavior, information processing, and the functional organization of mental systems. Serious difficulties arise when the theory claims to explain phenomenality without introducing new ontological commitments. Symbolic reductionism successfully avoids substantial dualism but limits itself to structural relations and external descriptions of the mind. The distinction between epistemological, functional, and ontological explanations shows that the success of computational models in predicting behavior is not identical to their ability to explain the nature of consciousness. Critiques of representationalism, embodied cognition, predictive processing, and phenomenology show that conscious experience involves intrinsic dimensions that are not fully captured by syntactic categories or formal causal relations. This condition demands a reconstruction of the ontology of consciousness that transcends the dichotomy between metaphysical dualism and computational reductionism so that subjectivity can be understood as an irreducible reality without relinquishing its connection to cosmological and biological structures.

The Ontological Tension between *Tajallī* and Computationalism

Consciousness occupies a problematic position in contemporary philosophical debates because its ontological status cannot be adequately explained through either neurocomputational reduction or classical substantial metaphysics. Ibn 'Arabī (1980) emphasized the existential unity of all entities through the *tajallī* relation between *al-Ḥaqq* and creatures, while Mulla Sadra (1981) posited the gradation of being within the framework of *tashkīk al-Wujūd*, which allows for differentiation of levels of consciousness based on the intensity of existence. In contrast, the Computational Theory of Mind views mental activity as the result of processing symbolic representations or information mechanisms within the nervous system (Colombo & Piccinini, 2024). The approaches of classical functionalism, mechanistic computationalism, predictive processing, and embodied cognition differ in their ontological orientations regarding the relationships among materiality, information, and conscious experience.

These differences in ontological structures generate fundamental tensions regarding the principle of causality and the status of material reality. *Tajallī* ontology does not conceive of the transcendent-material relation as an external intervention on a physical system, but rather as a multilevel ontological dependence that makes

materiality dependent on a higher source of existence. This emanative relation differs from the efficient linear-causation model that dominates modern scientific explanation. Computationalism, particularly its physicalist variant, upholds the principle of causal closure, which holds that all mental events must be explained by the physical interactions of the nervous system, without reference to nonphysical entities (Saad, 2025). Conflict arises when consciousness is understood as a phenomenon possessing intentionality, phenomenological unity, and subjective experience that cannot be fully reduced to symbolic configurations. The hard problem of consciousness, as formulated by David Chalmers (1996), holds that descriptions of computational function fail to explain why information-processing systems produce phenomenal experiences. The ontological tension, therefore, moves beyond methodological differences to the fundamental question of the source of the actuality of consciousness.

The conflict becomes even more complex when the concept of emergence is contrasted with ontological manifestation. Weak emergent theory assumes that mental qualities emerge from the complexity of material organization without conferring a new ontological status. In contrast, strong emergentism opens the possibility that consciousness possesses irreducible causal properties despite remaining dependent on material systems (Wilson, 2021). This position demonstrates that not all contemporary theories of consciousness are identical to materialistic reductionism. Nevertheless, emergentist approaches still face the problem of explaining the origins of intentionality and the unity of consciousness. *Tajallī* views consciousness as a manifestation of a higher level of being, so that conscious experience does not originate from a hierarchical existential actualization. The primary difference lies in metaphysical assumptions about the source of reality. Emergence maintains a naturalistic horizon through the dynamics of material systems, while manifestation acknowledges reality's ontological openness to a transcendent principle. This conflict is not simply a clash of terms, but rather a difference in the explanatory structure of the origins of conscious experience.

The causal determination model presents another point of friction that a simple opposition between spiritualism and materialism cannot explain. *Tajallī* ontology affirms a form of vertical determination through ontic dependence, whereby lower realities acquire existential actuality through higher realities without erasing the ontological continuity between levels of being (Cúrto, 2020). This concept differs from supernatural interventionism in that transcendent relations do not operate as external agents that occasionally enter physical systems. Computationalism adopts a bottom-up determination through the increasingly complex organization of material and neural activity (Shevlin, Castro, & Li, 2021). Problems arise when bottom-up approaches struggle to explain the unity of conscious experience and intentional referentiality without reducing consciousness to syntactic calculations. John Searle's (1980) critique of strong AI suggests that

symbol manipulation does not automatically yield phenomenological understanding. However, *tajallī* ontology also faces internal problems related to the relationship between vertical determination and the autonomy of the individual subject. Total existential dependence on an absolute source can create agency problems if not explained through an adequate ontological model of participation.

Contemporary debates in the philosophy of mind demonstrate that the absolute opposition between *tajallī* and computationalism is not always productive. Panpsychism, neutral monism, and process philosophy offer mediating positions that attempt to explain consciousness without a complete materialistic reduction or substantial dualism. Galen Strawson (2017) maintains that consciousness is a fundamental dimension of reality, while Alfred North Whitehead (1978) understands actual processes as the basic structure of existence that integrates experience and materiality. This approach opens the possibility of reinterpreting *tajallī* metaphysics within a processual framework without compromising the principle of the hierarchy of being. Meanwhile, embodied cognition and enactivism criticize classical computationalism for viewing the mind as too isolated from the body, the environment, and lived experience. This critique demonstrates that cognitive science itself has moved beyond mechanistic symbolic models.

The hierarchy of reality is a key point of difference between *tajallī* ontology and computational naturalism. *Tajallī* structures reality through existential gradations that allow for differentiation of levels of consciousness based on the intensity of being. Materiality occupies the lowest level of existence and attains actuality through a participatory relationship to the absolute source. This structure allows for explanations of spiritual experience, metaphysical intuition, and reflective consciousness as increasing existential qualities rather than simply increasing neural complexity. Computational naturalism maintains a flat ontology, measuring mental phenomena in terms of the information-processing capacity of biological systems. Integrated Information Theory and Global Workspace Theory attempt to explain the unity of conscious experience by integrating information. However, both models assume that consciousness emerges from material organization. A gap arises when phenomenological experience is understood as an irreducible reality that cannot be fully translated into the language of information quantification. This problem demonstrates the limitations of the explanatory reduction to the subjective dimension of conscious experience.

The ontological compatibility test shows that the conflict between the two paradigms is not entirely a logical incompatibility but primarily a metaphysical and explanatory one. *Tajallī* presupposes the ontological openness of reality to a transcendent source, while computationalism maintains the explanatory adequacy of physical systems. This difference creates tensions regarding the legitimacy of scientific explanation, the causal status of consciousness, and the relationship between subjectivity and materiality. However, this incompatibility does not

necessarily preclude conceptual dialogue. The concept of downward causation in emergentism strongly suggests that mental determination of material processes can still be discussed without abandoning the naturalistic horizon entirely. Conversely, *Tajallī*'s metaphysics can be reinterpreted as an ontological grounding model that explains the existential dependence of reality without necessarily implying supernatural intervention.

The theoretical impasse arises when the two paradigms attempt to explain consciousness through different metaphysical horizons whose underlying assumptions are not entirely compatible. *Tajallī* successfully explains the existential dimension, intentionality, and phenomenological depth of consciousness, but has difficulty elucidating the mechanisms underlying the relationship between transcendent hierarchies and empirical neurobiological processes. Computationalism can explain neural correlations, representational structures, and the information dynamics of cognitive systems, but it has not resolved the problems of qualia and the origins of phenomenal subjectivity. This condition shows that a complete reduction to a single paradigm actually eliminates an important dimension of conscious experience. Reconstructing the ontology of consciousness, therefore, requires a non-reductionist model that integrates the depth of existential metaphysics with the empirical findings of cognitive science without subordinating either domain to a single dominant framework. Such a model opens the possibility of understanding consciousness as a layered reality with biological, phenomenological, and ontological dimensions, so that the problem of consciousness is not reduced to material calculations or metaphysical abstractions alone.

Reconstructing the Ontology of Consciousness: Towards a Non-Reductionistic Model

Reconstructing the ontology of consciousness demands a philosophical repositioning that transcends the binary opposition between computational reductionism and the literal metaphysics of *tajallī*. Classical computationalism identifies consciousness as the output of algorithmic symbolic manipulation. At the same time, a literal reading of *tajallī* holds that consciousness is a direct emanation of absolute reality, with no differentiation between levels of existence. Both positions fail to adequately explain the relationship between subjectivity, intentionality, and the structure of reality. Criticism of computationalism centers on the assumption that there is an identity between syntactic processes and phenomenal experience. Predictive processing, enactivism, and integrated information theory broaden the explanatory horizons of consciousness, but they still leave open the question of the origins of first experience. The literal reading of *tajallī* faces a symmetrical weakness because it eliminates the ontological mediation between transcendent reality and empirical experience. Reconstructing the ontology of consciousness requires a differential-relational model that

acknowledges the plurality of levels of reality without absolutely separating causal, phenomenal, and reflexive relations.

The ontological weakness of computationalism lies in equating the representation of information with the existence of conscious experience. Symbolic processing can explain patterns of adaptation, behavioral prediction, and sensory data integration, but it fails to explain why syntactic transformations are accompanied by phenomenal qualities (da Cunha & Gibson, 2025). The explanatory gap between physical mechanisms and subjective experience suggests that consciousness is not identical to formal calculation. This critique does not deny the relevance of computation to cognitive function, but rather limits computation's ontological status to an organizational condition, not the essence of consciousness. Information has no intrinsic meaning without an interpretive horizon that allows for intentionality and reflexivity. This argument aligns with the phenomenological critique of reductive naturalism and with the position of emergent realism, which recognizes phenomenal qualities as irreducible properties (Spiegel, 2022). Consciousness is understood as an emergent reality ontologically dependent on material organization but not fully explainable by syntactic laws or neurophysiological correlates.

A literal reading of *tajallī* faces a different problem when the relationship between absolute reality and empirical experience is understood directly without any ontological mediating structures. Ibn 'Arabī and Mulla Sadra do not eliminate the differentiation of levels of being; rather they emphasize the gradation of reality through the layered dignity of existence. The reduction of *tajallī* to a direct manifestation of Divine will actually blurs the distinction among metaphysical causes, natural processes, and phenomenal experience. Consequently, variations in consciousness arising from neurological changes, cognitive impairments, or the development of reflexivity are difficult to explain without reducing all phenomena to metaphysical terms. The ontological reconstruction of consciousness positions *tajallī* not as an empirical causal intervention but as an ontological symbol that marks consciousness's openness to the horizon of transcendent meaning. This position maintains metaphysical rationality without eliminating the legitimacy of scientific explanation. The relationship between *tajallī* and consciousness is understood through a structure of reflexive mediation, thereby preserving the relative autonomy of subjective experience from material determination and metaphysical absolutism.

The proposed layered ontological model rests on four levels of reality: the physical, the organizational, the phenomenal, and the reflexive-transcendental. The physical level encompasses the material dynamics that enable biological stability and neural activity. The organizational level refers to complex configurations that generate information integration, self-regulation, and adaptive capacity. The phenomenal level marks the emergence of subjective experiences with irreducible

qualities. In contrast, the reflexive-transcendental level demonstrates consciousness's ability to understand itself and orient toward a horizon of meaning. The relationships between levels are not identical, but connected through mechanisms of ontological dependence and emergent grounding. Ontological dependence indicates that higher levels require the conditions of possibility of previous levels. At the same time, emergence marks the presence of new qualities that cannot be exhaustively explained through material descriptions. This model differs from classical non-reductive physicalism in that it does not position phenomenal reality as a passive derivative of matter, but rather as a relational actualization with its own ontological status.

The internal coherence of the layered model lies in the principle of differentiation-relatedness, which limits each form of explanation to its ontological level. Physical explanations cannot replace phenomenological analysis, just as metaphysical reflection cannot negate empirical causality. This principle avoids the causal exclusion problem by distinguishing between physical causal relations and phenomenal intentional relations. Neural activity remains a condition for the actualization of consciousness, but subjective experience has a meaning structure that is not identical to biological processes. Downward causation is understood as the influence of reflexive organization on the orientation of action and the interpretation of experience. Reflective consciousness can shape attention patterns, value evaluations, and intentional horizons without negating neural determination. This framework demonstrates that non-reductionism is not synonymous with substantial dualism. Consciousness is not posited as a separate entity, but as a level of reality that emerges through organizational relations and transcends purely mechanistic descriptions.

The model's explanatory capacity is evident through its explanation of qualia, subjectivity, and self-awareness. Qualia are understood as ontological features of the phenomenal level that cannot be reduced to neurophysiological data because first-hand experience always contains a dimension of immediate presence. The correlative relationship between brain activity and conscious experience does not automatically prove their ontological identity. This position aligns with the multiple realizability argument, which suggests that the structure of experience can manifest through different material configurations (Cao, 2022). Intentionality is understood as a relational orientation of consciousness toward the world, not simply a symbolic mapping of external objects. Self-awareness emerges through pre-reflective reflexivity, which allows the subject to make themselves the object of experience without losing the continuity of identity. This approach narrows the explanatory gap by explaining subjectivity as a multilevel actualization of biological structure, phenomenal experience, and interpretive reflexivity.

The model's integrative capabilities are evident through the complementary relationship between empirical science and reflective metaphysics. Neuroscience

explains the neural mechanisms, sensory integration, and organizational dynamics that enable conscious experience (Storm et al., 2024). Metaphysical analysis examines the conditions of possibility for subjectivity, meaning, and transcendental orientations that cannot be reduced to empirical observation (Aldea, 2020). The relationship between the two is not antagonistic, as each moves through distinct explanatory categories. *Tajallī* is reinterpreted as an ontological symbol signifying the openness of human reflexivity to absolute reality, rather than as direct supernatural causality. This interpretation distinguishes this model from metaphysical spiritualism and hard materialism. Computation is still recognized as an important organizational mechanism, but it is not treated as the final ontological basis of consciousness. The relational framework enables a productive dialogue among Islamic philosophy, phenomenology, and cognitive science without blurring the methodological boundaries of each discipline.

The ontological implications of the layered model become significant when applied to debates about artificial intelligence and the ontological status of machine consciousness. Artificial intelligence systems can achieve complex organizational levels through information integration, adaptive learning, and the simulation of linguistic responses (Bagasharov et al., 2026). This complexity is not sufficient to prove the existence of qualia or phenomenal reflexivity, as computation is not identical to first-hand experience. The possibility of artificial consciousness remains open if the system can develop phenomenal and reflexive structures that go beyond mere symbol reproduction. Such an assessment requires ontological criteria that distinguish the simulation of conscious behavior from the existence of actual subjectivity. A non-reductionist model offers a more adequate evaluative framework than computational reductionism or metaphysical spiritualism because it maintains the reality of subjectivity while respecting empirical findings. This reconstruction produces a philosophical synthesis that positions consciousness as a multilevel relational reality, thus providing a more coherent, critical, and conceptual ontological basis for discourse on mind, reality, and artificial intelligence.

Conclusion

The dialogue between *tajallī* metaphysics and the Computational Theory of Mind emphasizes that consciousness is understood as a multilevel manifestation of the intensification of being, enabling simultaneous relations between the material, representational, and transcendent dimensions. This ontological reconstruction highlights the key limitations of the computational approach in explaining subjectivity, phenomenological experience, intentionality, and the continuity of consciousness. At the same time, the *tajallī* concept offers a non-reductionist model that positions cognitive functions as operational layers of a broader reality without falling into metaphysical dualism. This integrative formulation broadens the horizons of contemporary philosophy of consciousness by rereading the hard problem of consciousness, while simultaneously opening the possibility of

developing an ethical paradigm for artificial intelligence and a holistic approach to neurocognitive studies. These theoretical implications also strengthen the critique of strict physicalism and broaden the epistemological dialogue between Islamic philosophy and contemporary cognitive science. The article's limitations are evident in the dominance of comparative-analytical methods, the limited selection of texts by Ibn 'Arabī and Mulla Sadra, and the lack of integration of embodied cognition theory, predictive processing, and empirical neuroscience data. Further research needs to be directed toward interdisciplinary neurophenomenological methodology, comparisons with panpsychism and integrated information theory, and conceptual examination of the relationship between the intensification of being and the architecture of computational consciousness.

Acknowledgments

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Author Contribution Statement

FM contributed to the conceptualization of the study, formulation of the methodology, data analysis, preparation of the initial draft, substantive revision of the manuscript, and correspondence during the submission and publication process. MA contributed to the collection and verification of data, literature review, and preparation of some of the manuscript's content. AS contributed to the analysis of the results, sharpening of the argumentation, and critical evaluation of the discussion's substance. RF contributed to language editing, checking for consistency of citations and references, final review of the manuscript, and validation of formatting before submission. All authors were involved in the discussion of the results, approved the final version of the manuscript, and are responsible for the integrity and accuracy of the article's content.

Conflict of Interest

The authors declare that this manuscript was prepared and submitted without any conflict of interest whatsoever. The authors have no financial, professional, institutional, or personal relationships that could influence the research process, data analysis, data interpretation, manuscript preparation, or presentation of results. The entire contents of the manuscript were prepared independently, in accordance with the principles of academic integrity, scientific objectivity, and scientific responsibility. The authors also declare that no other party exerts influence that could bias the findings, discussion, or conclusions presented in this manuscript.

AI Usage Statement

The authors declare that the use of artificial intelligence (AI) in the preparation of this manuscript was limited to technical assistance in the form of improving language quality, improving grammar, editing, and formatting the manuscript to ensure compliance with applicable writing requirements. AI was not used to formulate research questions, develop a conceptual framework, conduct data

collection and analysis, interpret findings, construct scientific arguments, or formulate research conclusions. All results, findings, concepts, analyses, ideas, interpretations, and conclusions contained in this manuscript are the result of the author's own thoughts, academic judgment, and the author's full responsibility. The author has also reviewed, verified, and approved the entire contents of the manuscript before submission for publication.

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