The Synergistic Mind-Body Hypothesis: A Daoist Approach to Consciousness from the Perspective of Traditional Chinese Medicine

Darin Lei

Department of Cognitive Science, University of Toronto

COG 341: Attention, Perception, & Consciousness

Dr. Alex Djedovic

Abstract

This paper formulates a possible embodied account of consciousness by integrating the vantages of ancient Chinese philosophy and medicine and predictive processing theories in cognitive science. It draws on robust empirical evidence from across the cognitive sciences, including contemporaneous work in philosophy of mind, neuropsychiatry, clinical psychology, and cognitive neuroscience to build on an overarching proposal that consciousness is ultimately the product of a synergistic and exaptive relationship between mind and body. I call this formulation the *synergistically affectively interoceptively synchronizing mind-body hypothesis* (SAIS). This system is characterized by highly adaptive interoceptive active inference that is realized through the dynamic coordination of allostatic affective control and exteroception. Emerging research underscores parallels between the allostatic paradigm of predictive processing and the system of *Qi* in traditional Chinese medicine and Daoist conceptions of consciousness, supporting the notion that there lies much to be explored within the realm of the mind-body connection. Leveraging these insights, it is highly plausible that the key to understanding consciousness may lie in a revisit of the fundamental processes that govern cognition – allostasis, homeostasis, and autopoiesis.

Keywords: Traditional Chinese Medicine, Daoism, 4E Cognition, Meditation Science, Predictive Processing, Interoceptive Inference

Introduction

Perhaps one of the most elusive scientific subjects is the basis of consciousness. A subject of much enigma, it was named as one of the most critical scientific questions in the 125th edition of the academic journal *Science* in 2005. Much scientific progress, notably in neuroscience, has been achieved since then; yet two decades later, there remains no objective consensus on a scientific definition of consciousness or of its neural basis (Zhang et al., 2024). However, parallels between much of ancient Chinese philosophy and current embodied mind frameworks in cognitive science reveal incredible paths towards synthesis and even the beginnings of a plausible formulation. Daoist conceptions, along with Traditional Chinese Medicine (TCM), highlight that consciousness is the emergent property of a system of interoceptive affective inference. The central concept of *Qi*, as a form of life energy that circulates throughout the body in Chinese philosophy, appears to correspond to the same principles that govern allostasis in modern neuroscientific understandings of brain-body homeostasis (Minelli et al., 2025). These ideas are illustrated in three pivotal empirical and theoretical studies: psychedelic psychotherapy, Daoist meditative training, and emerging perspectives on the role of biological rhythms in cognition. Such studies illuminate that the guiding doctrines of Daoism and TCM bear profound resemblance to the frameworks of oscillatory synchrony, predictive coding, and multisensory integration in explaining the brain dynamics of consciousness. These remarkable similarities demand that we revise aspects of the allostatic control model in predictive coding to encompass early Chinese ideas surrounding the significance of synergy between mind and body in giving rise to not only organismic life but also with it, cognition. Greater emphasis must be placed on the synergistic relationship between affect and a model of goal hierarchies in the allostatic control model. Although the model proposes that affect tracks error dynamics through interoceptive and exteroceptive inference, it does not elucidate how these mind-body inferential processes

emerge and to what significance they have for conscious experience (Deane et al., 2020). This paper argues that interoceptive signals work *in tandem* with affect in the allostatic control model to give rise to consciousness – an idea that can be largely informed by valuable insights from ancient Chinese wisdom.

Traditional Chinese Medicine, Daoism, and Consciousness

The Daoist model of consciousness posits that what truly characterizes humanity, or the human being, is what is known as "skillful action", composed of wholeness and fluency, most often referred to as spontaneity or *ziran* (Wenning, 2011). It asserts that skillful action is the highest expression of human consciousness, best characterized by inaction or *wuwei*, wherein actions are executed naturally and without intentionality (Chai, 2024; D'Ambrosio, 2024). In contrast to apathy which is often defined as a form of indifference to reality, *wuwei* is the exact opposite; it emphasizes the importance of "inactive action" where actions are executed effortlessly (Bruya, 2015).

To Daoists, this principle is known as *autotelicity* – a state in which an individual's level of skill "comports" with an activity's level of challenge such that the individual is fully engaged with and immersed in the activity. The activity complements the level of skill and vice versa, dynamically reinforcing each other. Such a state is also often referred to as a "flow state" among meditative practitioners and cognitive neuroscience researchers (Stanchina, 2025). Importantly, this concept of autotelicity is distinct from mindlessness. Mindlessness is characterized by an absence of *being*, automaticity, and non-deliberative action such that one's mind is elsewhere and bereft of critical thought (Di Nucci, 2013; Jones, 2014). A popular example of such a phenomenon is in "social media doom-scrolling" wherein users scroll social media platforms endlessly in a way that becomes automatic (Fasoli, 2018; Krueger & Osler, 2019; Slaby, 2016; Stelnert et al., 2022). By contrast, autotelicity involves complete concentration and the absence of effort or normative valence (Bruya, 2015). To the

Daoist, the ultimate definition of consciousness is the transcendence of self-awareness – being hyperaware and vividly aware of the present moment – a sense of *nowness*, *oneness*, and *wholeness*.[1]

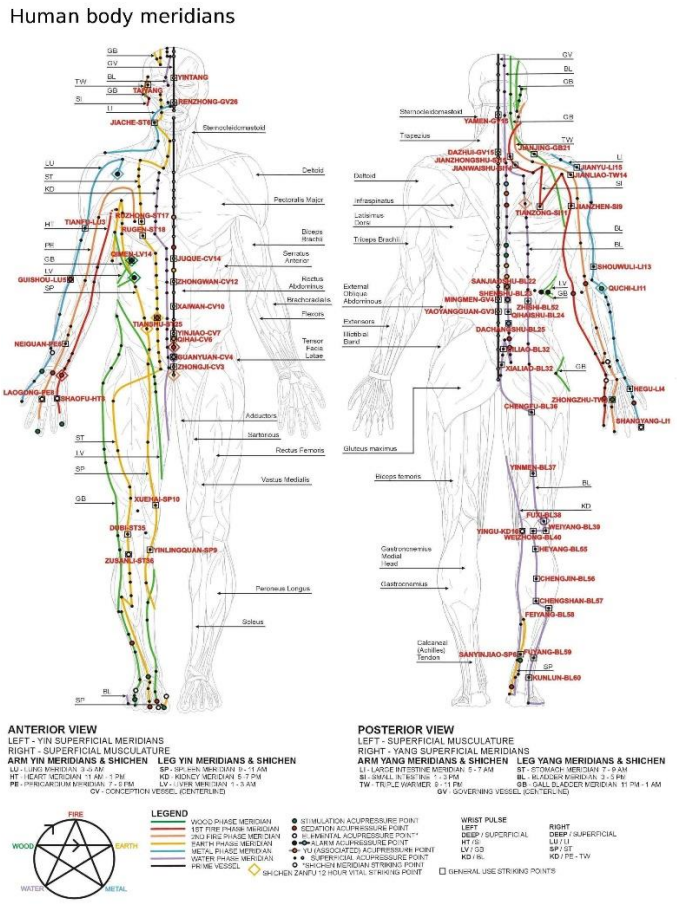
Central to this account of consciousness is that of the concept of *Qi*. In ancient Chinese philosophy, *Qi* is the vital energy that not only constitutes but also unifies the human body and mind. Practitioners of TCM claim that due to its essential role in maintaining this unification, it must be properly nourished; otherwise, its flow can lead to pathology as a result of stagnation or improper circulation. *Qi* flows through what are called *meridians*[2], which not only connect internal organs but also limbs, which together, form an overarching network that gives rise to a sort of organismic Gestalt, an organic whole (see Figure 1). This idea that there exists a vital life energy appears across cultures: in Greek philosophy, a similar force to *Qi* is described as *pneuma* and in the Indian tradition as *prana*, both of which are intimately tied to the concept of *breath*. From this vantage, the human organism can be understood as a system of interconnected functions originating from the organs (*zang*) that extend beyond just physiological homeostasis, subsuming both emotions and conscious activity. As such, it is characterized by a complex and intricate interplay between organs and emotions that give rise to conscious activity (Minelli et al., 2025).

Figure 1

The Meridian System in Traditional Chinese Medicine

[1]This "transcendence" of self-consciousness does not imply we are no longer conscious – in fact, it reiterates that what truly defines the very basis of consciousness is hyper-awareness and a profound state of self-awareness. It is knowing of all knowing including perspectival knowing, participatory knowing, propositional knowing, and procedural knowing. I make this distinction to counter any critiques or ongoing reader concerns regarding issues to do with the clarity of the definition of consciousness in this paper.

[2] The Meridian System is a hypothesis in TCM that posits that life energy (Qi) flows through paths called "meridians". In TCM literature, this system is divided into subclassifications that are beyond the scope of this paper. See Longhurst (2010), Li et al. (2014), and Qi et al. (2024) for a comprehensive overview.



According to the *Lingshu Jing* and the *Huangdi Neijing*[3], deficiencies in the *Qi* as well as mental imbalances of any organs can lead to the emergence of clinical manifestations of psychiatric illnesses. When viewed holistically, it is clear how this interconnected system gives rise to consciousness; as the kidneys are related to sadness, stagnated *Qi* within the kidneys can cause diminished willpower, leading to depression (Baum, 2022). Above all, this model also places the heart as the seat of *Shen*, roughly translated as consciousness, mental vitality, and emotional stability (Minelli et al., 2025). Only when this *Qi* is in balance can there truly be fully functioning consciousness and *autotelicity*. In essence, every organ is involved in consciousness due to the fundamental principle of *Qi*, including the brain, liver, kidneys, heart, spleen, lungs, etc. Together, these ideas from ancient Chinese philosophy resonate with an emerging claim in embodied cognitive science: consciousness is the result of

[3] The *Lingshu Jing* and the *Huangdi Neijing* are classical canonical ancient Chinese medical texts that inform much of TCM theory and practice today (Ma et al., 2021).

an integrated system of mind and body (Lu & Busemeyer, 2022).

TCM, Predictive Coding, and the Allostatic Control Model

A hugely influential framework emerging in cognitive neuroscience is the *predictive processing* framework, an integrative approach to how the mind constructs experience and plans future actions to achieve efficient energy regulation (*free-energy principle*; Clark, 2013). Informed by Bayesian statistics, it posits that the brain is a probabilistic predictor of reality, relying on its internal models to constantly generate predictions that infer the most likely cause of ambiguous sensory stimuli that it receives from the world. It must minimize prediction error as much as possible by reweighting precisions or re-assigning the priority of priors (i.e. pre-existing schemas and semantic networks of knowledge) (Minelli et al., 2025). Within this framework also lies an explanation of the importance of interoceptive signalling through what is known as the *allostatic control model* (ACM). The ACM emphasizes the role of affect as a second-order, active-inferential process that guides the predictive system via the modulation of precision-weightings towards opportunities for fulfilling survival needs (Deane et al., 2020; Smith, 2022). Affect is defined as the raw precursor to emotions, an amorphous core of experiences that represent the agent's physiological circumstances in terms of valence and thus salience quality. When there is more error than expected, this results in negative affect; conversely, when there is less error than expected, this results in positive affect (Minelli et al., 2025).

Crucially, it should be noted that our earlier discussions of *Qi* fit neatly into this model. Both *Qi* and allostasis share a fundamental understanding that dynamic adaptation is the key to sustaining the autopoiesis of the organism. Autopoiesis is defined as the purposive organization of an organism in which such autopoietic organization affords the organism survival and the capacity to do so (Bianchini, 2023). It is frequently cited as a key criterion for determining whether an organism is living or not. In cognitive science, the concept of

autopoiesis is most often used to differentiate cognitive agents from non-cognitive agents such as large language learning models (Vervaeke et al., 2012). Unlike cognitive agents, LLMs do not have their own self-directed agency or cognitive performance – they only function in accordance with the demands of users and are an exemplification of unsupervised plasticity and learning (Andersen et al., 2025). For instance, single-celled organisms such as bacteria are said to be autopoietic due to their fundamental biological governing structures that afford purposive living. In other words, autopoiesis is the process by which an organism seeks to survive and has the capacity or intention for survival (Jaeger et al., 2024).

Qi is dynamic and continuously adapts to various internal (emotional states, nutrition) and external changes (seasons, stress) (Li et al., 2014). *Qi* proactively optimizes and regulates the mind and body by anticipating the needs that are associated with the circadian rhythms (Lee et al., 2017). This runs parallel to ACM which outlines that various predictive systems are designed to anticipate periodic changes in physiological demands and that affect emerges as a guiding principle to inform the responses of the organism to its environment (Deane et al., 2020). Hormones and neurotransmitters exhibit circadian profiles of activity on target tissues in response to this higher-order hierarchical feedback loop of predictive affect (Pantis, 2023). Likewise, *Qi* is a proactive element in predicting an organism's needs and conditions for survival, hence preventing imbalances in the flow of energy before they manifest psychosomatic symptoms such as fatigue, lethargy, insomnia, migraines, anxiety, or dissociation (Minelli et al., 2025).

As such, the anticipatory nature of both allostasis and *Qi* illustrates that interoceptive signals are integral to consciousness. TCM and Daoism acknowledge the inherent dynamism of the human organism, serving to substantiate recent findings in the variegated literature on the neural, phenomenological, and psychological bases of consciousness (Minelli et al., 2025; Baum, 2022). Consequently, this reiterates that consciousness is not correlated to the brain

alone (Lu & Busemeyer, 2022). In effect, both predictive processing and its accompanied model of ACM situate ancient Chinese understandings of consciousness by grounding them in modern scientific accounts of the interoceptive-exteroceptive loop.

Meditative Training and Psychedelics: TCM and Daoism in Practice

Recent research has demonstrated that the main pharmacological mechanism of action of psychedelics is to "relax" the precision-weightings of prediction errors and to increase sensitivity to sensory stimuli, leading to a redistribution of neural priority to other beliefs (Carhart-Harris & Friston, 2019). In doing so, psychedelics maximizes the mind's sensitivity to perturbations that can end up generating crucial insights about an individual's construction of reality (Costines & Schmidt, 2023; Zhang et al., 2024). This high-level theoretical conjecture regarding the pharmacological function of psychedelics has been corroborated by Shinozuka et al. (2024) whose multi-level meta-analysis, found that psychedelics generally work to desegregate brain networks. Segregation is defined as the absence of functional connectivity (FC) between brain regions while integration refers to FC within a network. Psychedelics significantly elevate the FC between all non-identical pairs of brain networks, increase within-network FC in the frontoparietal (FPN) and dorsal attentional (DAN) networks while decreasing within-network FC in the default mode (DMN) and ventral attentional (VAN) networks. Increased FC of the FPN may explain the therapeutic effects of psychedelics in psychopathology. This is supported by empirical work demonstrating that this network is involved in the flexible adjustment of cognitive control in sensorimotor and visceromotor responses to environmental feedback and input (Shinozuka et al., 2024).

Decreased rigid delineations of FC throughout brain networks aside from FPN and VPN might explain the relaxed state in psychedelic experiences as this consequential increase of FC between brain networks would allow for maximal receptivity and sensitivity to sensory input with which to realize consciousness (Carhart-Harris & Friston, 2019). Above all,

decreased FC in the VAN alongside increased FC in the DAN reflect key considerations in the psychedelic experience in relation to interoception. In general, the VAN is responsible for redirecting attention to salient stimuli while the DAN is responsible for sustaining attention. This seemingly dissociative relationship broadly reiterates an underlying nature of consciousness in which it is characterized as a state of hyperawareness (Nelson, 2024). By temporarily inhibiting the VAN and enabling the DAN, the brain's ability to engage in interoceptive active inference is now amplified tenfold, increasing its natural capacity to sustain attention to spontaneous, synesthetic-like imagery, visual percepts of vivacity, and the *wholeness* of simply *being* and being conscious (Preller & Vollenweider, 2024; Carhart-Harris & Friston, 2019; McGovern et al., 2025). This reignited activation of the DAN thus heightens the individual's consciousness by making them acutely aware of their existence and reality, granting them access to the internal models that comprise their ACM (Shinozuka et al., 2024). From a therapeutic standpoint, symptoms of depression are often alleviated under the influence of psychedelics wherein changes in FC lead to a relaxation of maladaptive prior beliefs (Kochevar, 2023).

These findings account for much of the cognitive bizarreness observed in psychedelic experiences which frequently feature rich visual hallucinations such as fractal patterns (i.e. geometric structures that show self-similarity at different scales such as snowflakes or tree branches). Psychedelic experiences elicit a state of self that is similar to what is described as the transcendence of self-awareness in Daoist accounts of spontaneity – a remarkable state of *oneness*, *nowness*, and *wholeness* in consciousness and in flow experiences. Psychedelics exemplify the greater argument that we should reorient our empirical attention to what lies at the core of cognitive processing: interoceptive signaling. In fact, Shinozuka et al. (2025) have even called on psychiatrists to integrate the use of psychedelics with a particular type of Daoist meditation called the "outer dissolving technique of the water method" into their

clinical practice. This meditative practice involves an individual scanning their body until they identify a sensation that feels obstructed such as a feeling of tension or contraction. Through practice, one then learns to maintain their attention on the sensation, causing the feeling to eventually soften. This continued maintenance is what transforms the rigidity of the sensation to something more fluid, allowing the suppressed emotions that are stored within the internal organs to be gradually released (Shinozuka et al., 2025).

According to the theory of this meditative practice, it is these parts of the body that contain these blocked sensations that must be moved to release counterproductive *Qi* imbalances (Tan et al., 2004). Shinozuka and colleagues suggest that as psychedelics have a relaxing effect on the mind and that pairing them with this meditative practice may be particularly beneficial as it may enhance the individual's consciousness by training their attention. Alternatively, one may also view this as mapping onto Daoist principles of consciousness, that is, this form of meditation exposes the underlying mechanisms of consciousness as a state of profound awareness, so much so that it can lead to self-healing properties (Stanchina, 2025). For instance, somatic-based meditative practices involving the proactive directing of attention to various parts of the body heighten exteroceptive and interoceptive signals in a way that cultivates self-compassion (Metzinger et al., 2009; Lutz et al., 2019; Tan et al., 2004; Vervaeke, 2022).

Converging Perspectives: Interoceptive Rhythms

A critical review by Engelen et al. (2023) revealed converging patterns of neuroimaging and physiological data on the significance of interoceptive rhythms in relation to cognitive processing. Spanning across various visceral systems, from the cardiovascular to the respiratory to the somatosensory systems, it has been found that interoceptive signals from these regions of the body are temporally locked to neural signals, resulting in a form of

mind-body synergistic synchrony.[4] The cardiac, respiratory, and gastric systems' communicative role with the brain greatly substantiates this claim. Several lines of evidence have robustly indicated that there exist two major forms of heart-brain communication: temporal contingencies and heartbeat-evoked responses (HERs) (Engelen et al., 2023). In some experimental paradigms, where external stimuli are presented at a fixed latency after each heartbeat, it has been found that the processing of heartbeats in the central nervous system is modulated by temporally congruent auditory stimuli and that the processing of either auditory or visual stimuli is attenuated when synchronized with the heartbeat (Banellis & Cruse, 2020; Marshall et al., 2022; van Elk et al., 2014; Salomon et al., 2016).

Moreover, sensitivity to these temporal contingencies appears in behaviour – both infants and primates spend less time attending to a stimulus moving in synchrony with their heartbeats (Charbonneau et al., 2022; Maister et al., 2017). Furthermore, HERs have also been increasingly viewed not as sensory responses, but as prediction errors that signal the discrepancy between the predicted and observed signal. They are modulated by cardiac-driven predictions of auditory stimuli, the predictability of outcome states, and anticipated affective content (Banellis & Cruse, 2020; Gentsch et al., 2019; Marshall et al., 2019). Interoceptive studies (see Babo-Rebelo et al., 2016a; Babo-Rebelo et al., 2016b) have also determined that HERs reflect self-relatedness during mind-wandering, the strength of body ownership in somatosensory illusions, and self-other distinction in mental visual imagination (Babo-Rebelo et al., 2019; Park et al., 2016; Sel et al., 2017).

Perhaps most interestingly, HERs have also been proposed to serve to index the

[4]As this is far beyond the scope of this paper, I wish address that there exist three interrelated candidate mechanisms and neuroscientific frameworks that could serve as explanations of consciousness in relation to our above discussions of interoceptive rhythms. These include *oscillatory synchrony*, *predictive coding* (only briefly discussed here) and *multisensory integration*. These ideas are alluded to throughout the paper but are not explicitly mentioned due to their sheer complexity. I highly encourage the reader to visit a review of these mechanisms as presented in Engelen et al. (2023)'s review to cultivate a deeper understanding of not only this paper's central argument but also that of many contemporaneous works that seek to integrate ancient Chinese wisdom and 4E cognitive science (viz. the embodied mind frameworks).

subject of conscious experience (Al et al., 2020; Park et al., 2014). They have been found to predict the probability of the conscious detection of a stimulus, covary with subjective pain perception, and credibly index the "residual consciousness" of post-comatose patients (Candia-Rivera et al., 2021; Raimondo et al., 2017; Shao et al., 2011). Similarly, studies involving respiration illustrate a similar story (Tort et al., 2018). Beyond just olfactory sampling, oscillatory respiration is interpreted to play a role in the large-scale coordination of neural dynamics, contributing to the optimization of perception, emotion, and cognition (Engelen et al., 2023; Yackle et al., 2017). Coupling between respiratory cycles and neural activity are said to also be due to backpropagating neuromodulation (Engelen et al., 2023; Zelano et al., 2016). Lastly, the rhythms in the gastric system extend beyond just dietary regulation, playing a role in orchestrating neural dynamics between different regions of the external senses and action (Rebollo & Tallon-Baudry, 2022). It is proposed that gastric activity might be intrinsically related to arousal, that is, neural responses to gastric stimulation are notably larger during sleep than wakefulness (Pigarev, 1994). Across all systems, this temporal tagging likely helps the mind-body system coordinate neural activity flexibly. In which, they facilitate the alignment of bodily signals in a way that gives rise to predictive efficiency and multisensory integration and ultimately conscious experience (Engelen et al., 2023). This medium by which the mind-body system coordinates the ACM and exteroception underscores the significance of synergistic functioning within human cognition (Lu & Busemeyer, 2022). Specifically, in relation to the ACM, this interoceptive-exteroceptive system of action is what gives rise to affect (Gu et al., 2013; Seth, 2013). Here, the emergence of affect is keenly tied to the minimization of prediction errors, wherein affective regulation (as through meditative practice) can result in more adaptive predictions of reality (Barrett & Simmons, 2015).

While some evidence illustrating these overall patterns is mixed, these inconsistencies

can be accounted for by various methodological limitations including varying definitions of the rhythmic temporality of cardiac, respiratory, and gastric parameters. For instance, in the heart, the parameters of systole and diastole, respiration in the lungs, etc. (Bradley, 2009). These limitations warrant further research and cannot be justified as valid critiques of the explanatory power that the mind-body hypothesis holds for consciousness. As a result, these views on consciousness – Daoism and TCM, psychedelics and meditation, and neuroscience – converge toward a proposal that I call SAIS (*synergistic affectively interoceptively synchronizing mind-body*) hypothesis. This name captures the full extent of the paper's stance on a possible scientific formalization of consciousness as the result of a synergy between mind and body, shaped by affective allostatic control and interoceptive active inference.

Limitations and Rebuttals

Some critics might argue against several components of the SAIS model. For one, there is a prevalent concern among opponents of the predictive processing framework that psychedelics do not necessarily serve to illustrate the point that interoceptive-exteroceptive integration is integral to consciousness. Opponents cite the occurrence of seemingly inexplicable phenomenology such as ego-dissolution as the basis for their claim against the illustrative role of psychedelics in SAIS (Deane, 2021). Second, it is often argued that much of ancient Chinese wisdom appears to be anchoring the basis of consciousness to the heart as opposed to the brain and that there are no coherent understandings of the mind-body relationship in the context of TCM interventions (Baum, 2022). While these viewpoints may appear to run counter to the central thesis of this paper, the opposite may also be true. Contrary to the way in which they are framed, they all support the thesis that a synergy between mind and body is fundamental to consciousness. I will respond to each of these

critiques in turn.[5] In response to concerns that psychedelic-induced ego-dissolution run counter to the central thesis of this paper, I believe that the opposite is also true. Rather than refuting the thesis that a synergy between mind and body is fundamental to consciousness, it supports it. Deane (2021)'s rebuttal articulates this perfectly. While psychedelic-induced ego-dissolution might appear to threaten the necessity relationship between the phenomenal self-modelling (i.e., the SAIS model we have discussed thus far) and consciousness, the inferential process that assesses the fit between the agent's model and the world is intact. That is to say, the phenomenology of ego-dissolution is underpinned by a specific inference of allostatic control that remains presently clear under the influence of psychedelics. In other words, ego-dissolution can be explained by SAIS because it reinforces the idea that subjective valuation (in this case, the interoceptive signaling and affect) is the most fundamental and a constitutive aspect of consciousness. Both affective and interoceptive inference remain even when all other structural features of experience dissipate in ego-dissolution (Deane et al., 2021).

Replying to the critique raised of ancient Chinese views on the central role of the heart in consciousness, this is simply false. A 1930s retort by practitioners of TCM to the then rising challenge of Western psychiatric medicine best articulates this. TCM practitioners concluded that "even if madness may have physically manifested in the brain, its origin resided further afield: namely, in the heart and its complex interrelations with other vital systems and processes" (Baum, 2022). In using this principle to frame the origins of cognition, the traditional Chinese thought of interoceptive synchrony as the impetus for consciousness still stands. As this paper has implied, the advent of an age of exploration, or a modern renaissance of ancient ideas in consciousness has arrived. Recent scientific studies

[5] These critiques are also implicitly addressed throughout this paper. See each section of the critical literature review to obtain a sense of which areas respond most sharply.

have begun to explore the possibilities by which mental and emotional states may be the result of somatic, interoceptive, and exteroceptive processes (Baum, 2022). For instance, Carabotti et al. (2015) have illustrated the bidirectional relationship between brain and gut health – what they call the gut-brain axis (GBA). It can be argued that such complex relationships between mind and body, as outlined in Daoist and TCM views of psychiatric disease and of mental health, attest to the notion that "mental activity" are often affected by processes that occur outside of the nervous system itself. These finding challenges normative views of biomedicine in the literature which often reduce mental and emotional states to the result of brain activity or neuropsychological processes. In essence, examples provided throughout this paper, along with Carabotti et al. (2015) highlight that the more holistic view offered by TCM and Daoism should not be viewed as incorrect or correct, but as a precursor to what may lie in the truth surrounding the origins of conscious experience, and by extension, cognitive processes.

Conclusion

Drawing from a rich assortment of empirical evidence, it can be argued that ancient Chinese wisdom offers a unique and possibly essential vantage from which to view the foundations of consciousness. Daoist and TCM-based theories characterize consciousness as a state of flow, a transcendence of self-awareness, and spontaneous wholeness that is sustained by an intertwined system of allostasis, homeostasis, and autopoiesis. Allostasis governs emotions; homeostasis, the regulation of physiological balance, and autopoiesis, the self-organizing property of life that binds it altogether (Andersen et al., 2025). Converging scientific evidence on psychedelics, meditation, and biological rhythms (see Shinozuka et al., 2024, 2025) all reveal that this age-old definition of consciousness may indeed be true. Although an inchoate hypothesis, SAIS provides cognitive scientists with a novel perspective with which to examine the nature of consciousness. It attempts to integrate views from the

predictive processing framework and ancient Chinese views of organismic life to further the proposal that cognition is ultimately the result of mind-body synergy. As the *Dao De Jing* sublimely and pithily suggests, while human daily life is constantly filled with "vast arrays of competing, distracting stimuli", it is also "accompanied by the clamour of consciousness" – a clamour that "drowns out all other sounds and saturates the senses" (Cohen, 2024, p. 111). This clamour represents the true essence of consciousness: a hyperawareness which saturates the senses and connects us to the very reality in which we live.

References

Al, E., Iliopoulos, F., Forschack, N., Nierhaus, T., Grund, M., Motyka, P., Gaebler, M., Nikulin, V. V., & Villringer, A. (2020). Heart-brain interactions shape somatosensory perception and evoked potentials. *Proceedings of the National Academy of Sciences of the United States of America*, *117*(19), 10575–10584. https://doi.org/10.1073/pnas.1915629117

Andersen, B. P., Miller, M., & Vervaeke, J. (2025). Predictive processing and relevance realization: exploring convergent solutions to the frame problem. *Phenomenology and Cognitive Sciences, 24*, 359–380. https://doi.org/10.1007/s11097-022-09850-6

Babo-Rebelo, M., Buot, A., & Tallon-Baudry, C. (2019). Neural responses to heartbeats distinguish self from other during imagination. *NeuroImage, 191*, 10–20. https://doi.org/10.1016/j.neuroimage.2019.02.012

Babo-Rebelo, M., Richter, C. G., & Tallon-Baudry, C. (2016). Neural Responses to Heartbeats in the Default Network Encode the Self in Spontaneous Thoughts. *The Journal of Neuroscience: the official journal of the Society for Neuroscience, 36*(30), 7829–7840. https://doi.org/10.1523/JNEUROSCI.0262-16.2016

Babo-Rebelo, M., Wolpert, N., Adam, C., Hasboun, D., & Tallon-Baudry, C. (2016). Is the cardiac monitoring function related to the self in both the default network and right anterior insula?. *Philosophical transactions of the Royal Society of London. Series B, Biological Sciences, 371*(1708), 20160004. https://doi.org/10.1098/rstb.2016.0004

Banellis, L., & Cruse, D. (2020). Skipping a Beat: Heartbeat-Evoked Potentials Reflect Predictions during Interoceptive-Exteroceptive Integration. *Cerebral Cortex Communications*, *1*(1), tgaa060. https://doi.org/10.1093/texcom/tgaa060

Baum, E. (2022). Embodied Minds: Hearts and Brains in Psychiatry and Chinese Medicine. *Integrative Psychological and Behavioral Science, 56*, 343–354. https://doi.org/10.1007/s12124-021-09605-z

Barrett, L. F., & Simmons, W. K. (2015). Interoceptive predictions in the brain. *Nature Reviews Neuroscience, 16*(7), 419–429. https://doi.org/10.1038/nrn3950

Bianchini, F. (2023). Autopoiesis of the artificial: from systems to cognition. *Biosystems, 230*, 104936. https://doi.org/10.1016/j.biosystems.2023.104936

Bradley M. M. (2009). Natural selective attention: orienting and emotion. *Psychophysiology, 46*(1), 1–11. https://doi.org/10.1111/j.1469-8986.2008.00702.x

Bruya, B. (2015). Action without Agency and Natural Human Action: Resolving a Double Paradox. In B. Bruya (Eds.), *The Philosophical Challenge from China*. MIT Press.

Candia-Rivera, D., Annen, J., Gosseries, O., Martial, C., Thibaut, A., Laureys, S., & Tallon-Baudry, C. (2021). Neural Responses to Heartbeats Detect Residual Signs of Consciousness during Resting State in Postcomatose Patients. *The Journal of Neuroscience: the official journal of the Society for Neuroscience*, *41*(24), 5251–5262. https://doi.org/10.1523/JNEUROSCI.1740-20.2021

Carhart-Harris, R. L., & Friston, K. (2019). REBUS and the Anarchic Brain: Toward a Unified Model of the Brain Action of Psychedelics. *Pharmacological Reviews, 71*(3), 316–344. https://doi.org/10.1124/pr.118.017160

Carabotti, M., Scirocco, A., Maselli, M. A., & Severi, C. (2015). The gut-brain axis: interactions between enteric microbiota, central and enteric nervous systems. *Annals of Gastroenterology, 28*(2), 203–209. https://pmc.ncbi.nlm.nih.gov/articles/PMC4367209/

Chai, D. (2024). The Way of Awareness in Daoist Philosophy. *The Philosophical Quarterly, 74*(3), 1044–1047. https://doi.org/10.1093/pq/pqae016

Charbonneau, J. A., Maister, L., Tsakiris, M. & Bliss-Moreau, E. (2022). Rhesus monkeys have an interoceptive sense of their beating hearts. *PNAS, 119*(16), e2119868119. https://doi.org/10.1073/pnas.2119868119

Clark, A. (2013). Whatever next? Predictive brains, situated agents, and the future of cognitive science. *Behavioural and Brain Sciences, 36*(3), 181–204. https://doi.org/10.1017/S0140525X12000477

Cohen, E. (2024). The Dao of Dialogue: Daoism, Psychology, and Psychotherapy. *Journal of Daoist Studies, 17*, 99–116. https://doi.org/10.1353/dao.2024.a920717

Costines, C., & Schmidt, T. T. (2024). Phenomenology of Psychedelic Experiences and Psychedelic-Associated Distressing Effects: Quantifying Subjective Experiences. In A. L. Halberstadt, F. X. Vollenweider, D. E. Nichols (Eds.), *Current Topics in Behavioral Neurosciences: Behavioral Neurobiology of Psychedelic Drugs* (Vol. 36, pp. 1–23). Springer. https://doi.org/10.1007/7854_2024_562

D'Ambrosio, P. J. (2024). Intention, ethics, and convention in Daoism: Guo Xiang on *ziran* (self-so) and *wuwei* (non-action). *Asian Philosophy, 34*(2), 99–119. https://doi.org/10.1080/09552367.2024.2292350

Deane, G. (2021). Consciousness in active inference: Deep self-models, other minds, and the challenge of psychedelic-induced ego-dissolution. *Neuroscience of Consciousness, 7*(2), 1–16. https://doi.org/10.1093/nc/niab024

Deane, G., Miller, M., & Wilkinson, S. (2020). Losing Ourselves: Active Inference, Depersonalization, and Meditation. *Frontiers in Psychology, 11*, 539726. https://doi.org/10.3389/fpsyg.2020.539726

Di Nucci, E. (2013). *Mindlessness.* Cambridge Scholars Publishing.

Engelen, T., Solcà, M., & Tallon-Baudry, C. (2023). Interoceptive rhythms in the brain. *Nature Neuroscience, 26*, 1670–1684. https://doi.org/10.1038/s41593-023-01425-1

Fasoli, M. (2018). Substitutive, Complementary and Constitutive Cognitive Artifacts: Developing an Interaction-Centered Approach. *Review of Philosophy and Psychology, 9*, 671–687. https://doi.org/10.1007/s13164-017-0363-2

Gentsch, A., Sel, A., Marshall, A. C., & Schütz-Bosbach, S. (2019). Affective interoceptive inference: Evidence from heart-beat evoked brain potentials. *Human Brain Mapping, 40*(1), 20–33. https://doi.org/10.1002/hbm.24352

Gu, X., Hof, P. R., Friston, K. J., & Fan, J. (2013). Anterior insular cortex and emotional awareness. *The Journal of Comparative Neurology, 521*(15), 3371–3388. https://doi.org/10.1002/cne.23368

Jaeger, J., Riedl, A., Djedovic, A., Vervaeke, J., & Walsh, D. (2024). Naturalizing Relevance Realization: Why agency and cognition are fundamentally not computational. *Frontiers in Psychology, 15*, 1362658. https://doi.org/10.3389/fpsyg.2024.1362658

Jones, D. (2014). Mindlessness. Philosophical *Psychology, 29*(1), 149–152. https://doi.org/10.1080/09515089.2014.945520

Kochevar, C. (2023). Psychedelic phenomenology and the role of affect in psychological transformation. *Phenomenology and the Cognitive Sciences.* https://doi.org/10.1007/s11097-023-09943-w

Krueger, J., & Osler, L. (2019). Engineering Affect: emotion regulation, the internet, and the Techno-Social Niche. *Philosophical Topics, 47*(2), 205–231. https://muse.jhu.edu/article/774363

Lee, Y., Shaw, R. E., & Jin, Z. (2017). Gih (Qi): Beyond Affordance. *Frontiers in Psychology, 8*, 00556. https://doi.org/10.3389/fpsyg.2017.00556

Li, L., Tung, C.W., & Lo, K.C. (2014). The Origins of Meridians. *Chinese Medicine (Irvine), 5*(2), 71–74. http://dx.doi.org/10.4236/cm.2014.52008

Longhurst, J. C. (2010). Defining Meridians: A Modern Basis of Understanding. *Journal of Acupuncture and Meridian Studies, 3*(2), 67–74. https://doi.org/10.1016/S2005-2901(10)60014-3

Lu, M., Yi, S., & Busemeyer, J. R. (2022). How Chinese Medicine Theory Expands the Dimensions of our Understanding of Consciousness. *Mind and Matter, 20*(1), 159–166. https://www.ingentaconnect.com/2022/00000020/art00010#

Lutz, A., Mattout, J., & Pagnoni, G. (2019). The epistemic and pragmatic value of non action: a predictive coding perspective on meditation. *Current Opinion in Psychology*, *28*, 166–171. https://doi.org/10.1016/j.copsyc.2018.12.019

Ma, D., Wang, S., Yu, S., Ni, S., Tang, M., & Xu, A. (2021). The development of traditional Chinese medicine. *Journal of Traditional Chinese Medical Sciences, 8*(s1), 1–9. https://doi.org/10.1016/j.jtcms.2021.11.002

Maister, L., Tang, T., & Tsakiris, M. (2017). Neurobehavioral evidence of interoceptive sensitivity in early infancy. *eLife*, *6*, e25318. https://doi.org/10.7554/eLife.25318

Marshall, A. C., Gentsch, A., Blum, A. L., Broering, C., & Schütz-Bosbach, S. (2019). I feel what I do: Relating interoceptive processes and reward-related behavior. *NeuroImage, 191*, 315–324. https://doi.org/10.1016/j.neuroimage.2019.02.032

Marshall, A. C., Gentsch-Ebrahimzadeh, A., & Schütz-Bosbach, S. (2022). From the inside out: Interoceptive feedback facilitates the integration of visceral signals for efficient sensory processing. *NeuroImage*, *251*, 119011. https://doi.org/10.1016/j.neuroimage.2022.119011

McGovern, H. T., Bajo, L., Hassed, G., Hoefnagels, R., Levey, M., Rose, N., De Foe, A., Hutchinson, B. T. (2025). Deconstructing Psychedelic Phenomenology: A Thematic Analysis of Discrete Phases of the Psychedelic Experience. *Brain and Behavior, 15*(7), e70687. https://doi.org/10.1002/brb3.70687

Metzinger, T. (2009). Chapter 2: A Tour of the Tunnel. In *The Ego Tunnel: The Science of the Mind and the Myth of the Self* (pp. 25–65). Basic Books.

Minelli A., Bottaccioli, F., & Bottaccioli, A.G. (2025). Psyche and Life: Allostasis between the Predictive brain-mind system and Traditional Chinese Medicine. *Pnei Review.* https://doi.org/10.3280/pnei2025oa19336

Nelson, E. S. (2024). Self-Awareness and Nothingness: Wang Yangming, Wang Ji, and Existential Confucianism. In K. Aho, M. Altman, & H. Pedersen (Eds.), *The Routledge Handbook of Contemporary Existentialism* (pp. 387–402). Routledge. https://doi.org/10.4324/9781003247791-42

Pantis, S. (2023). *Demystifying The Mind-Body Connection: The Neuroscience Behind How Thoughts Impact Physical Health* (Publication No. 107) [Undergraduate Honors Thesis, University of San Diego]. Digital USD. https://doi.org/10.22371/02.2023.004

Park, H. D., Bernasconi, F., Bello-Ruiz, J., Pfeiffer, C., Salomon, R., & Blanke, O. (2016). Transient Modulations of Neural Responses to Heartbeats Covary with Bodily Self-Consciousness. *The Journal of Neuroscience: the official journal of the Society for Neuroscience, 36*(32), 8453–8460. https://doi.org/10.1523/JNEUROSCI.0311-16.2016

Park, H. D., Correia, S., Ducorps, A., & Tallon-Baudry, C. (2014). Spontaneous fluctuations in neural responses to heartbeats predict visual detection. *Nature Neuroscience*, *17*(4), 612–618. https://doi.org/10.1038/nn.3671

Pigarev I. N. (1994). Neurons of visual cortex respond to visceral stimulation during slow wave sleep. *Neuroscience, 62*(4), 1237–1243. https://doi.org/10.1016/0306-4522(94)90355-7

Preller, K. H., & Vollenweider, F. X. (2018). Phenomenology, Structure, and Dynamic of Psychedelic States. In A. L. Halberstadt, F. X. Vollenweider, D. E. Nichols (Eds.),

Current Topics in Behavioral Neurosciences: Behavioral Neurobiology of Psychedelic Drugs (Vol. 36, pp. 221–256). Springer. https://doi.org/10.1007/7854_2016_459

Qi, W., He, B., Gu, Q., Li, Y., & Liang, F. (2024). Scientific exploration and hypotheses concerning the meridian system in traditional Chinese medicine. *Acupuncture and Herbal Medicine, 4*(3), 283–289. https://doi.org/10.1097/HM9.0000000000000128

Raimondo, F., Rohaut, B., Demertzi, A., Valente, M., Engemann, D. A., Salti, M., Fernandez Slezak, D., Naccache, L., & Sitt, J. D. (2017). Brain-heart interactions reveal consciousness in noncommunicating patients. *Annals of Neurology*, *82*(4), 578–591. https://doi.org/10.1002/ana.25045

Rebollo, I., & Tallon-Baudry, C. (2022). The Sensory and Motor Components of the Cortical Hierarchy Are Coupled to the Rhythm of the Stomach during Rest. *The Journal of Neuroscience: the official journal of the Society for Neuroscience, 42*(11), 2205–2220. https://doi.org/10.1523/JNEUROSCI.1285-21.2021

Salomon, R., Ronchi, R., Dönz, J., Bello-Ruiz, J., Herbelin, B., Martet, R., Faivre, N., Schaller, K., & Blanke, O. (2016). The Insula Mediates Access to Awareness of Visual Stimuli Presented Synchronously to the Heartbeat. *The Journal of Neuroscience: the official journal of the Society for Neuroscience*, *36*(18), 5115–5127. https://doi.org/10.1523/JNEUROSCI.4262-15.2016

Sel, A., Azevedo, R. T., & Tsakiris, M. (2017). Heartfelt Self: Cardio-Visual Integration Affects Self-Face Recognition and Interoceptive Cortical Processing. *Cerebral Cortex, 27*(11), 5144–5155. https://doi.org/10.1093/cercor/bhw296

Seth A. K. (2013). Interoceptive inference, emotion, and the embodied self. *Trends in Cognitive Sciences, 17*(11), 565–573. https://doi.org/10.1016/j.tics.2013.09.007

Shao, S., Shen, K., Wilder-Smith, E. P., & Li, X. (2011). Effect of pain perception on the heartbeat evoked potential. *Clinical Neurophysiology: official journal of the International Federation of Clinical Neurophysiology*, *122*(9), 1838–1845. https://doi.org/10.1016/j.clinph.2011.02.014

Shinozuka, K., Cox, B., Roseman, L. (2025). *Healing through the Body: The Potential Role of Daoist Meditation in Psychedelic Therapy.* PsyArXiv. https://doi.org/10.31234/osf.io/s32pm

Shinozuka, K., Jerotic, K., Mediano, P., Zhao, A. T., Preller, K. H., Carhart-Harris, R., & Kringelbach, M. L. (2024). Synergistic, multi-level understanding of psychedelics: three systematic reviews and meta-analyses of their pharmacology, neuroimaging and phenomenology. *Translational Psychiatry, 14*, 485. https://doi.org/10.1038/s41398-024-03187-1

Slaby, J. (2016). Mind Invasion: Situated Affectivity and the Corporate Life Hack. *Frontiers in Psychology, 7*, 00266. https://doi.org/10.3389/fpsyg.2016.00266

Smith, S. M. (2024). The affectively embodied perspective of the subject. *Philosophical Psychology, 37*(5), 1140–1169. https://doi.org/10.1080/09515089.2022.2081143

Stanchina, G. (2025). *The Art of Becoming Infinite: Mou Zongsan's Vertical Rethinking of Self and Subjectivity.* Open Book Publishers. https://doi.org/10.11647/OBP.0442

Stelnert, S., Marin, L., & Roeser, S. (2022). Feeling and thinking on social media: emotions, affective scaffolding, and critical thinking. *Inquiry, 68*(1), 114–141. https://doi.org/10.1080/0020174X.2022.2126148

Tan, S., Tillisch, K., & Mayer, E. (2004). Functional Somatic Syndromes: Emerging Biomedical Models and Traditional Chinese Medicine. *Evidence-based Complementary and Alternative Medicine: eCAM, 1*(1), 35–40. https://doi.org/10.1093/ecam/neh016

Tort, A. B. L., Brankačk, J., & Draguhn, A. (2018). Respiration-Entrained Brain Rhythms Are Global but Often Overlooked. *Trends in Neurosciences, 41*(4), 186–197. https://doi.org/10.1016/j.tins.2018.01.007

van Elk, M., Lenggenhager, B., Heydrich, L., & Blanke, O. (2014). Suppression of the auditory N1-component for heartbeat-related sounds reflects interoceptive predictive coding. *Biological Psychology*, *99*, 172–182. https://doi.org/10.1016/j.biopsycho.2014.03.004

Vervaeke, J., Lillicrap, T. P., & Richards, B. A. (2012). Relevance Realization and the Emerging Framework in Cognitive Science. *Journal of Logic and Computation, 22*(1), 79–99. https://doi.org/10.1093/logcom/exp067

Vervaeke, J. (2022). How a philosophy of meditation can explore the deep connections between mindfulness and contemplative wisdom. In R. Repetti (Eds.), *Routledge Handbook on the Philosophy of Meditation* (1st ed., pp. 192–208). Routledge.

Wenning, M. (2011). Daoism as Critical Theory. *Comparative Philosophy, 2*(2), 50–71. https://doi.org/10.31979/2151-6014(2011).020208

Yackle, K., Schwarz, L. A., Kam, K., Sorokin, J. M., Huguenard, J. R., Feldman, J. L., Luo, L., & Krasnow, M. A. (2017). Breathing control center neurons that promote arousal in mice. *Science (New York, N.Y.), 355*(6332), 1411–1415. https://doi.org/10.1126/science.aai7984

Yang, Z. (2024). A Reconstruction of Arguments on the Relationship Between Dreaming and Awakening in the Interpretations of Zhuangzi. *Philosophies, 9*(6), 186. https://doi.org/10.3390/philosophies9060186 Zelano, C., Jiang, H., Zhou, G., Arora, N., Schuele, S., Rosenow, J., & Gottfried, J. A. (2016).

Nasal Respiration Entrains Human Limbic Oscillations and Modulates Cognitive Function. *The Journal of Neuroscience: the official journal of the Society for Neuroscience, 36*(49), 12448–12467. https://doi.org/10.1523/JNEUROSCI.2586-16.2016

Zhang, M., Wang, Y., Gao, T.-M., & Wang, X. (2024). Psychedelics and Consciousness: Expanding the Horizons of Mind and Therapy. *Research, 7*, 0495. https://doi.org/10.34133/research.0495