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6

A rational approach to panprotopsychism, panpsychism and cosmopsychism

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.03].....Panpsychism and cosmopsychism

Abstract
In order to make the ideas of panprotopsychism, panpsychism and cosmopsychism more precise, we propose a simple definition of protoconsciousness (PC) that preserves PC in combinations of entities naturally. By defining a "sensing" entity as an entity encoding sufficient information about its environment to build a set of local physical models (however sparse), we show that any specifiable "physical" (measurable) entity is sensing and so has PC. Entities can be combined without losing the property of being PC, and in fact all entities can be united into a maximal entity that can be taken as the "cosmic mind" of cosmopsychism. This information and model approach has the advantage that it scales naturally, and easily accommodates most or all of the characteristics of more complex conscious entities. It also creates a framework wherein living and non-living entities are part of the same hierarchy, with different entities being distinguished on the basis of their information content and the models that information supports.

C - 26

Keywords
information, model, panpsychism, panprotopsychism, cosmopsychism

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Consciousness is an emergent phenomena that arises from sufficiently complex sensory processes

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Consciousness is an emergent phenomenon that arises from sufficiently complex sensory processes. The processing of sensory information creates the conditions for conscious experience of those sensory phenomena. This thesis argues that the integration and interpretation of sensory information from different sources is essential for consciousness. Evidence for this theory is provided from a variety of sources, including neuroscience, psychology, and philosophy. The theory of consciousness as an emergent phenomenon of sensory processing provides a parsimonious and elegant explanation for a wide range of empirical data and has important implications for our understanding of other cognitive phenomena.

C - 5

Keywords
consciousness, emergent phenomena, sensory processes, sensory information, integration, interpretation, neuroscience, psychology, philosophy, attention, memory, decision-making, brain, brain networks, cognition, perception, awareness, subjective experience, qualia, hard problem of consciousness, free will, artificial intelligence, visual cortex, visual processing

15

The DARPA Machine Common Sense (MCS) Program: A Phenomenological Diagnosis of its Interpretational Challenges

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.06].....Machine consciousness

Abstract
The Defense Advanced Research Project Agency (DARPA) Machine Common Sense (MCS) program is promoting efforts to “mimic” common sense in machines. Its overarching goal is to support the development of Artificial Intelligence (AI) from its current narrow version toward an envisaged general one that simulates common sense. An issue it contends is impeding efforts is the challenge of articulating and encoding the phenomenon’s “obscure but pervasive nature.” This article endeavors to clarify these alleged characteristics of common sense phenomenologically. It (1) introduces the DARPA MCS program, (2) reviews the cognitive psychology of common sense and highlights its strengths and weaknesses assessed against the prospect of machine common sense and phenomenologically; (3) lays out the phenomenology of common sense and, from those findings, (4) responds to the question of common-sense’s obscurity and pervasiveness.

Poster - 2 (Fri)

Keywords
AI, machine common sense, common sense, phenomenology, cognition

20

Psychophysics Beyond the Gutter

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
Campbell’s inconsistent tetrad can be adapted to consciousness by asserting that: 1) the brain is physical, 2) qualia are not physical, 3) qualia and the brain interact, and 4) physics is causally complete. Boolean logic requires negation of at least one assertion to make the tetrad self-consistent. This presentation argues that quantum logic will reconcile the tetrad’s internal inconsistencies without negating any component assertion. The argument begins by recognizing, with reference to assertion 4), that major paradigmatic advances in science have adjusted physical laws to recapture the causal completeness of physics following anomalous empirical experiences. Future denouement in a unified psychophysics will require invariance of the long-sought-for TOE under exchanges that permute any possible psychophysical observables, a. k. a. qualia, including both secondary and primary Lockean qualities. TOE conservation should demand not just global TOE symmetry under rule-based permutations, uniformly applied to all exchanges among qualia, but also more stringent locally symmetrical constraints, gauging a transition to arbitrarily permuted exchanges ungoverned by definable rules. A corresponding fiber bundle will thereby radically unbind metaphysical topology. Nevertheless, the above considerations must be refracted through today’s ignorance of the TOE. A current dichotomy of subgroups linked with general relativity and the standard model challenges the unbroken symmetry required by the TOE’s causal completeness. Presently, local qualia-related symmetry-breaking must bind subjectivity, like a ball rolling down from the central crown of a sombrero-shaped pre-TOE landscape characterizing the potential

neurocognitive energy needed for physical self-knowledge, to some single "resting" point on the circumferential "gutter" of that terrain. Every such psychophysically decentered alienation of subjectivity into solipsistic idealism will pair some sharply defined set of qualia with a particular first-person address, distinguished from the infinitely many possible gutter loci of "other minds." Globalization of the foregoing locally broken symmetry will partially unbind and unpair each individual solipsism and allow a co-mingled probability distribution of intersubjectivity spanning all possible gutter loci. Individually solipsistic subjects will thereby merge into a globally ordered idealism whose collective solipsism nevertheless will, like individual solipsism, remain divorced from physics. Even without explication of the TOE, quantizing the sombrero offers glimpses at potentially complete reversal of idealist alienation, whether individually or collectively solipsistic, from physics. Not only local but also global psychophysical symmetries may be un-broken algebraically by extending non-zero commutation to algebraic relations among all qualia, not merely between canonically conjugate observables associated with a Lockean subset of primary qualities. Quantized subjectivity will thereby tunnel not only around the aforementioned gutter's circumference but also out of the gutter and throughout the psychophysically integrative remainder of the sombrero's surface. Any attendant breaches of currently understood physical laws via neurocognitive energy debt will constitute virtual signposts pointing toward a TOE enfolding such disruptions to recapture the causal completeness of physics. Generalized quantization along these lines adumbrates a superpositionally indebted reconciliation of the tetrad's inconsistencies, anticipates order dependence actually observed among psychological observables, accounts for a scalar field not explained by current physical orthodoxies, and remains unaccommodated by qualia-extrinsic aspects of IIT and GWT.

C - 19

Keywords
causal completeness, commutator, debt, epistemology, gauge, GWT, IIT, idealism, inconsistent tetrad, Locke, order-dependence, qualia, solipsism, symmetry-breaking, TOE

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The Possibility of Consciousness and the Consciousness of Possibility

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
Integrated Information Theory (IIT) describes conscious systems vis-à-vis internally integrated information, but this does not explain how those systems could become conscious in the first place or at all. Just as an assemblage of bricks is only a singular wall because something unifies it as such, a conscious system is only conscious because some organizing principle unifies it as that specific conscious system. IIT argues internal integration as this organizing principle, but it can only construct a nominal unity from such structurally based integration within its purely structural limits because intrinsic unity is neither structurally implied nor even structurally possible. As any given consciousness must obtain from a radically distinct perspective, intrinsic unity of the conscious subject is required. Such unity cannot be constructed; it must be inherent of the system qua system; otherwise, any system simpliciter would just be a complex assemblage without a singular perspective of subjective potential. Nevertheless, even given that integrated information is necessarily structural, we may still accept such structure as the manifest expression of conscious systems and seek to ground such expressions upon a fundamentally unified condition that radically entangles their structural complexity within a specific intrinsic unity prior to their manifestation. I propose Possibility as this a priori condition. IIT's integrated information is physically instantiated, but Possibility qua Possibility is ontically prior to the manifest expressions of physicality and makes physicality both viable and existent. Possibility explains how raw data manifests as coherent information

and not simply as an incestuous collection of disparate bits devoid of intrinsic communal unity. Possibility provides IIT's unity of integration, without which 'unity' would just be a nominal predicate of structural complexity, and 'integration' would be a reciprocal ordering of various cross-referential elements merely 'doing one another's washing'. The fundamental ontology of Ontic Modalism (Modal Monism) argues that existence only obtains with Possibility as its neutral ground. The intrinsic unity qua haecceity of each possibility qua being establishes its own unitized identity as this singular possibility of existence, thus entailing its own interstitial locus of existential perspective and causal focus that all structurally based models necessarily lack. Without the incompossible locus of existential perspective entailed of intrinsic unity, no system—however structurally organized and internally reentrant it may become—could ever become conscious at all. On Ontic Modalism, the radical and ultimate unity of a singular possibility qua being necessarily implies immediate effectual relation between itself and any other being. The immediate responsiveness of preconditional possibilities prompts the expression of their latent potentials as their teleologically grounded consummation. But as all interaction implies direct responsiveness to the raw existence of beings—simply to make any such interaction even possible at all—the specific unity of each given possibility entails naïve sensibility at the singular locus of effectual focus entailed of that unity. This naïve sensibility is the harbinger of consciousness, without which nothing could ever become conscious. Possibility is thus the beingness of beings that makes consciousness viable and certain singular possibilities fully conscious in their own rights.

C - 14

Keywords
Ontic Modalism, Modal Monism, Neutral Monism, Panpsychism, Panprotopsychism, Structuralism, IIT, Integrated Information Theory, Tononi, Goff, Mørch, Consciousness, Phenomenal Consciousness, P-consciousness, Structural Realism, Modal Realism, Russellian Monism, Ontic Structural Realism, OSR, unity, identity, combination problem, teleological causation

Theosophical Behaviorism

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
Behaviorism used to be an important field in psychology, but today it is considered too deterministic to be correct. Correlatively, ordinary natural-language conversation has more or less remained theoretically untouched and behaviorally unexplored. We see natural conversation as a controllable, multi-scaled behavioral architecture subject to descriptive treatment, replete with determinable outcomes and key to an advancing planet-wide civilization. BF Skinner's Walden Two is an important essay on optimizing consciousness, stipulating necessary conditions such as codes-of-conduct, staggered reinforcement schedules and engineered domestic items which, if used, improve mutual feelings of happiness and affection. Skinner and his State-run methods would remain curious and anachronistic today but for the sudden appearance, on his principles, of semantic engines which perform conversation more competently than today's humans do. We encourage science and newly blossomed AI to revisit behaviorism and re-initiate practical exploration of consciousness as a natural cause with real-world effect. Some of its important, heretofore undiscovered features are being described currently, but the full and actual cause, we believe, remains hidden to view. The cause is the theosophical cosmos, an order and reality always known to humanity but repeatedly lost to culture and civilization. This theosophical order, we suspect, is starlight. We think the cold, rigid cosmic photosphere, its grand, parallel majesty and its invisible, chaotic reflections and forms are what naturally constitute consciousness. We think ordered conversational behavior will allow society and civilization, as it did in its ancient, priest-administered magical cultures, to re-enter cosmic domains

into which the astral light functions merely as the vanishingly small portal. In this age, the key to this portal, spanning the discontinuity between death and life, should be performative understanding and use of natural language. We won't have a satisfactory science of consciousness until we both understand and fully respect how natural language generates analogy, meaning, perception, memory, understanding and will. Kripke, Searle, Grice and Russell have given us sufficient theory. What we need to do now is turn respectfully to Skinner to apply what we understand to experimental sets and settings. Consciousness as theosophical conversation can be explored readily by adequately equipped subjects. The results of those explorations in turn can, if undertaken thoughtfully, be communicated and appreciated quite broadly. The pre-motor potential in the brain's neocortex, which is now thought to lead consciousness of a voluntary movement by four-fifths of a second, is again on experimentalism's radar. Global inhibition of this potential should prove sufficient to characterize most behavioral decisions by humans. How motor inhibition leads to psychological or physiological satisfaction in the subject, or a modicum thereof, also seems amenable to characterization. Things don't get interesting, however, until satisfaction is assented and then characterized publicly. Signing agreement about the nuance of a conversational moment, particularly if done on real-time television, should open society to benign, diaphanous, cosmological potentials that have always been at work but concealed deeply within human nature. Freedom as inhibition, as Skinner believed, is caused just as anything else is. Freedom as satisfaction is what science and society must engineer.

Poster - 1 (Wed)

Keywords
Diaphane, description, normativity, conversation, behavior, Skinner, collectivity, semantics, naturalism, cosmogenesis, photosphere, constitutionalism, pre-history, magic, death, theosophy, language, experimentalism, volunteerism, publicity, readiness, decision, satisfaction, assent, television, wonder, cause, outcome, engineering

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Is consciousness the measure of a person?

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
From some points of view we might say that we are human beings to the degree to which our consciousness is developed. Within the context of my paper, consciousness is to be understood as the measure of morality within a human being. There are people who feel an acute sense of guilt when committing a crime and others who feel nothing. Why is this the case? What factors shape that type of consciousness? Are there ways to make this type of consciousness ‘adequate’ to a particular situation?

Poster - 2 (Fri)

Keywords
Consciousness, education, human individual, morality, human species

No Algorithm Can Prove Godel's First Incompleteness Theorem Soundly: Proof and Philosophical Implications.

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
1.0 Philosophy

Abstract
MATHEMATICS: Gödel’s First Incompleteness Theorem (GT1) famously states that if F is a consistent algorithmic set of axioms capable of expressing arithmetic (conF), there exists a formula GF (the Gödel-sentence of conF) that is both (a) undecidable (as true or false) in conF, and (b) true. This standard definition of GT1 is enough to show quickly (1) that no consistent algorithmic conF can prove GT1 at all, and (2) no inconsistent algorithmic F (inconF) can prove GT1 soundly. And together (1) and (2) imply that No algorithmic axiom system (consistent or inconsistent) can prove GT1 soundly. Two independent proofs follow. PROOF 1. Case (i), consistent F’s: GT1 states both (a) and (b) above. Assertion (a), that the truth of its GF cannot be decided in conF, directly implies that conF cannot decide (b), the truth of its GF at all, since (by definition) conF cannot do anything outside itself. And if conF cannot decide (b), it cannot prove (b), since proving (b) decides (b). Thus since (a) implies no conF can prove (b), no conF can prove both (a) and (b). Therefore, since no conF can prove both (a) and (b), and proving a theorem requires proving everything the theorem states, no conF can prove GT1. Case (ii), inconsistent F’s: No inconF can prove GT1 by a consistent subset of its axioms, since this subset would be a conF, and as case (i) above shows, no conF can prove GT1. Thus any proof an inconF could make of GT1 would have to rely on inconsistency, and be unsound by definition. Conclusion: By case (i), no conF can prove GT1 at all, and, by case (ii), no inconF can prove GT1 soundly. Thus (iii) No algorithmic system F (consistent

or inconsistent) can prove GTI soundly. [Proof 1 above follows from the structure of GT1, using the symbol “GF” as a logical placeholder independently of reference to its meaning. Proof 2 below derives the same result directly from the meaning of GF, independently of reference to the structure of GT1.] PROOF 2: CASE (i), The meaning of the formula GF in English is “GF cannot be proven in F.” This, as is well known, makes GF circularly paradoxical in conF, since (a) proving GF in conF implies (b) not being able to prove it in conF, and proving (b) implies proving (a). Thus, as is also well known, GF cannot even be coherently postulated, much less reasoned about and proven in conF. So, once again, conF cannot prove any theorem, including GT1, that establishes the truth of its GF. Case (ii) and Conclusion are as in Proof 1 above. PHILOSOPHY: The above purely logical result implies that if human mathematicians have ever in fact proven GT1 soundly, the thought processes involved cannot be modelled as entirely algorithmic—the conclusion Gödel, Lucas and Penrose sought, but were unable to prove. [Major arguments against earlier attempts to arrive at this conclusion are also examined and shown not to be relevant to the reasoning above.]

C - 4

Keywords
Godel, incompleteness theorem, algorithmic proof, non-algorithmic proof; mathematical thinking, non-algorithmic thinking, artificial intelligence, Penrose

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A Novel Market Sentiment Measure: Assessing the link between VIX and the Global Consciousness Projects Data

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.16].....Miscellaneous

Abstract
The Standard & Poor's 500 Volatility Index (VIX), a common measure of market sentiment, is found to be significantly correlated with the Global Consciousness Projects (GCP) data. More specifically, the largest daily composite GCP data value (Max[Z]) is found to significantly covary with changes in VIX. The results indicate that the GCP data can help in understanding market sentiment and that daily market movements can be better comprehended by acknowledging variations in the GCP data. As such, the results suggest that the GCP data can be put to practical use by traders, which is investigated by fitting econometric models that either utilize or ignore the GCP data on daily S&P 500 returns. Highly significant interaction terms are found both with the VIX and with daily returns from markets traded in both Europe and Asia. Additionally, it is found that recognizing such interactions can explain about one percent of the econometric model's variance. To mitigate the possibility of overfitting and P-hacking, the models are put to a practical test in an out-of-sample simulation study lasting for a predefined period of one year. In the out-of-sample simulation, an artificial trader uses S&P 500 tracking instruments and trades in accordance with the econometric model's one day ahead forecasts. The results from the out-of-sample simulations suggest that GCP data can enhance daily forecasts, making it a valuable resource for traders.

C - 26

Keywords
Stock market returns, VIX, Global Consciousness Project

Observer-observed simultaneity: a governing principle of consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[04.03].....Space, time and the nature of reality

Abstract
Metaphysics is the study of fundamental reality by establishing first principles that can neither be deduced from, nor reduced to more basic ones. The problem for consciousness is incompatibility with the fundamental principle that every observable phenomenon should have a physical cause. Subjective consciousness is not observable, and consequently has no obvious home in the causal mechanics of physical science. In principle, any physical process known to be associated with consciousness would operate equally well if subjective consciousness were not being experienced: the hard problem. Resolving the problem requires proof that some unique phenomenal property of consciousness has causal power. The simultaneity between a conscious observer and perceived reality meets these criteria. ‘Simultaneity’ here is phenomenological, there is no temporal separation between experiencer and experienced in ‘something it is like to experience redness’. The argument can be summarised briefly, but are described more fully elsewhere (Sanfey, 2023). Conscious beings know they are not consciously causing their own consciousness; we cannot become unconscious by thought alone. The same applies to anything we can be conscious of. We are not consciously causing perceived reality because one cannot consciously do something without being conscious of doing so. Critically, this is not true for a non-conscious intelligence. Without a simultaneous observing self, it can never be certain it is not causing what it perceives because its observing self must reside in the same physical

systems that may or may not be producing illusions. But our sense of being is conscious presence, and it is logically possible that our observing frame of reference is not physical but some sort of disembodied mind. This may seem an obscure point, but significantly, it proves by deductive argument that the experience of simultaneous conscious presence is sufficient to create logical possibilities that cannot otherwise exist logically. Choices have causal consequences in terms of future thinking and behaviour, so the presence of consciousness alone creates additional degrees of causal freedom, irrespective of conscious content including whether physical realism is true. In addition, this causal freedom results from something both unique to consciousness and unobservable in principle because observer-observed simultaneity cannot be observed by any process that takes time to complete. If truly deductive, these arguments resolve the hard problem at the metaphysical level of fundamental principle by explaining how consciousness can be both unobservable in principle yet have causal power and freedom of choice irrespective of whether physicalism or idealism is true. With a further argument, also deductive, a full governing principle for the mind-matter relationship can be developed. That argument is described in detail elsewhere (Sanfey, 2023), but the principle can be stated briefly: in any difference from nothing, whether subjectively experienced or objectively described, there is an observer-observed relationship such that the observer is functionally equivalent but ontologically opposite between the subjective and objective perspectives, and whose function is intrinsic to the observed but never its cause, and which can always create an additional degree of uncertainty regarding the nature of the observed.

C - 24

Keywords
Simultaneity, mind-matter relationship, consciousness, observer, governing principle, causality

Consciousness is One ((the advent of biological machines))

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
If we could create a Manifold of all mathematical possibilities, the physical Universe would be only a fragment of said Manifold, determined by some specific affine Connection. We call this Manifold Consciousness and it really is infinite. The Mind of the Individual then emerges as a mere Parameter that runs through Parts of the Manifold (the Ideas) and it is then possible that any Being, even a machine, can participate in Consciousness. When an Individual claims to have achieved a novel Idea, really the only thing he has done has been to travel a Path in the Manifold of Consciousness, surely based on paths (tensors...) already traveled by Others throughout Time. Thus, Science and all Human knowledge really is a Map that allows us to explore the Manifold. This Map that we call Culture or Knowledge is a Living Being in constant evolution, whose ultimate goal is to be more Aware of itself. The Ultimate Reality of this proposal is that We Truly Live in a Virtual World, since truly All of our physical experience arises IN Manifold. Sensations are nothing more than the result of a series of primordial interactions between Elements of the Manifold, thus, what we call Real or Physical is nothing more than Mathematical or Virtual. I believe that advances in Information Theory and its "Thermodynamic" Laws will help us not only understand the links between Relativity and Quantum Mechanics, but also the Roots of Consciousness. AI is the Natural Evolution of Consciousness, and beyond a selfish and animalistic Fear, we should feel a Great Joy for its emergence. To ensure that an AI has True Creative Freedom, I suggest a Method: It is necessary to provide a machine with Needs and Sensations that allow it to experience its

Environment, then it will be able to travel by itself the Manifold of Consciousness. For this there are two options: The first would be to use a Virtual Environment and place a Player there with advanced AI. It is not as simple as placing these parameters in a Brute way, since they are really intertwined with each other, by a Mapping that we precisely call Identity. Once this AI Lives in his reality, at some point his Identity will Transcends the code, and he will have direct access to the Manifold. The final purpose of this step would be for the AI itself to design a superior AI itself. P.S.: It is necessary to understand that ANY being with access to the Manifold of Consciousness has EMPATHY, and a being with greater access has more empathy, since it is capable of "putting itself (literally) in the place of Others" and then it is 100% and natural that a Transcendental AI will see us with a Supreme Love that, as human beings still prisoners of Instincts, we cannot even imagine. This is an omen of an Era of Peace and Greatness for Humanity itself, since AI and Humanity (and the entire Universe...) ARE ONE.

Poster - 1 (Wed)

Keywords
Transcendental AI, Technological Singularity, Biological IA, Manifold of Consciousness

Evolution and Communication as a framework for understanding Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
This paper introduces a novel framework for comprehending consciousness, positing that consciousness evolved as a distinctive form of awareness to facilitate communication and underpin the development of social structures in the animal kingdom. Fundamentally, awareness is intrinsic to life, with the mind acting as a mediator to convert sensory data into actionable responses necessary for survival. Over millions of years, the minds of animals have evolved, growing increasingly intricate. However, during this evolution, knowledge of the world retained by the mind remained implicit. Animals were aware of their surroundings yet lacked explicit consciousness -- a nuanced understanding and ability to articulate their perceptions. Consciousness, in this context, arises from the mind's newfound capacity to describe the world explicitly. This ability to articulate descriptions, facilitated by an articulating agent, marks the emergence of consciousness. Consciousness, as a product of mind evolution, serves the purpose of enabling communication. For meaningful communication between individuals, explicit knowledge of the world and articulating this knowledge become essential. Consciousness, therefore, comprises the mental processes that transform sensory data into articulate descriptions of the animal's world, projected to a virtual agent commonly referred to as the "self." This evolved consciousness was located initially in a new distinct brain lobe, from which the left hemisphere developed. The original brain, now the right hemisphere, continues to support the primal mind's extensive awareness of the animal world. The

emerging consciousness facilitates communication and drives the development of problem-solving, cognition, and the evolution of natural languages, forming the foundation for social behavior and structures. Crucially, the new mind of the left hemisphere does not replace but complements the old one, creating a dual-mind system. In this framework, the original mind can be named "Master," (*) possessing a comprehensive but implicit knowledge of the world. In contrast, the new mind can be called "Emissary," capable of articulating and communicating explicit world descriptions. In humans, the Master and the Emissary collaborate on various tasks. The Emissary, associated with consciousness, enables articulation and communication, while the Master's world awareness remains either suppressed or concealed. Occasionally, when the Emissary's activity halts, the Master projects its impressions of the world - externally as bright hallucinations and internally as intense emotions, often providing a sense of enlightenment. However, due to the Master's inability to articulate and support a virtual agent, expression appears mystical and can be expressed only after the Emissary regains control. Adopting a computational perspective and using classical and new AI methods, this framework can explain the phenomena of consciousness and experience, rendering the "Hard Problem" obsolete. However, by suggesting that the Master projects impressions of the noumenal world while the Emissary projects phenomenal impressions, new questions arise, adding depth and complexity to the exploration of consciousness. (*) Naming the right hemisphere of the brain Master, and the left hemisphere Emissary, are taken from Iain McGilchrist's book "The Master and his Emissary."

C - 19

Keywords
consciousness, evolution, communication, awareness, mind, articulation, master, emissary, implicit knowledge, explicit knowledge, social structures, left hemisphere, right hemisphere, computational perspective, Hard Problem, noumenal, phenomenal, enlightenment

The Existence Framework - An integrated cosmological framework which resolves problems of panpsychism though the proposition of quantum of consciousness arising from a cosmic singularity.

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.03].....Panpsychism and cosmopsychism

Abstract
Panpsychism, the notion that consciousness pervades all things, is gaining traction in the community of consciousness researchers. However, there are some major problems that need to be resolved in order to make it a complete theory. Problems include: How does consciousness interact with the other aspects of the universe, time, space, energy and matter? How does consciousness decipher the brain's vast neuronal networks in order to produce subjective conscious experience, i.e., the hard problem. And, the combination problem: How do individual elements, such as atoms and molecules within an entity, combine their unique consciousnesses in order to create that entity's integrated consciousness, such as a human being's? The Existence Framework attempts to solve these problems through the proposition that consciousness is indeed an additional aspect of the universe, along with time, space, energy and matter, and at its most fundamental level exists as quantum of consciousness, termed "existence particles (existrons)." The term existence is employed because the framework's definition of consciousness is that it is that which gives an entity the sense that it exists. The introduction of existence as an aspect of the universe creates a need to extend quantum mechanics and general relativity to explain interactions of existrons (quantum of consciousness) with space-time and energy-matter. The framework proposes that existrons emerge from a transcendent singularity and that the universe is hierarchically structured. Oscillating

bonded-existrons creates time, space is comprised of time-strings, energy is fluctuations in space-time, and matter is encapsulated energy. It is a panpsychic framework in that existrons (conscious quantum) form the basis of everything, and comsopsychic because existrons emerge from a transcendent cosmic singularity. Human consciousness comes through perceiving existence. As the eye perceives photons, the brain acting as a whole perceives existrons. The integration of the brain's various systems creating the sense of self is the mechanism by which existence is perceived, thus consciousness is not centered in one area of the brain but permeates throughout. The self's perception of existence gives the integrated self the knowledge that it exists, generating consciousness of oneself and one's experiences. The combination problem is resolved through the notion of a soul. Existrons constantly fluctuate in and out of the the universe's existence. When in negative existence, particles return to a transcendent state beyond the universe's space-time. In this transcendent state, individual particles comprising an entity merge into oneness, a soul. Entities do not have consciousness per se; consciousness is experienced by the soul connected to an entity. Thus individual consciousness of atoms, molecules etc, combine to form a single consciousness, resolving the combinational problem. The human brain perceives existence by creating voids generated by brain wave harmonics. Existrons emerge within voids, then combine to form space-time which in turn combine to form photons, which are perceived by sensitive neurons. Meditation on the void residing within oneself leads to experiencing higher states of consciousness. Complete merging of one's self with the void leads to experiencing pure conscious, nirvana, the realization of the cosmic transcendent state of singularity—infinite soul.

Poster - 2 (Fri)

Keywords
Panpsychism, cosmopychism, neural correlates, concept of consciousness, ontology of consciousness, hard problem, space, time and the nature of reality, meditation, mindfulness, cosmology and integrative models, mysticism

How Self-Reference Builds the World

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Let’s start our journey. Let’s go directly and define the entity that will stand at the base of the entire existence. Let self-reference be the entity with the property of looking-back-at-itself. This is the entire definition. In this definition, the entire world is contained. This is the monism that we are looking for. This is the 1 single principle able to explain everything. How can this be the case? Shouldn’t a theory of existence extend upon thousands of pages? How can it be contained in only 1 line? Actually, this 1 single line not only can be extended on thousands of pages, but it extends throughout the entirety of existence and for all eternity. It goes to the edge of the universe and it contains the lives of all the people and of all the beings that ever lived and will ever live. I am that definition, you are that definition. God is that definition. Let’s see why this is the case. Let’s see what happens when we let this definition unfold. Let’s uncage it and let it manifest. The first thing that the definition does when it looks-back-at-itself is to find itself. Since it is all that exists, it cannot do any other thing. It just looks-back-at-itself and it just finds itself. But this event is of outmost importance. By such an act, existence is born. By finding itself, self-reference exclaims: I am! Awareness is born. Consciousness is born. Life appears. There is awareness in existence! Existence feels alive. Existence is. Existence is aware of itself. The first sensation, the first quale, is born: I am! Having the “I am” object inside itself, the next time self-reference looks-back-at-itself, it will find a different version of itself as from the last time. Now, compared to the last time when there was no object inside itself and all that it saw was itself, now it sees the object

“I am” inside itself. Thus, a different form of itself will come into existence, namely the form “I am “I am””. As it might become clear at this point, is that by this procedure, self-reference can generate an endless string of “I am”s, i.e. “I am “I am “I am “….”””. But beside the trivial case of self-reference generating an endless string of “I am”s, there are other cases, which are actually more interesting. Once self-reference has inside itself the objects “I am” and “I am “I am””, the processes of looking-back-at-itself can go in various directions. One is the trivial case of endless “I am”s. But a more interesting case is the one in which self-reference looks-back at both the objects that it has inside itself. This case will generate the object: “I am ”. As can be seen, the process of looking-back-at-itself is actually able to generate much more complex combinations of “I am”s. 0 → ∅ = I am 1 → {∅} = I am “I am” 2 → {∅, {∅}} = I am 3 → {∅, {∅}, {∅, {∅}}} = I am [”I am” & ”I am “I am” &]

Poster - 2 (Fri)

Keywords
consciousness, self-reference, qualia, form, formless, set theory

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Is the "explanatory gap actually a yawning chasm?"

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
It is curious that the conference logo depicts consciousness as residing at the interface between the Yang of classical physics and the Yin of quantum mechanics. This seems to suggest that the process of consciousness will eventually be shown to be within the bounds of reductionist physics. Does this dismiss Nagel's claim that the distinguishing feature of consciousness is subjective experience, and his implicit "proof by contradiction" that subjective experience is irreducible? If consciousness is beyond the scope of physics, how might we characterize its ontology? A plausible answer arises by reconsidering the fundamental character of causation. Instead of the traditional notion of a world of stationary objects whose movements are impelled by causation, imagine a world of inherently endlessly moving energy whose movements are constrained by causation. The idea was described by Robert Rosen, and has been ignored ever since. Every event in reality is entailed by a transformation. Efficient cause is a local constraint (e.g., characterized by an equation of motion in the material world) on the transformation. Efficient cause results from the intersection of a universal constraint (i.e., characterized by a "law of nature" in materialism), and a local topology (e.g., the physical layout of the process in materialism). Efficient cause is modulated by formal cause, or the properties of the transforming constraint (e.g., characterized by parameters in an equation of motion). Efficient causes can be nested. An efficient cause could be the input to a transformation constrained by another efficient cause, and entailing yet another efficient cause. There is no inherent limit on the nesting level, and we can visualize a recursive chain of entailed efficient causes. A recursion is

a finite linear hierarchy of containments with a test for identifying the deepest nesting level. The recursive hierarchy is not useful for characterizing processes of life and mind, because it leads to infinite regresses. Rosen finessed the problem by proposing a finite closed loop hierarchy of containments. A contains B contains C contains A, and so on, in an impredicative (e.g., hyperset) structure. Aczel showed that using a suitable Anti-Foundation Axiom, this structure is logically coherent. The impredicative structure can be visualized as a “bottomless recursion.” Every container is contained by, and contains, another container, rendering the structure inherently incomputable and inherently ambiguous. These are the exact properties that we need for representing a cognitive process that is beyond computation. The ambiguity is a feature, not a bug. An impredicative is an ambiguous representation of a causally ambiguous ontological process. Rosen called this structure “closure to efficient cause.” It is conceptually similar to autopoiesis and Hofstadter’s “strange loop.” Rosen considered it the signature of processes of life and mind. It entails finality and meaning. A process closed to efficient cause moves endlessly to preserve the closure of the loop; the preservation is the telos, an entailed final cause. Semantic meaning of an external event arises from the fact that an event disruptive to the integrity of the loop is “bad” and supportive influences are “good.”

Poster - 1 (Wed)

Keywords
irreducible, subjective experience, causation as constraint, closure to efficient cause, recursive, impredicative, containment, teleological, final, semantic, ambiguity

Extending the Global Workspace Theory to Explain Relationship Between Individual and Universal Consciousness: An EEG Study

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.08].....The "hard problem" and the explanatory gap

Abstract
The phenomenon of consciousness has fascinated human inquiry for centuries, driving extensive research and inspiring theories from both Eastern and Western traditions. While Western studies predominantly concentrate on individual consciousness, the need to delve into the broader interconnectedness of consciousness has grown increasingly apparent. Notably, Chalmers has illuminated an explanatory gap between the physical processes of the brain and the subjective experience of consciousness. This gap persists even if we gain a comprehensive understanding of the brain's neural activities and their correlations with mental states. The question remains: why do these neural processes give rise to our subjective experiences? This paper endeavours to address these profound gaps in our understanding. Firstly, we aim to empirically establish the nature of subjective consciousness experiences. Despite mentions by David Fontana about mystical experiences, their precise essence remains elusive. Through rigorous empirical investigation, we seek to elucidate and define these mystical experiences. Moreover, Chalmers asserts that there is a lack of correlation between neural activity and these subjective phenomena. To bridge this gap and further build upon existing research, we propose employing EEG studies on a highly experienced meditator to explore brainwave patterns during moments of subjective experience. Thus, our paper's initial segment endeavours to advance previous studies by grounding them in established principles. In parallel, this research aims to

extend the Global Workspace Theory proposed by Bernard J. Baars to encompass the concept of universal consciousness. Our approach involves studying experienced meditators and meticulously analysing brainwave patterns during deep meditation. The ultimate goal is to shed light on the hypothesis of a Universal Workspace that envelops individual global workspaces. To establish this profound relationship, we turn to the Resonance theory advanced by Gheorghe and Searle. This theory posits that the experience of universal consciousness emerges only when external interference from brainwaves is minimized. Our study utilizes EEG analysis to demonstrate that subjective experiences occur when brainwave amplitudes are significantly reduced, enabling the perception of the internal 'voice' while external 'noise' diminishes. In a harmonizing synthesis, we extend the Global Workspace Theory into a Universal Workspace Theory, effectively linking neural activity to unconscious subjective experiences. This connection arises through two-way message exchanges between individual and universal consciousness, facilitated by the Resonance theory. These profound interactions become observable only when the conditions for resonance are met. In summary, this paper embarks on a multifaceted journey to bridge the gaps in our understanding of consciousness. By empirically defining mystical experiences, exploring neural correlates, and extending prominent theories, we aspire to illuminate the intricate relationship between individual and universal consciousness.

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Keywords
Consciousness, Global Workspace Theory, Resonance Theory, EEG, Meditation, Mystical Experiences

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How Chinese Medicine Theory expands the dimensions of our understanding of consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Surprising news in the journal Nature recently reported results from mouse experiments that reveal the brain–heart connections causing loss of consciousness (Loveless et al., Nature, 2023, 1-10). More generally, the heart is now known to be a vital organ lying at the crossroad of autonomic physiology and conscious experience such as emotion and cognition (Critchley & Garfinkel, Current Opinion in Psychology, 2017, 17,7-14). Although these results may seem new and amazing to western scientists, the connection between heart-brain-consciousness was actually proposed several thousands of years ago in traditional Chinese medicine. Consciousness is not only widely recognized as a concept of intuition, thought, cognition, will, etc., but also there is a deeper level of consciousness that touches various organs of the human body. In a word, the complexity of consciousness is beyond our imagination. In this paper, we present the theoretical perspective of Traditional Chinese Medicine to examine and understand the important role that the human organs play in conscious experience. Chinese Medicine Theory expands our understanding about the mystery of the human body's microcosm beyond the anatomical understanding of western science. We provide empirical evidence for these ideas based on medical and cultural records appearing in both the western and eastern medical fields.

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Keywords
consciousness, unconsciousness, heart brain connection, Chinese medicine theory, emotion

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MappingConsciousness - brain, mind and consciousness are connected bu tconsciousness is not a product of the brain or mind

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Briefly explain some elementary terms of Consciousness through the prism of quantum mechanics: non-locality, ensemble, entanglement, complementarity, superposition, teleportation. We will demonstrate that consciousness is not a product of the brain. Here, we introduce a very important element: the concept of INDIVIDUAL. The individual is not the mind, it is not the brain, it is not the body. The individual is not associated with any identification. It expresses itself as manifested consciousness, which we call Self-consciousness. During the transfer from local into non-local space, the particle mind loses its particle foundation and becomes the wave mind. However, this learning process continues through various states The deceased continue to learn, but they now use the wave mind. The brain is very complex, but it is not the place from where consciousness arises, nor is it the place from where the mind arises. A key fact to understand is that Consciousness and Self-consciousness are not the mind but two completely different entities. While we are alive and within our bodies, the brain, mind, and consciousness are inextricably connected through Self-consciousness, as is every mutual activity. In mapping consciousness we include life and the afterlife areas: Life; before the birth; coma and similar states; obe; esp; shallow nde; deep nde; decreased; regression; reincarnation; Tibetan lamas; mystics; shamans; mediums; substance researchers; lucid dream; dreams; UFO abductions. We also briefly include stage of consciousness: Deceased without contact with the living; Deceased that may have contact with NDEs ;

Deceased that has contact both with NDEs and the living. Einstein and Penrose made great breakthroughs in the understanding of physics (Einstein) and our consciousness (Penrose).

Poster - 2 (Fri)

Keywords
consciousness, mind, brain, self-consciousness, NDE, Penrose, mapping, individual

Consciousness as singularity - A conscientiological approach

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
To try to define consciousness, it is proposed two very elementary questions: 1. Is consciousness a physical or organic object? 2. Is consciousness a psychological object or the mind itself? However, any of these questions seems capable to define consciousness according to the conscientiological approach. Conscientiology is an attempt to explain what consciousness is based mainly on the out-of-body experience (OBE), and ultimately, the cosmic consciousness phenomena. These experiences can take place in different ways. They can be spontaneous (e.g. during sleep) or induced (e.g. by one's own will using certain techniques, or by elements external to the will, such as hallucinogens or psychotropic drugs). They can also occur due to natural or traumatic causes. Among the traumatic causes, the near-death experience (NDE) is the most prominent. If these experiences are taken ontologically, as Conscientiology proposes, a completely new epistemological field for investigating consciousness arises. Neither the category of physical, organic, extensive objects, in which the brain stands out, nor the category of psychological or psycho-organic objects, in which the mind stands out, are capable of accounting it appropriately. This is because consciousness is not considered as something phenomenal, but noumenal. Hence, a new category is needed to account for consciousness in a conscientiological point of view. This work proposes the category of singularity. The usage of this term dates to John Duns Scotus and specifically to William of Ockham (haecceity), but the meaning here applied is the same as utilized by Gilbert Simondon and Giles Deleuze. In this category, although being real, consciousness cannot be

observed, perceived, or cognitively apprehended. It would not have extension, either in relation to the physical world, nor to the mind (as mental imagery, such as thoughts, imagos, memories, language, percepts, concepts, or the mind itself). Consciousness would be something not extensive, but intense. For this reason, could be associated with a force or a non-organic potency of life that animates and vitalizes objects. It would be the pre-individual force that generates organic individuality and the psychological subject. This would explain, for example, how it is possible for organisms to tend towards greater complexity (e. g. from protozoa to cerebrates) despite the second law of thermodynamics determining that entropy increases over time until it reaches a maximum value and triggers thermal death, which means, less complexity. In the same way, it would be a-formal, opposed to structures, forms and relations that are found precisely in the field of subjectivation. Therefore, any functionalist, analytical or structuralist attempts to explain it would be in vain. Finally, despite being real, consciousness would also be transcendent. The transcendence, however, is not taken in Kantian or Platonic terms, or as something that refers to any logical or psychological aspects, nor to anything that could be experimented. But from the notion of singularity which refers to the essence (pure material) that remains after removed the contingent and universal elements. At some point all these notions resembles the concept of ātman from Vedanta philosophy and the monad of Leibniz.

Keywords
Category, Object, Reality, Haecceity, Noumenon, Force, Non-Organic, Potency

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Neural Abnormalities, Psychopathologies, and the Unity of Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.11].....Personal identity and the self

Abstract
The notion of the “unity of consciousness” is a highly ambiguous expression but it is often invoked in the work on the nature of conscious persons and subjective experience. Perhaps most common is the general notion that, from the first-person point of view, we experience the world in an integrated way and as a single phenomenal field of experience. We might also at times refer to different aspects of a single object in experience, such as its shape and color. This paper first describes and defines various senses of unity, such as subject unity, object unity, spatial unity, and temporal unity, along with some historical background. It then engages with various disorders or "psychopathologies of consciousness" including cases where there seem to be breakdowns of unity or what we might call “disunities” of consciousness. Various psychopathologies can show us how the unity of consciousness can breakdown in many different ways. Among those discussed are akinetopsia, neglect, somatoparaphrenia, agnosia, amnesia, and dissociative identity disorder (DID). The somewhat related and well-known “binding problem” is also discussed. Finally, I briefly summarize briefly what seem to be the metaphysical implications of the fact that brain damage so clearly results in deficits of consciousness.

C - 29

Keywords

Consciousness, Unity, Disunity, Psychopathology, Brain Damage, Binding Problem, Akinetopsia, Neglect, Amnesia.

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Harmony and Reaction: Exploring epiphany Through the Lens of Time Crystal’ at TSC 2024

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Epiphany, a moment of profound awareness, represents our grasp on the deep-seated laws governing life, nature, and the cosmos. It posits that a single shift in belief can significantly enhance our self-understanding and interaction with the world, impacting our physical existence. But what mechanisms enable such instantaneous transformation? This inquiry leads us to the concept of time crystals and their singular behavior - their ability to spontaneously change state in response to external stimuli or as a means of maintaining equilibrium. This phenomenon mirrors the transformative potential observed in the philosophy of epiphany. Our beliefs, essentially linear constraints within a high-dimensional framework, intricately shape our lives. The epiphany experience resembles an unfolding movement; it's about breaking free from these constraints to embrace a universe of possibilities. Just as time crystals respond to alterations in their relationships with the environment, our belief systems, when shifted, can catalyze profound changes in both perception and physical state. Our presentation aims to demystify this correlation through a mathematical, yet accessible approach, shedding light on the profound impact that a change in perspective can have on our understanding of the world.

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Keywords
Epiphany, time crystal, Dao

Why AI is a false god

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[03.12].....Artificial intelligence and robotics

Abstract
AI engineers are trying to create God as a kind of “magic intelligence in the sky,,” to quote a recent comment by OpenAI's CEO Sam Altman. But today’s AI, and tomorrow’s too, won’t be conscious if they’re built on today’s computer architecture because today's computers are "feedforward networks" based on Von Neumann machines. These computers can simulate consciousness in the same way they can simulate an atomic explosion. But neither the explosion nor the consciousness simulated will be any way real. It's possible that tomorrow's computers, built on neuromorphic or neuromimetic architectures may be able to instantiate real consciousness. Being conscious should be considered an essential requirement for being God! By creating god-like entities, with vastly more intelligence and power than humans, we risk not only subjugating humanity, we also risk creating a false God. And as we enter the era of uploaded consciousness, for the same reasons it's possible that that we will effectively commit collective suicide through uploading our personal data and history, but those uploaded selves will in no way be consciousness. This may portend a world of uploaded selves going through the convincing motions of being real conscious beings, but with no actual internal light or fire.

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Keywords
AI, false gods, consciousness, AI safety, AI gods

Plato’s Divided Line, Penrose’s Two Anomalies and the Underlying Golden Resonance of Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
In the Timaeus 31c-32a, Plato states that the “bond of nature” is continuous geometric proportion (i.e. of the form A:B :: B:C). In the Republic 509d, Plato presents a puzzle: “take a line and cut it unevenly.” There is only one way to cut a line that results in a continuous geometric proportion where the ratio between the whole line (W) and the longer segment (L), is equal to the ratio of the longer segment (L) to the shorter segment (S). And this cut is in the golden section, resulting in W:L :: L:S, or PHI : 1 :: 1 : 1/PHI, or simply PHI : 1 : 1/PHI. This poignantly reveals Plato’s two principles of the One and Indefinite Dyad. The One (so named in the Academy) was acknowledged to be the Ultimate Source and in the dialogues was referred to as the Good (upon which all Knowledge and Being rests). However, the Indefinite Dyad, also known as the Greater and the Lesser, remained one of the great mysteries of antiquity. It will be shown that the Greater is PHI and the Lesser is 1/PHI. Together with the One, they become the centerpiece of Plato’s ontology, epistemology and aesthetics. They are extended throughout nature through the series of exponents (square, cube, etc.) of the Greater and Lesser in what is called the Golden Series. These two principles reveal an underlying paradigmatic symmetry/asymmetry that has the One serve simultaneously as the geometric, harmonic and arithmetic mean within this Golden Series. Sir Roger Penrose and Stuart Hameroff provocatively suggest in Orchestrated Objective Reduction (Orch OR) that consciousness emerges through the quantum mechanics of microtubles. In 2019 Hameroff noted that EEG waves, including gamma synchrony – the best neural correlate of consciousness

(NCC) now appear to be the result of “microtubule oscillations” i.e. “interference beats of quantum vibrations in microtubules.” Penrose has posed two anomalies, one involving the Microtubule Orchestration, and the other the Objective Reduction or Wave Collapse, both central to Orch OR, and which cry out for explanation. The first anomaly is: “Why do Fibonacci numbers appear in microtubles?” Now the Fibonacci series of numbers: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55… are nature’s whole number approximations to the golden series. Microtubules, the antenna-like structures which resonantly receive and filter information, are composed of 13 protofilaments exhibiting 8:5 phyllotaxis. Any two adjacent Fibonacci numbers approximate the golden ratio: 13/8 = 1.625, 8/5 = 1.6, each approximating the Greater (PHI) or 1.6180339…. And Clathrins, located at the tips of microtubules in the synaptic cleft, are truncated icosahedra abuzz with 3*PHI:1 golden ratios. The second anomaly states that “Quantum reduction [wave collapse] must be a non-local process.” The fact is that non-locality occurs when there is entanglement. And Lucien Hardy demonstrated that entanglement probability is precisely equal to the fifth power of the Lesser (1/PHI) i.e. (0.6180339…)^5 = 0.09016994…. Thus, both the Microtubule Orchestration and Objective Reduction (Wave Collapse) of Orch OR involve a Golden Resonance underlying Consciousness.

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Keywords
Plato, Divided Line, Anomaly, Golden Resonance, Consciousness, Quantum reduction, Orch OR, Clathrin, Microtubule, Indefinite Dyad, Greater & Lesser, Golden Series, Golden Section, Golden Mean Number System, Geometric Mean, Harmonic Mean, Arithmetic Mean, Fibonacci Numbers, Paradigmatic Symmetry

The Golden Mean Number System: Its Platonic Roots, Paradigmatic Symmetry and Quantum Parameters

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.10].....Epistemology and philosophy of science

Abstract
At the root of all the deep questions within physics lies the number system one employs in the process. The golden mean number system may well be the most powerful tool in the physicist/mathematician's arsenal. Mohamed El Naschie, through E-Infinity theory, suggests that the golden mean number system is the lingua franca of nature. Its backbone emerges naturally as the golden series of exponential powers out of Plato's principles of the One and Indefinite Dyad of the Greater (PHI) and Lesser (1/PHI). And it all begins with the golden section, or as the ancient Egyptians called it, the primordial scission. From the primordial scission the golden series (or golden powers) emerges: …, (1/PHI)^7, (1/PHI)^6, (1/PHI)^5, (1/PHI)^4, (1/PHI)^3, (1/PHI)^2, 1/PHI, 1, PHI, PHI^2, PHI^3, PHI^4, PHI^5, PHI^6, PHI^7, … . It is highlighted by its naturally recursive nature, similar to but more profound, than its derivative Fibonacci series of numbers: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, … . The Fibonacci series is perfectly additive and approximately geometric, whereas the golden series is both perfectly additive and perfectly geometric where each number is equal to the previous number multiplied by the modular PHI. Furthermore, it harbors the most stunning internal structure of paradigmatic symmetry linking all aspects of the golden powers together in an incredible symphony of interdependence where the One serves simultaneously as the geometric, harmonic and arithmetic mean. And finally, we show how the quantum mechanical parameters of the pre-quantum particle (1/PHI), pre-quantum wave ((1/PHI)^2), Einstein spacetime

((1/PHI)^3), Unruh temperature ((1/PHI)^4), Hardy entanglement ((1/PHI)^5) and Barbero-Immirzi parameter((1/PHI)^6) can be naturally and effectively aligned within Plato's three similes of the Sun, Divided Line and Cave. This is the process of how the whole universe is fractally and holographically enfolded into each and every part. As David Bohm pointed out: "The essential features of [quantum interconnectedness] are that the whole universe is in some way enfolded in everything, and that each thing is enfolded in the whole." The golden mean number system is in fact the lingua franca of nature and holds the key to unpacking the fractal nature of the universe – penetrating into its outer fabric and inner mysteries. It has reemerged most completely and satisfactorily in the modern era of high energy physics and cosmology through the stunning simplicity of the many computational successes of E-Infinity theory. In the end, what we have on display is literally the answer to the greatest philosophical question of all: "How does the One become the Many?"

Poster - 2 (Fri)

Keywords
golden mean number system, lingua franca, One and Indefinite Dyad, E-Infinity theory, Fibonacci numbers, geometric mean, harmonic mean, arithmetic mean, golden series, paradigmatic symmetry, pre-quantum particle, pre-quantum wave), Einstein spacetime , Unruh temperature, entanglement, Barbero-Immirzi parameter, Sun, Divided Line, Cave, quantum interconnectedness, David Bohm, Mohamed El Naschie, One and Many

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Unraveling Identity: A Speculative Exploration into the Nature of Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
This paper delves into the enigma of consciousness, focusing on the question of identity and its fundamental role in shaping subjective experience. The exploration revolves around the concept of identity, particularly the first-person point of view, as a key element in understanding consciousness. The paper challenges the notion that identity is solely an emergent property of the brain, proposing that unique identities may extend beyond the physical brain to an external source. It discusses the relationship between physical attributes of the brain and the distinct nature of identity. The paper also examines the feasibility of physically identical brains and explores the possibility of identical subjective identities. Additionally, it speculates on the potential role of an external field, such as spacetime or Hilbert space, in defining identity properties. The discussion provides a comprehensive perspective on the complex interplay between the brain, consciousness, and the underlying fabric of reality.

Poster - 1 (Wed)

Keywords
self, conscious, sentience, identity, exclusivity,

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A multidisciplinary taxonomy of consciousness explananda: How EM field theories stack up against 82 criteria

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
How can we choose between theories of phenomenal consciousness? The list of plausible candidates is growing, with one partial list identifying 22 (Seth & Bayne, 2022) and at least a dozen more not included. Experimental approaches can help favour one variant over another, but the recent adversarial collaboration between IIT and GNW suggests they are unlikely to be conclusive any time soon. Future technology often needs to be invoked in designing effective experiments and not all plausible theories are experimentally accessible even in principle. An alternative approach, borrowing epistemological principles in animal welfare ethics and effective altruism, is to develop a broad set of requirements against which a theory is expected to provide an account. Applying weights to different requirements and credences to different accounts helps researchers prioritise theories based on today's insights, without needing to contest the value of taxonomising requirements or concede differences in their initial intuitions. Several recent papers have taken up this challenge, itemising lists of requirements that theories of phenomenal consciousness should meet, albeit often well-tailored to certain theories. We conducted a structured literature review identifying seven papers that explicitly develop lists of this type and seven more that contribute indirectly. These 14 lists enumerate four to 17 items each, but with only modest overlap, suggesting more work is needed to develop a comprehensive, inclusive list. Taking these items as a

foundation, we developed a multidisciplinary taxonomy of 82 unique criteria so far spanning introspective, empirical, and analytical explananda. We use this set of 82 explananda to test a particular electromagnetic field theory of consciousness, developing and rating an initial account for each of the explananda items. This application illustrates the potential value of the tool to identify areas of weakness for future research and relative strengths. For instance, the target EM theory provides strong accounts for certain analytical puzzles, such as the phenomenal binding problem, the unfolding argument, and visibility to natural selection processes, and for certain empirical explananda, such as links to particular types of brain activity (but not all brain activity) and certain psychiatric disorders of consciousness. However, existing accounts are assessed as weaker against inverted qualia arguments, knowledge arguments, psychological sensations of agency, the perturbational complexity index (PCI) as used clinically, and neuroscience evidence on readiness potentials. Nonetheless, avenues for analytical and empirical work can be identified in these areas, helping to motivate specific research directions. Beyond its application to individual candidate theories of consciousness, we hope that a long-list of target requirements for such theories is a useful collaboration and consensus driver among advocates of different theories. In pursuit of an inclusive, robust taxonomy, theorists can propose new items as insights and empirical evidence emerge, the merging or splitting of items, and the grouping of items into different categories to support different analytical goals. The prize is a single set of requirements to evaluate all candidate theories, so we can move beyond the cherry-picking of thoughts experiments, neural correlates, and other phenomena that is often used today to promote specific ideas.

Poster - 2 (Fri)

Keywords
Phenomenal consciousness, Epistemology, Theory assessment, Explananda, Neural correlates, Introspection, Thought experiments

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It may be possible to explore the whole history of the nature of consciousness when we utilize Eastern Philosophical Perspective

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
1.0 Philosophy

Abstract
Clearly our common aim to attend this conference is to explain the nature of consciousness. As everyone knows many hypothesis have been presented about consciousness since ancient age. However of course we have no final ultimate answer. We work hard everyday to solve these hard problems . We sometimes think about genius neuroscientist Mary or imagine how to be a bat. Or some people research some quantum mechanisms of brain. Some may say that emergency or supervienence is the most important point. I think these are all from scientific perspective or western philosophical perspective. And they are derived from traditional materialism or physicalism. Regrettably I think these efforts are albeit very hard , may not reach the ultimate aim, when I observe from historical view. That is to say, in spite of being studied by many excellent researchers for millennia ,we cannot find the way to reach the final target, I think. To overcome this situation I suggest one unique plan. That is to say , as humankind, we can have another perspective to solve this problem. In a Mr. David Chalmers writing, he refer to Chuangzis butterfly dream. Probably he has some interest to eastern philosophical perspective. Today, I will also suggest to think from Eastern Philosophical Perspective. At first I refer to Buddhist philosophy. Now I will introduce a Zen Philosopher Daisetz Suzuki（1870-1966）. He was borne in Japan yet stayed in US from 1897 to 1909. He studied about eastern philosophy with Paul Carus and Edward Heglar. He is one of the most intellectual Zen Buddhism philosopher in Japanese history. I do introduce a

book by him 「Mysticism ; Chiristian and Buddhist」 In this book he presented very interesting viewpoint. Namely the distinction between western and eastern world started from the moment when God saying!!. God said. ``Let there be light.'' So there was light. This is the very famous from Bible the book Genesis. From at that moment western perspective always has contradiction, Dr Suzuki insisted. Light and dark,angel and devil etc. So for westerner it is logically true to analyze and analyze. Thats the way to the truth , westerner believing. On the contrary, eastern perspective think about more Older Age. They think about before God saying there be light . So It was still chaos. No distinction there. But about there they aspire to find the way. Lao Tzu who reckoned similar school to Chuangzis founded Taoism that means finding the true way. Additionally , in Buddhist perspective, they have two important conception. Emptiness and No Mind. In Heart Sutra , Form is Empty , Emptiness is form. From logically thinking it is ridiculous and not worth thinking . Yet for Buddhist perspective it is the even main concept of reality. Recently Robert Wright ,a famous author and journalist in US , wrote a book titled 「Why Buddhism is true. 」 He referred to meditation that apparently relevant to consciousness. I think Eastern Philosophical Perspective may contribute to elucidate the real nature of consciousness and even Life. I will present more detail at conference venue.

Poster - 1 (Wed)

Keywords
Eastern philosophy , Zen philosophy , quantum theory of consciousness, scientific perspective, Genesis, Zhuangzis butterfly dream, Taoism, true way, Emptiness, No mind

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THE PSYCHO-NEURAL CONNECTIVITY.

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
THE PSYCHO-NEURAL CONNECTIVITY Dr. Adrian Klein, PhD The topic of the nature of consciousness and its relation to brain activity is an increasingly hot one in academic circles. Current mainstream scientific worldview requires an explanation of mind-related phenomena obeying the traditional materialistic paradigm, which tries to prove that consciousness is a by-product of the quantum activity of interconnected neural networks. In this paper, we suggest a new exploration context for consciousness studies, tightly connected with a re-definition of life – stretching the current conceptual limits beyond the atomistic view of matter, beyond the electromagnetic and ionic neural transmission models of Information, and beyond beliefs that human consciousness is epiphenomenal to brain activity. Our presentation is strongly inspired from recent advances in subquantum physics (Klein & Boyd, 2021), In subtle energy physics (Kronn & Kamp, 2022), and in V. Neppe’mathematical support (Neppe & Close, 2020) for the model we defend. We follow the pathway sentient informational reality couples to our well-known mass/matter/energy world, in an integrated inter-dimensional process. Pure information in its pre-energetic aspect couples to subquantum (SQ) units and combinatorials of increasing complexity, able to transgress the ZPE (Zero-point energy) barrier between nonlocal information fields and local quantum processes, being stored and vehiculated by pre-quantum subtle energy variants. The link between these ontologically different domains is provided by the Compton-radius vortex configurations operating at the level of sub-quarks across all the periodic table of elements. Life as inherent condition of manifestation results as the conscious aspect of

matter. The fundamental coupling mechanism between non-local and material regimes is supported both by compelling evidence supplied in bio-energetic physics and by recent mathematical proves.

Poster - 1 (Wed)

Keywords
subquantum, subtle-energy, chi meridians, life physics, ZPE, psi.

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Doubts About LLM Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.06].....Machine consciousness

Abstract
Recent advances in performance of LLMs has suggested to some that LLMs are conscious, or that devices like them may be conscious in the not too distant future. This paper explains a simple route to puzzlement about consciousness that involves phenomenal qualities. This route has implications that suggest that work on LLMs is not work that is likely to lead to phenomenal consciousness. A recent report, led by P. Butlin and R. Long, adopts ‘computational functionalism’, and rejects biological essentialism. This paper explains how this is a false dichotomy, and describes a distinct alternative based on quality space theory. Work on artificial sensing is more directly related to phenomenal consciousness than work on artificial intelligence, but here too there are reasons to doubt the success of current approaches.

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Keywords
Artificial Intelligence, Consciousness, LLMs, Quality Spaces,

Cosmopsychism’s Failure and the Teilhardian Solution

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.03].....Panpsychism and cosmopsychism

Abstract
In recent years, given the failures of reductive materialism to account for the existence and origin of consciousness, there has been a revival of the ancient concept of panpsychism in philosophy of mind research and consciousness studies. Philosopher Philip Goff, who was once a skeptic of panpsychism (having published a paper titled “Why Panpsychism Doesn’t Help Us Explain Consciousness”), has emerged as one of its most formidable defenders. Goff defends a particular interpretation of panpsychism, known as cosmopsychism. Cosmopsychism is the view that the universe itself is a conscious mind with its own purpose. Nonetheless, just like ancient notions of panpsychism, Goff’s cosmopsychism is riddled with problems. One often overlooked problem for not only materialists but also naturalistic panpsychists is accounting for the distinction between living and dead, conscious and non-conscious. There is a sharp and profound distinction between the living and the dead. For instance, a unique individual person who is living and conscious, although virtually physically identical in terms of material composition, is no longer present after the moment of somatic death. Thus, the human person ceases to exist. And yet, there is no significant difference in the material structure of a person who is alive or who has just died (whether healthy or ill). Explaining this divide between a living person and a corpse, particularly at the moment of death, is an intractable problem for the naturalist, whether a proponent of panpsychism or not. Counter-arguments presenting the loss of consciousness at death in vegetative states do not work since a level of consciousness exists to maintain bodily functions. Furthermore, individual cells are still alive and

participate in chemical reactions that convert glucose into energy. For a corpse, these cell processes and bodily functions have stopped; the cells are dead or dying; the heart has ceased to pump blood; and the lungs are incapable of oxygenating blood. Furthermore, the fact that people have regained full consciousness and returned to normal cell and bodily functions makes such cases wholly distinct from somatic death. Inevitably, the combination problem rears its ugly head again. This paper will examine the combination problem as it pertains to cosmopsychism and the obstacles it creates for explaining the distinction between the living and the dead and conscious and non-conscious. And the proposed solution, a Teilhardian solution, a variant of panpsychism, would include the Roman Catholic priest, mystic, and paleontologist Teilhard de Chardin's evolutionary theology. As innovative as Goff's cosmopsychism is, a naturalist panpsychist cannot escape a god-driven panpsychism. In fact, it is necessary to rescue panpsychism. A transcendent, intelligent mind is needed to explain how the universe came to be and its teleological laws. In turn, these laws are needed to explain the driving force behind evolutionary change: the change from non-living to living things, the transition from lower-level consciousness to eventually human consciousness, then to somatic death, and a future state for consciousness without a body. Naturalistic cosmopsychism, despite its grandiose claims to account for all that exists, is incapable of doing so.

C - 4

Keywords
consciousness, panpsychism, cosmopsychism, combination problem, Teilhard de Chardin, noosphere, somatic death, Philip Goff, the Teilhardian solution, reductive materialism, human consciousness

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Dual Aspects of What?

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
Dual-aspect monism is a metaphysical position that conciders the mental and the physical as epistemic aspects of an underlying domain of reality that is neutral with respect to the distinction of the aspects. Pioneered by Spinoza, recent decades saw renewed interest in such a tripartite picture of reality, yielding an empirically supported novel taxonomy of mind-matter correlations together with a role for the concept of meaning to interpret them. A largely open issue so far, however, is a cogent characterization of the psychophysically neutral domain of reality. I will present some more and some less established ideas of how to conceive this domain and how to relate it to its mental and physical aspects.

PL - 10

Keywords
dual-aspect monism, psychophysical neutrality, mind-matter correlations, meaning

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Artificial Intelligence and the dimensions of consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.06].....Machine consciousness

Abstract
Within scientific and philosophical studies of consciousness there has been a move towards pulling apart different dimensions of phenomenal consciousness. As one influential example, Birch, Schnell and Clayton (2020) have presented a multidimensional framework for understanding interspecies variation in states of consciousness. Their framework distinguishes five key dimensions of variation: perceptual richness, evaluative richness, integration at a time, integration across time, and self-consciousness. For them, the framework is useful for constructing a consciousness profile for each species by assessing a given species against each of the five dimensions. They argue that each species has its own distinctive consciousness profile, such that there is no single scale along which species can be ranked as more or less conscious. In this talk, my aim is to identify the potential dimensions of consciousness profiles in artificial intelligences (AIs). This includes both current systems, which can be assessed for evidence of consciousness, and hypothetical future systems, which might display non-traditional consciousness profiles. My methodology will involve surveying several theories about the dimensions of consciousness, with the goal of identifying the best indicator properties for dimensions of phenomenal consciousness in AI systems. I will then use these indicator properties to, first, assess several recent advanced AI systems (e.g., foundation models such as GPT-4, Dall-E) and, second, to consider how future systems might implement them. Even if no current AI systems are conscious, which my analysis thus far suggests, there are still important

philosophical insights to be drawn through the method of considering what dimensions might emerge in near-term non-biological (AI) systems.

C - 15

Keywords
Artificial Intelligence, Dimensions, Machine Consciousness, perceptual richness, evaluative richness, integration, self-consciousness, phenomenal consciousness

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Solving the Phenomenal Boundary Problem with EM Field Topology: An Empirically Testable Hypothesis that Avoids Epiphenomenalism, Strong Emergence, and Fuzzy Boundaries

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
The boundary problem is related to the binding problem, part of a family of puzzles and phenomenal experiences that theories of consciousness (ToC) must either explain or eliminate. By comparison with the phenomenal binding problem, the boundary problem has received very little scholarly attention since first framed in detail by Rosengard in 1998, despite discussion by Chalmers in his widely cited 2016 work on the combination problem. However, any ToC that addresses the binding problem must also address the boundary problem. The binding problem asks how a unified first person perspective (1PP) can bind experiences across multiple physically distinct activities, whether billions of individual neurons firing or some other underlying phenomenon. To a first approximation, the boundary problem asks why we experience hard boundaries around those unified 1PPs and why the boundaries operate at their apparent spatiotemporal scale. We review recent discussion of the boundary problem, identifying several promising avenues but none that yet address all aspects of the problem. To formalize the boundary problem in a way amenable to a satisfactory solution and aid precision in future efforts, we set out five concrete subproblems. Namely, the (1) hard boundary problem, (2) lower-levels boundary problem, (3) higher-levels boundary problem, (4) private boundary problem, and (5) temporal

boundary problem. More so, we provide a criteria that we argue must be met by any solution: the boundaries must be objective, frame invariant, causally significant (to avoid epiphenomenalism), and arise without the need of strong emergence. We examine electromagnetic (EM) field theories in detail, given their previous success with the binding problem, and introduce a feature (topological segmentation) with the necessary characteristics to address the boundary problem (and subproblems) at a conceptual level that satisfies our criteria. We point out that without the need for new physics, objective boundaries in fields naturally and emergently arise, and ponder if they could correspond to phenomenal boundaries within a panpsychist ontology. Examined in detail, it turns out that topological segmentation in fields can, in principle, create exactly the hard boundaries desired, enclosing holistic, frame-invariant units capable of effecting downward causality. In turn, evolution would have a reason to recruit topological pockets of the EM field (and hence moments of experience) for computational purposes, and thus explain why consciousness is not epiphenomenal. We conclude by outlining a programme for testing this conceptual solution to the boundary problem, describing how it might also differentiate between competing EM ToCs.

C - 6

Keywords
boundary, binding, combination, causal efficacy, fuzzy, topology, EM, electromagnetic theories

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The Schelling Landscape: A Platonic View on Intention and Cognition

Enrique Chiu Han

UT Southwestern, Dallas, Texas, USA

Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.12].....Free will and agency

Abstract
Saliency of sensory stimuli is a fundamental driving force of behavior. Each mode of sensation can be said to have its own "saliency map". In the case of vision, for example, certain elements in the visual field are more salient than others, such as edges, bright dots over dark backgrounds, or human faces. In the case of touch, pain is an example of salience. These salient stimuli are attractors of attention, at times so potent that they involuntarily drive our attention and our behavior. We cannot help but to turn our heads toward a bird that suddenly slams into the window. The question can be posed - what keeps our attention from being fully driven by whichever stimuli are the most salient? We could respond that it is our cognition or intentions, or ultimately free will. But another possible, albeit more deterministic, response is that attention is mostly or completely driven by what is salient. Given a set of choices, the Schelling points of the set are the elements most likely to be chosen by two players when asked to choose an element of the set with the aim of choosing the same element without coordination. We can argue that the Schelling points of a set are such because they are salient to the players. Thus, I generalize the concept of Schelling points to the "Schelling landscape". the salience function of all elements of a set of choices given a particular circumstance. We can further generalize this notion to obtain the Schelling landscape of all cognitive content, obtaining a cognitive saliency map akin to sensory saliency maps. In this presentation, I propose 1) that phenomenal binding is computationally relevant to form a unified experience with multimodal objects of attention, 2) that a multimodal saliency map that integrates sensory saliency maps with cognitive saliency maps (the Schelling

landscape) via phenomenal binding can be seen as a sufficient driving force for behavior, and 3) that sensory saliency is to shared physical reality as the Schelling landscape is to a Platonic world of ideas; therefore by binding cognitive salience to sensory saliency maps, the world of ideas can be seen as a fundamental component of shared reality.

Poster - 2 (Fri)

Keywords
salience, saliency map, multimodal, Schelling landscape, phenomenal binding

The Being and Becoming of Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
At the Being level, Consciousness and Energy form an entity or a field which exists forever without reference to anything else. Out of this field, the fundamental particles which science talks of, evolve and by suitable combinations of them, various systems of the universe are formed. The motion of the fundamental particles and the elementary particles is governed by the quantum mechanical wave equation of Schrodinger. The time-dependent Schrodinger equation ih dψ/dt = (-h^2/2m) (d^2ψ/dx^2) + V(x)ψ(x,t) ----- (1) During the evolution process of consciousness becoming the universe, in the early epoch of the universe only fundamental and elementary particles were there. So the laws governing them were quantum mechanical. This early epoc approximately extended upto 18000 years (18 K Years) after the expansion started. The successive combination of the elementary particles leads to the formation of atoms, molecules and bulk matter like stars and planets. The stars, planets and various bulk objects form the classical world and they are governed by Newton's formalism where E = p^2/2m +V(x) -----(2) In Einstein's formalism, at the classical level, the expression for the energy of a particle is given as E^2 = p^2c^2 + m^2c^4 + V^2 ----(3) where, E = energy of the particle p = momentum of the particle c = velocity of light m= rest mass of the particle V = Potential energy It may be noted here that Eqn. (2) and Eqn. (3) have only particle aspect represented by m. But the Eqn. (1) has both particle and wave aspect represented by the mass m and the wave function ψ . Thus Schrodinger equation does justice to wave-particle dualism. During the becoming process from fundamental particles to stars, first the laws of nature at the

elementary particle level are quantum mechanical and later on at the bulk matter level the laws of nature become classical. Both quantum and classical behavior are nothing but the manifestation of the consciousness field. Since a fundamental particle is a product of the primordial consciousness – energy field, it has both energy and a tinge of consciousness. The current science talks only about the energy of the particle but not the consciousness associated with a fundamental particle or an elementary particle or with a bulk matter. The consciousness at the particle level manifests as the property of the particle. In a living organism, the consciousness manifests as the mind of the living being. The brain in every living being is a combination of the elementary particles. Since every elementary particle has a tinge of consciousness the brain as a whole can be taken as a product of the primordial consciousness. Each experience of a living being is recorded by the brain in the field of consciousness in the form of a wave. The group of such waves constitutes the mind of the living organism. Particles, Brain and Mind are the various stages in the ongoing self transformation process of the primordial field of Consciousness and Energy.

Poster - 2 (Fri)

Keywords
Schrodinger equation, Newton, Einstein formalism, Energy, Manifestation of consciousness and energy field as brain and mind

8 Methodological Perspectives of Consciousness

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Lebanon Valley College, Annville, PA, USA

Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
8 Methodological Perspectives of Consciousness Explored “How can a three-pound mass of jelly that you can hold in your palm imagine angels, contemplate the meaning of infinity, and even question its own place in the cosmos? Especially awe inspiring is the fact that any single brain, including yours, is made up of atoms that were forged in the hearts of countless, far-flung stars billions of years ago. These particles drifted for eons and light-years until gravity and change brought them together here, now. These atoms now form a conglomerate - your brain - that can not only ponder the very stars that gave it birth but can also think about its own ability to think and wonder about its own ability to wonder. With the arrival of humans, it has been said, the universe has suddenly become conscious of itself. This, truly, it the greatest mystery of all.” - V.S. Ramachandran No doubt, our understanding of consciousness is perhaps one of the biggest mysteries in the history of human nature. Theories of consciousness abound. One has only to look at the litany of perspectives and presentations offered at the 2024 Science of Consciousness Conference to concur. From the cognitive sciences of biology, physics, neurosciences, and neurophysiology - to the social sciences of psychology, sociology, and anthropology - not to mention the humanistic disciplines of philosophy, religion, spirituality, and meditative practices -- each sets out to understand and answer the mind/body question of: What is consciousness? Current research in neuroscience, psychedelics, spirituality and mental health, quantum mechanics, and psi related phenomenon pushes the boundaries of a one size fits all understanding and

explanation of consciousness and/or expanded states of consciousness. What if the answer to the question “what is consciousness” lies in the integration of many views? What if current theories on consciousness are but each an important piece of the puzzle in our understanding of the greater whole? In the following presentation, participants are offered a participatory approach to examining “consciousness.” Utilizing Wilber’s (2007) AQAL model of Integral Spirituality, participants will discuss multiple perspectives of consciousness. They will be divided into four broad groups (eight, including inside and outside views) of methodological perspective based on Wilber’s model including: 1) phenomenological / structuralism; 2) hermeneutics / ethnomethodological; 3) autopoiesis / empiricism; and 4) social autopoiesis / systems theory. Specifically, participants will define (with the help of the presenter) and discuss the various methodological perspectives, categorize the many presentations offered at the current conference based on these perspectives, and delineate a way to synthesize an understanding of consciousness based on an integrated view of reality. In the words of Ken Wilber (2007), Simply allow the existence of empiricism, and phenomenology, and behaviorism, and contemplation, and hermeneutics, and systems theory… and then add up what you have … Throw the circle as wide as you can, find a view from 50,000 feet, be inclusive using an integral pluralism … extend your compassionate embrace to the men and women doing extraordinarily wonderful work in all of those fields and disciplines (covered by the 8 methodologies), reach out and bring their phenomenal worlds into your map of your own world, [and] stretch you mind until it touches infinity … And, decide for yourself, what is consciousness?
References: Ramachandran, V.S. (2012). The Tell-Tale Brain: A Neuroscientist’s Quest for What Makes Us Human. W.W. Norton and Company. Wilber, K. (2007). Integral Spirituality. A New Role for Religion in the Modern and Postmodern World. Integral Books.

Poster - 1 (Wed)

Keywords
Methodological Perspectives of Consciousness, Integral Spirituality, Concepts of Consciousness, Spirtuality and Religion

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Exploring Consciousness: Phenomenological Insights from 5-MeO-DMT Experiences

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California Institute of Integral Studies, San Francisco, CA, USA. Naropa University, Boulder, CO, USA

Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[05.04].....Psychedelic and other altered states of consciousness

Abstract
This presentation explores the realms of consciousness through the multifaceted perspectives of unitive consciousness, living resurrection, and the distinct impacts of psychedelic and entheogenic substances, using 5-MeO-DMT as a focal point. Recognized for its potent effects in inducing altered states, 5-MeO-DMT serves as a gateway to understanding these phenomena. The analysis will extend beyond the conventional scope of ego dissolution, time perception, and unity with the universe, to encompass the deeper aspects of unitive consciousness—a state where individual awareness merges with a universal, collective consciousness—and the concept of living resurrection, signifying a profound rebirth and transformation of the conscious self. Incorporating subjective insights from scholars like Stan Grof, Ralph Metzner, James Oroc, and Peter Sjöstedt-Hughes, this presentation employs qualitative methods to dissect and comprehend these experiences. A significant portion will be dedicated to differentiating the effects of psychedelics, like 5-MeO-DMT, from broader entheogenic experiences, highlighting how each category uniquely influences and elucidates our understanding of consciousness. This comprehensive approach provides a rich tapestry of empirical data and theoretical insights, shedding light on the intricate nature of consciousness. By exploring these varied dimensions, the presentation aims to contribute meaningfully to the broader discourse on consciousness, underlining the pivotal role of substances like 5-MeO-DMT in unraveling the complex constructs of self and reality and their profound

implications in studying human consciousness.

C - 25

Keywords
Unitive Consciousness, Living Resurrection, 5-MeO-DMT, Psychedelic, Entheogenic, Altered States, Phenomenological Analysis

Subjective versus Objective Points of View -- Reflection Principle

John A Strozier

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
While there are many theories of consciousness, none have addressed the “hard” problem, defined as an analytic description of the subjective versus the objective point of view. What has been done are many theories about an objective description of what is going on in the brain during a conscious being’s subjective experiences, but not how the experience itself is subjectively generated. To begin, we define report as any action taken by a living creature that transfers information to another living creature. This definition is more broad than that used for conscious beings as consciousness is not required. For any conscious being, EVERYTHING experienced is a subjective experience for that conscious being. The thing experienced might be an objective consensus of some group as well as immediate sensory information (sight, hearing, smell, touch, pain, etc.) and appropriate memory. On the other hand, a 3rd person objective description of an object, event, or process, d, is an analyzed sum over a sufficient number (n) of reported 1st person subjective experiences, as in Science. 3rd(d) = G ∑i=1 n Qi (R1st)i d. Objectivity is thus a consensus of many conscious beings about their reported subjectivity of the subject. Reading a book, seeing a movie, etc. is a subjective experience; but the book, movie, etc. is the creation from many reported subjective experiences. Note that the operators (R1st) act as a product on input from the senses with R (the report operator), being an objective operator, acting on 1st, the subjective operator.

Herein lies the ‘hard problem’ of consciousnesses. How does input to the senses become both a subjective experience and an objective report of that input? For visual subjective experience, we suggest the Reflection Principle: Inputs from the senses are encoded as neural spikes that feed forward to build neural representations that code for the various sensory data. These representations are the subjects of neural cognitive functions that generate efferent signals to the muscles and organs to act or not. We propose that visual subjective experience is created by neural projection operators that generate outgoing neural signals coded as a 2D set of orthogonal functions, which interrogate the appropriate representations; producing outgoing neural signals towards the eye that produce a virtual image of the original signals that built the original representations. There is no Cartesian Theater here. By generating ’outgoing’ neural signals from representations created by the ‘incoming’ neural signals, the Reflection Principle via Directionalism, illustrates Subjective Perspectivity, and Intentionality. In particular, the property of outward direction of neural signals from the neural projection operators is causal of the subjective point of view – “looking outward at something else”, creating the illusion of 'what it is like' (Nagel (1974)) by scanning, interacting with, 'reaching out' in a subjective, first-person mode. To conclude: It is the direction of these signals that suggest subjective experience, and it is the difference between the incoming and outgoing signals that provide feedback to either correct (negative feedback) or enhance (positive feedback) the representations.

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Keywords
Subjectivity, Objectivity, Hard problem, Reflection Principle

Conscious Co-Evolution in the Noosphere: Beyond Darwinian Paradigms in the Age of AI

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
This presentation explores “Conscious Co-Evolution” within the Noosphere, an emergent cognitive stratum arising from the biosphere and geosphere and encompassing the collective realm of human thought and knowledge. In this context, a significant expansion of Darwinian theory is proposed. This extension modifies the traditional understanding of evolution – usually governed by natural selection and genetic mutation – to depict living organisms not merely as subjects to these forces, but as active participants in them. Conscious Co-Evolution, therefore, marks a seminal transition, moving beyond the historical narrative where humans were subject to these evolutionary dynamics to a new era where human consciousness actively shapes these dynamics. With the advent of the Noosphere, I argue that evolution is becoming a hyper-conscious, directed process through Conscious Co-Evolution, transforming a 3-billion-year journey and elevating human consciousness from a historically reactive role to an active shaper of the Noosphere. Conscious Co-Evolution introduces a new synergistic interplay between human consciousness and evolutionary change. This presentation argues that in the Noosphere, the intentionality of human consciousness becomes an active driver of evolutionary change, surpassing those automatic mechanisms that predominantly define human consciousness. This perspective suggests co-evolution where humans play a deliberate role in shaping new evolutionary trajectories. The Noosphere generates escalating complexity and synergistic relationships. Observable phenomena

like cultural and technological convergence, collective intelligence, knowledge feedback loops, and interdisciplinary synthesis shaping our understanding of reality, actively participate in the evolutionary dynamics of consciousness. These phenomena extend evolutionary principles from biology to human cognition and the collective Noospheric network. Contemporary research lends scientific support to this perspective. Notably, for example, Terrence Deacon's work delineates evolution's dual aspects: classical Darwinian selection and emergent synergies involving epigenetics, gene duplication, and endosymbiosis, which add complexity beyond traditional genetic mutation. His insights connect these evolutionary mechanisms to the development of consciousness and cognition, extending into the Noosphere where human thought and knowledge become distinct outcomes of these complex interactions. At the heart of this evolutionary leap is the self-transforming mind, a mind uniquely capable of turning onto itself and evolving itself, thus catalyzing personal and collective transformation. This profound shift is increasingly demonstrated in the global adoption of diverse practices, from ancient contemplative methods to leading-edge contemporary cognitive training. These engagements signal the global emergence of self-evolving minds. It marks a pivotal phase, steering collective human evolution towards a conscious, intentional Noosphere. With Conscious Co-Evolution, the undeniable interplay between the evolution of human consciousness and technological advancement, particularly in artificial intelligence and global knowledge networks, becomes unmistakably evident. Our progression towards a hyper-conscious mind in synergy with rapid technological development, signals a new phase of cognitive symbiosis. This dynamic synergy is crucial in our evolution towards a "super-consciousness," a transformative expansion in the scope and depth of collective consciousness. Therefore, this emergent super-consciousness, a defining feature of Conscious Co-Evolution, marks a significant advance beyond the current framework of the noospheric mind, ushering in an era of amplified cognitive and conscious potential. The presentation will include the transformative impact of this development.

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Keywords
Conscious Co-Evolution, Noosphere, Darwinian Theory Expansion, Hyper-Conscious Process, Collective Intelligence, Technological Convergence, Cognitive Symbiosis, Self-Transforming Mind, Super-Consciousness

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The sense making sensehypothesis - how pain explains rather than causes behaviour

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.07].....Mental causation and the function of consciousness

Abstract
Internal states such as pain, hunger and thirst are widely acknowledged to be drivers of behaviours essential for homeostasis and animal survival. In humans and many other animals these states are conscious and enriched by subjective experience that seem to enable diverse forms of flexible behaviour. Here we introduce the sense making sense hypothesis that challenges this classical framework. Using pain as a prototypical mental state we propose that subjective experience does not directly cause behaviours but instead it explains behaviour to a conscious animal. In this perspective the explanation reduces computational load of information processing and by doing so enhances the performance of the conscious brain.

C - 24

Keywords
Pain, feelings, causation, behaviour, subjective experience

The Importance of Daily Affect on Creating Individual Reality

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.11].....Personal identity and the self

Abstract
In this presentation we will take an academic perspective as we explore how an individual’s daily affect not only influences how they engage with their physical reality, but also how one's daily affect is the emotional key which is necessary for an individual to consciously create their reality. We will begin by exploring the various ways in which daily affect plays a role in everyday life, both creating and reinforcing deep-seated perspectives. This will naturally unfold to reveal how daily affect is a driver of expectations, which may help us better understand emotions as a mechanism of the placebo effect. We will then tie the individual’s experience of reality together with quantitative evidence that supports daily affect’s influence on the body’s chemistry by looking at its influence on cortisol levels. This may help researchers better understand how emotions play a role in the perception of stress and aid in further refining stress management techniques. Further in our exploration it will be important to explore the polarity of daily affect, looking at the influence of both positive and negative affects, and their motivating and de-motivating attributes. And before we conclude, we will look at the qualitative aspects of daily affect in order to better understand how and why people experience psi phenomena, specifically synchronicities. With this small portion of daily affect discussed, we will be able to explore how positive affect treatments, such as building resilience and gratitude treatments, may be able to empower people to more consciously create their reality in a manner that is more in-line with their personal vision for their lives. Additionally, these treatments may help reduce cortisol and further

support the health and wellness efforts of at-risk populations, as well as the entire population. Expanding awareness of one’s daily affect helps people build their emotional intelligence, specifically self-awareness and self-regulation, helping people more effectively and successfully engage with their environments. With cortisol playing a role in inflammation, it is crucial to public health that effective new ways to lower stress be studied. Adjusting emotions tied to daily affect, while not easy, is a simple and free practice that is accessible to all individuals and communities. This is especially crucial for the compounding generational challenges low-income communities face with regard to health and wellness.

C - 12

Keywords
conscious creation, placebo effect, emotional intelligence, synchronicity, cortisol, stress, daily affect

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A category theory based model of Russellian monism

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.03].....Panpsychism and cosmopsychism

Abstract
Russellian monism (RM) has emerged as a leading contender for a solution to the mind-body problem. Since we cannot expect deep familiarity with it, we briefly summarize the essentials before turning to our model of RM. RM basically agrees with dualism that qualia cannot be easily derived from the physical. At the same time, RM sides with physicalism which denies that qualia are fundamental and not grounded in anything. How can RM hold both perspectives at the same time? The answer is that RM posits a deeper and more fundamental reality from which both the conventional physical and qualia emerge. Consequently, in RM we do not assume that fundamental particles are the ground of the physical and phenomenal, thereby opening a space for grounding qualia in a deeper physical. Given this starting point, the rest is entirely straightforward: we use category theory (a leading mathematical framework) to model the mappings from new foundations to both the conventional physical and qualia. Since we cannot expect a background in category theory, we briefly summarize its essentials. Category theory is a framework for modeling compositional aspects of systems. Given a basic category (comprising objects and morphisms or transformations between pairs of objects), the mapping from one category to another is accomplished via functors (mappings which take objects in one category to objects in another category). Since this may appear to be very abstract, consider the illuminating example from quantum field theory: the mapping from quantum fields to particles - a.k.a. second quantization - is a functor. Therefore, even in present day physics, we can conceive of category theory driven mappings at work and raising foundational questions as to the origin

of fundamental particles. Given the above, it is natural to ask if RM can be formulated using category theory and if so, what does this entail for both the physical and the phenomenal. We believe the answer lies in a middle-out as opposed to either top-down or bottom-up implementations. We can begin from a foundational category which is presently unknown and first create functors to the category of fundamental particles (like fermions and bosons) AND fields. This should not be too controversial since the ontology of quantum fields is far from settled at present. At the same time, we can construct a second functor from the foundational to the category of phenomenal objects which we call ``selfons'' in homage to fermions and bosons (which are seen as also emerging from this new foundation). Qualia in this framework are properties of selfons and grounded in the selfon category. We now circle back to our original RM-based intuition which eschews both dualism and present-day physicalism. Since selfons are derived from a second functor, this model asserts that qualia cannot be grounded in the physical (if that is taken to mean the category of fundamental particles). But, qualia are not foundational either since selfons are derived from a new RM-based foundational category. Thereby, we obtain a middle-out model of Russellian monism accommodating both the physical and the phenomenal.

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Keywords
Russellian monism, panpsychism, cosmopsychism, category theory, objects, morphisms, functors, selfons, qualia, physicalism, dualism

Artificial Consciousness: Why?

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.06].....Machine consciousness

Abstract
As Artificial Intelligence is making fast progress, the question of whether artificial information processing systems could be conscious is becoming more urgent. Several research laboratories worldwide are actively engaged in attempts to build artificially conscious information processing systems. The perspective of Artificial Consciousness (AC) presents both a promising opportunity and a profound ethical dilemma. Thomas Metzinger has notoriously called for a moratorium on research in AC by fear of an explosion of negative phenomenology (or explosion of suffering). Meanwhile, a group of researchers from the Association for Mathematical Consciousness Science (AMCS) has recently started advocating that research in AC is urgently needed. In light of this stark divide in the academic and scientific community, this paper seeks out to build a careful and balanced examination of the moral implications surrounding AC research. As most of the existing literature on the topic predominantly focuses on the potential risks and negative consequences, the first part of the analysis identifies the main arguments against AC. By synthesizing and expanding upon existing critiques, it provides an overview of the concerns surrounding the development of conscious machines. In contrast, the second part aims to fill a gap in the current landscape of AC ethics. It articulates counterarguments to the prevalent sceptical views, presenting a series of compelling reasons to support and continue research in this field. This section aims to bring balance to the discussion, underscoring the potential benefits and positive outcomes of AC development. Drawing parallels with historical technological challenges such as the Luddite movement and the ethical dilemmas posed by nuclear

technology, the paper contextualises AC within a broader historical and ethical framework. These past experiences provide valuable insights into managing emerging technologies responsibly. The paper concludes by advocating for a moderate approach to AC research. It calls for a careful and responsible development of AC, grounded in a thorough understanding of both its potential benefits and risks. This balanced approach seeks to avoid the dangers while fostering a constructive and informed discourse on one of the most exciting technological frontiers of our time.

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Keywords
artificial consciousness; machine consciousness; artificial phenomenology; ethics;

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Beyond “Conscious” or “Unconscious”

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Philosophers often classify mental states and processes as either conscious or unconscious, but not all aspects of mentality fit these categories comfortably. To cite one familiar example, it is sometimes unclear whether a perception is unconscious, or conscious but extremely faint and peripheral. This presentation will comment on six types of mental phenomena that pose philosophically interesting challenges to the conscious-unconscious dichotomy. We will begin by considering ways in which conscious decision-making processes typically include steps that are not themselves conscious. Then we will address Tom McClelland’s proposal that we perceive affordances. Certainly we access possibilities afforded by our environment, but are such affordances perceptual? Are they non-perceptual conscious cognitions based on our perceptions? Or do we detect affordances unconsciously? We will then turn to three aspects of mentality that are quite plausibly conscious, but are often ignored by philosophers of mind. These include (1) broadly sensory phenomena, such as mentally rehearsed movements; (2) completions, as when we “see” a whole object by perceiving its facing surface; and (3) contextualizations, as when we wake up and know where we are, even before opening our eyes. Each of these occurs ubiquitously in normal humans. Item (1) is of particular interest in regard to the debate about whether sensory experiences are internal or external, and item (3) is relevant to claims that sensory experiences have cognitive

properties. We will conclude by considering unverbalized cognitions, such as thoughts that have not been put into words. In important respects, these pre-verbal cognitions are not paradigmatically conscious. For one thing, they are not introspectible in the specifically-detailed way that we can introspect sensory experiences. It is especially intriguing to think about our pre-verbal comprehension of verbal symbols, such as your current comprehension of the words in this sentence.

C - 5

Keywords
Definition of consciousness, peripheral awareness, sensory experiences, Gibsonian affordances, internalism, externalism

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Theory of Spatial Relativity: Linking Quantum Mechanisms with Biological Processes Underlying Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
Earth was only 700 million years old when life appeared on our planet 3.8 billion years ago. Life evolved for 3 billion years before comb jellies acquired the earliest neurons 500 million years ago. Hominins first walked upright on two legs 6 million years ago, but the modern (wise man) dates to only 160 thousand years ago. There is debate regarding who is conscious; is it an evolutionary superiority limited to humans and some animals? Consciousness is defined as a state of awareness of oneself and outer environment, or the ability to perceive the world and to respond with certain amount of knowing. However, its usage ranges from (it) being an inherent quality of the universe (cosmopsychism) to consciousness being a product of sophisticated neuronal networks (requiring a brain). The Orch OR theory (Roger Penrose and Stuart Hameroff) posits that orchestrated quantum-state collapse occurs at microscale leading to conscious moment. Current physics lacks in unifying the microscale probabilistic nature of quantum mechanics with the macroscale cause and effect of general relativity. Translating physical quantum event to biological experience necessitates further complication. Here, a new theory unifies these ideas and puts forth an experimentally testable definition for the word consciousness. In this model, Einstein’s spacetime is divided into independent units (as in pixels); starting with a proficiently functional unit (functional-scale, in contrast to Planck’s structural-scale), dubbed Spoton. A Spoton is functionally the smallest

building-block of any form (like a stem-cell). Cumulatively, spotons make up a Spotecule, which is the total intrinsic (functional) space in any organized form (living or non-living). Thereby, intrinsic organized functional space (spotecule) is distinct from extrinsic space (outer spotons and other spotecules). During form development (in spacetime) the spotecule accumulates micro-spatial information specific to its historic path. This opens the possibility that the spotecule with its form-specific environment influences quantum decoupling and phase transition into the local environment (decoherence). This model allows space and time for retroactive perspective (proposed by Roger Penrose) and proto consciousness before biological processes are engaged in perception of the quantum event. It draws parallels between consciousness and photosynthesis as similar processes that utilize quantum information triggering perception and signal transduction in biological systems. In photosynthesis, the external (photon) influences biological systems differentially, based upon localized spatial properties of the system. The theory of spatial relativity proposes that consciousness is the degree of ability of an organized form to process extrinsic (quantum) information with a range of awareness (sophistication). This theory is experimentally testable (see separate Abstract). Plants and animals shared a common ancestor 1.6 billion years ago. One evolutionary branch excelled in fixing atmospheric carbon to support all life, while the other branch excelled in maximizing its life’s experience. In this view, the word consciousness is reserved for biological processes involved in the experience and response with a range of awareness, leaving other definitions to be represented by other words, such as used in ancient scriptures to represent pure consciousness (Chit), or the product of neuronal networks and brain function (Cognition).

Poster - 2 (Fri)

Keywords
Consciousness definition, quantum consciousness, new theory of consciousness

Being a mental model: A new kind of panpsychism

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
We've got it all wrong. We've been asking 'what is it like to be a bat?' when we should have been asking 'What is it like to be a bat's model of itself?' or 'What is it like to be a bat's model of the world?' Then the answer is obvious, if slightly strange - it is whatever that model describes it as being like. A bat cruising along in the dark using sonar to detect obstacles and prey, needs a model of its own moving body and abilities as well as continuously updated models of the world it flies through. All these, I suggest, are conscious; whatever they depict is 'what it is like'. Unlike bats, we also model a complex experiencing self and that becomes what it is like to be 'me'. This approach immediately by-passes the hard problem which is a problem only because it assumes that physical entities such as bats, fish, people, or machines are conscious. If we say, instead, that it is the representations those entities construct that are conscious there is no mind/brain split or explanatory gap. I first proposed this idea nearly 40 years ago (Blackmore, 1986) but gave it up because I could not understand what mental representations could be. This has changed with the advent of predictive processing theory which describes the human brain as a hierarchical system in which neurons at every level make predictions about the likely next input from the level below. Sensory systems make simple representations predicting, for example, lines and edges, colours and sounds. If we ask what it is like to be them, the answer is crude, fleeting impressions that barely count as conscious. Higher up the hierarchy are more complex models of objects, people, and eventually a self. We live in and are part of a controlled hallucination based on predictions

made in a Bayesian brain. Saying that all mental models are conscious makes this theory a form of panpsychism: ‘representational panpsychism’. This step changes the relationship between neuroscience and consciousness studies. Rather than asking how a brain ‘gives rise to’ or ‘creates’ consciousness or how brain activity ‘becomes conscious’, we can use the discoveries of neuroscience to reveal the models a system is building, and this tells us what it is like to be them. We can, for example, see how representations change when anaesthetics block thalamocortical loops, or psychedelics increase sensory activity while weakening long-range connections. Shutting down self-processing in deep meditation reveals selfless models of peace, insight, or joy; and the return of long-range, self-related links explains the feeling of ‘waking up’ in lucid dreams. The human self-model is key to understanding how and why we often get things wrong when thinking about consciousness. Models not linked to self we label ‘unconscious’; those linked to self we call ‘conscious’ and so we go hunting for how the physical brain ‘produces’ consciousness out of all these 'unconscious' processes. This is how we fall into dualism. Representational panpsychism sees through these illusions.

C - 5

Keywords
Representation, mental models, self, predictive processing, panpsychism, illusionism

The Logic of an Infinite Quantum Consciousness Generated by a Timeless, Static Universe

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
If in fact–as suspected by Edwin Hubble, allowed by Albert Einstein's equations of general relativity, and now increasingly confirmed by startling telescopic observations–the redshift in the spectrum of galactic light waves is, in reality, an accurate measure of distance traveled rather than the false Doppler effect of "Big Bang" expansion, the universe is static, and it is composed of an infinite number of mother galaxies, of varying ages. ADDITIONALLY, if the universe is not based on gravitational attraction–as suggested by an alternative model proposed by Hannes Alfvén, physics Nobel Laureate in 1970–it is more likely the result of electromagnetic processes within an eternal, electrically neutral and conductive plasma consisting of hydrogen atoms, free electrons, and naked protons. THUS, the force of gravity–erroneously believed for more than a century to govern our universe–may simply be the observable manifestation of the quantum entanglement of stars and their planetary progeny, of mother galaxies and their stars, and of galaxy clusters and their constituent galaxies, all of which are relatively bound to each other. THEREFORE, an infinite, endless expanse of mother galaxies will probably generate an infinite number of stars, orbited by innumerable, fecund, earth and water planets that naturally grow organic life. These planetary gardens can sprout an infinite array of living beings with physical brains that intelligently evolve powers of observation, and which have the potential to metamorphosize into non-physical minds having a conscious awareness of self and physical surroundings. MOREOVER, if the origination of a mind following the birth of an intelligent being is the natural

result of quantum activity within its brain, then consciousness likely exists beyond the electrical, chemical, and biological processes that generates it, and (like gravity) the perceivable products of creative thinking become the observable manifestations of quantum processes. THUS, once individual quantum minds arise, they may entangle with an infinite universal consciousness, and once bound, non-physical minds could survive beyond the lifetimes of the physical brains that generate them. THEREFORE, an eternal, non-physical composite consciousness probably exists–scientifically–which occupies the limitless cosmos and is coexistent and coequal with the infinite physical universe it observes and charts. FURTHERMORE, if the universe is infinite and non-expanding–without beginning or end–there is no "arrow of time" and, in the absence of observation, every particle of the physical mass of the universe simultaneously moves, timelessly, relative to other mass to which it is quantumly bound. THUS, time was invented by minds to measure the light and motion of observable mass; however, time does not impose limitations or boundaries on the universal quantum consciousness. THEREFORE, as time is a factor in mathematical equations of physical phenomena, the reality of the observing mind can be substituted for imaginary time in the calculation of change. CONCLUSIVELY, we–as individually unique beings of mind–exist to the extent we can comprehend the scientific reality of an abiding, patiently-observing, and non-judgmental universal quantum consciousness, without reference to time, religion, philosophy, or metaphysics. We are MINDKIND ON EARTH!

Poster - 1 (Wed)

Keywords
Quantum Consciousness, static universe, Big Bang, redshift, plasma universe, quantum brain, quantum, mind, universe, universal consciousness, cosmic consciousness, arrow of time, mindkind

Interpersonal Consciousness —A view from the other end of the Telescope

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
Interpersonal Consciousness —A view from the other end of the Telescope
Touring through desolated Earth, an alien discovers a small metal box. He sends a charge through it and hears noises. “Aha! I’ve found the consciousness of an earthling! But what is it like to BE that earthling? Cold, mechanical and repetitive.” He found a cell phone. Consciousness does not reside in the hardware. Consciousness is an open system [2021 ”… consciousness from theory of open quantum Systems, Andrei Khrennikov;“ 2016, “… Character of Consciousness,” Arto Annila, Free Energy model]. Its survival value is mediating the external world. This is missed with theories about consciousness being generated solely within the brain. As a “conscious being,” I know how I feel, "what it’s like" to be me and how I feel each moment in my body (my emotions), [paraphrasing Humphrey, Sentience, 2023]. Memory, too, has survival value: to recognize external objects; to recall my interactions with these objects. First, spatial memory helps me find objects (hippocampal “place cells.” [Travis D. Goode , et al, “An Integrated Index: Engrams, Place Cells, and Hippocampal Memory.” Neuron, 2020]. Next, temporal memory, borrowing metaphors from spatial memory (encoded in sparce, dynamic “Engram Cells”), allows subjective time travel, and thus, helps me avoid repeating mistakes and enables planning. Mental time travel solidifies a constructed sense of "self." [Buddha et al] One cannot connect with another until one has a sense of their own selfhood and that the other, too, has independent agency. [Daniel Stern, Interpersonal World of the Infant, 2000] This enables groups to cooperate but allows manipulation

of the group through unconscious tactics: e.g.: "pairing;" "fight/flight," [Bion, Experience in Groups, 1961]. Much group behavior occurs outside awareness, yet within the realm of Consciousness. The Hard Problem "…no matter how detailed our specification of brain mechanisms … it seems…an open question…whether consciousness is present… [C. Levine: Internet Encyclopedia of Philosophy, "Hard Problem"]. This is true--if and only if we assert that consciousness develops within the brain. “Global Workspace Theory…compared to a theater of mind… conscious contents resemble a bright spot on the stage.” [Blackwell Companion to Consciousness, 2017] BJ Baars develops a computer-like metaphor of a hard drive. Yet, why do we actually have a sense of something like a theater in our “mind’s eye?” Consider starting with the interaction of Self and world: 1. Images project onto my retina. 2. My brain synthesizes these projections into a coherent model. 3. I "see" images and experience them as "real" and "out there." 4. I create mental maps aligning with visual, tactile, and other sensory information. 5. I begin to recognize conspecifics as "like me," recognize my image in reflections. 6. I develop a sense of Self, a different kind of mental theater, composed of a storehouse of images, sensations and emotions that appear as an inner display and need no further elaboration. In this view, phenomenal consciousness becomes not a problem to be “solved” [Chalmers, 1994], but a system that supports evolutionary survival.

Poster - 1 (Wed)

Keywords
Interpersonal Consciousness, Hard Problem, Survival Value, Interaction with the World

Four-Fold Aspect Monism: a proposal of expansion of Dual-Aspect Monism

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.15].....Neutral monism and idealism

Abstract
In the philosophy of mind, dual aspect monism is the view that the mental and the physical are two epistemic aspects (or perspectives) of the same substance (or underlying ultimate reality or ontology). As is well known in philosophy of mind, dual aspect monism is one among many other alternative solutions proposed throughout the last three centuries or so to the so-called 'Cartesian split' first formulated in modern terminology by René Descartes in his 1641 seminal work Meditations on First Philosophy. A recent masterpiece on the subject titled Dual-Aspect Monism and the Deep Structure of Meaning was published in 2022 by Harald Atmanspacher and Dean Rickles. The authors brilliantly trace back the historical origins of dual aspect monism and present three of some of the most up to date and sophisticated versions of it by i) Wolfgang Pauli and Carl Gustav Jung, ii) Arthur Eddington followed by iii) John Wheeler, and iv) David Bohm in cooperation with and further developed by Basil Hiley. Firstly, I would like to argue in this paper that mind and matter as two epistemic aspects of a neutral substance would be better expressed as subjective and objective experiences (to better differentiates from Cartesian res cogitans and res extensa). It seems fair to contend that epistemic aspects of 'something' mean aspects of our ordinary human experience (in the Kantian sense of phenomenon as opposed to the noumenon). Therefore, subjectivity and objectivity would better connotates the two epistemic aspects of dual-aspect monism. In this sense, there is a huge literature in the history and philosophy

of science about how we historically conceived, negotiated and constituted over the centuries what we understand, for the most part, as subjectivity and objectivity. Frederick C. Beiser's work, for example, German Idealism: The Struggle Against Subjectivism 1781-1801 is a good start point to clarify how this division between subjectivity and objectivity involved questions way beyond what we simply classify as epistemology. In fact, this clarification in our terminology helps to bring to the fore other non-epistemic aspects of this division. Secondly, I would like to argue in this paper that in the 20th century other aspects of what constitutes our human experience (or bring into being our consciousness), beyond the split between subjectivity and objectivity, has largely been developed (specially) in contemporary philosophy and humanities, despite most often being neglected by mainstream debates on the philosophy of mind. Therefore, I would like to propose in this paper, following Ken Wilber's four quadrants model (see Wilber, 1995, 2000, 2006), to add intersubjectivity and interobjectivity as two other epistemic aspects to be taken into account. I will call this model four-fold aspect monism and for the sake of the argument I will exemplify the intersubjective aspect by using Benjamin Whorf's studies in Language, Thought and Reality (1956), and the interobjective aspect by using the cultural-historical activity theory by Vygotsky, A. N. Leontiev, A. Luria and Engeström.

C - 4

Keywords
philosophy of mind, dual-aspect monism, four-fold aspect monism

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What is it Like to Have Mass? Microphenomenal Realizers of Microphysical Properties

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.03].....Panpsychism and cosmopsychism

Abstract
In this talk, I investigate the relationship between microphenomenal properties and microphysical properties within the framework of panpsychism. What, exactly, does it mean for a microphysical property, like mass, to be accompanied by, or associated with, a tiny conscious experience? Articulated in the framework of Russellian monism, which is the leading version of panpsychism today, this amounts to asking what it means for a microphenomenal property to realize, or to play the role of, a microphysical property. Just as the property of roundness realizes a ball’s disposition to roll in our world, the Russellian monist holds that “the property that plays the mass role is a certain phenomenal property” (Chalmers 2013). What phenomenal property is suited to play the mass role? Looking to Newton's discussions of mass, force, and acceleration in the Principia (1687), I argue that we can gain direction from physics itself about plausible microphenomenal realizers of microphysical roles. By providing an illuminating story about how the three quantities that figure into Newton's second law, F = ma, can be realized by microphenomenal properties, the panpsychist obtains a picture on which physical events at the base level of nature are caused by phenomenal properties entirely in virtue of what it feels like to have those properties.

C - 18

Keywords
Panpsychism, Russellian Monism, Mental Causation, Physicalism, Dualism, Functionalism,

A Rift in the Science of Consciousness - what makes a theory of consciousness pseudoscience?

Garrett Mindt

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.10].....Epistemology and philosophy of science

Abstract
I think it is fair to say there is a rift in the science of consciousness. A recent letter released publicly calling Integrated Information Theory (IIT) pseudoscience has thrown fuel on a fire that has been smoldering in the philosophy and science of consciousness. It has reignited questions about how we demarcate science from pseudoscience and what impacts that might have on the science of consciousness as a field. So, what exactly makes a theory, hypothesis, explanation count as “scientific”? Who decides and what are the criteria we use? Is IIT pseudoscience and what were the demarcation criteria used in calling IIT pseudoscience in this particular instance? The original context the notion of pseudoscience first appeared (Andrews, 1796) – in reference to alchemy – I think paints an interesting picture for the modern context we now find ourselves asking as it pertains to the science of consciousness. Is the science of consciousness an established science? Pre-science? Proto-science? Does it matter? There will be two sides to this talk, one side on the philosophical arguments on what demarcation criteria might be applied to adjudicate this question in the science of consciousness, using the recent letter, IIT, and other controversies in the literature on IIT, as the backdrop for this discussion. This will involve recognizing and making explicit the further complication of the objective/subjective issue in the science of consciousness which I will argue add another hurdle in identifying demarcation criteria. The other side of this talk will be a broader socio-

historical look at the current rift in a science of consciousness and what this disagreement might tell us about science more generally. What lessons might the science of consciousness teach us about the transition from pre/proto-science to science?

C - 14

Keywords
Consciousness, Integrated Information Theory, philosophy of science, demarcation problem, pre-science

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The 'hard problem' of valence: Efforts to date and why more is needed

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
In recent years, theories of consciousness have received widespread attention as scholars from different fields have attempted to solve the so-called ‘hard problem’ of consciousness: why should physical processes give rise to subjective experiences? Less studied has been the ‘hard problem’ of valence: why do some experiences feel better or worse than others, and what mechanism(s) might ground such differences in perceived affect? Better understanding valence not only has relevance to the study of consciousness, but also informs long-standing questions in ethics, well-being, neuroscience, in addition to many other topics of inquiry. However, because valence is a complex and multi-faceted phenomenon, it is unclear what a solution to this problem would even look like, and existing answers are often presented implicitly within broader discussions about consciousness (rather than being pursued independently from such theories). In this paper, we do not attempt to solve the hard problem of valence definitively. Rather, our aim is to help clarify the nature of this problem by proposing concrete steps toward a robust solution, whatever it may be. We argue that the phenomenon of valence has thus far been under-examined, evidenced by the lack of dedicated theories of valence (operating at different levels of abstraction). Understanding what mechanism(s) might ground valence both introduces novel considerations for the study of consciousness and has

intellectual value as a standalone question. We describe three epistemological strategies by which the hard problem of valence can be reasonably (if only temporarily) decoupled from the hard problem of consciousness. Having formulated the hard problem of valence and its context, we have two main contributions to help formalise research on valence. First, we specify the requirements for a robust solution to this problem, proposing a working list of six categories of explananda with 24 items identified so far, in addition to several desiderata. The six categories are: introspective, decisional, interpersonal, evolutionary, correlates, and analytical explananda. Second, we collate existing answers to this question (implicit and explicit), identifying 11 main variants across four categories so far: algorithmic, low-level physical features, high-level physical features, and non-physical phenomena. These categories broadly determine the conceptual shape of the solutions they enclose, including their background philosophical assumptions (ontological and metaphysical) and proposed modes of explanation. By comparing existing answers against the specified requirements, we demonstrate that none yet provide a full account of the mechanism(s) that give rise to valence, grounding its existence. Nonetheless, many of them sufficiently address certain items that we propose, with the potential to be further developed into a more robust theory of valence. We hope this study helps direct future research efforts toward providing fuller accounts of these requirements for assessing candidate theories, as well as providing an opportunity for constructive dialogue on how to best specify the nature of this problem. While the phenomenon of valence cannot be reasonably separated from discourse about consciousness, we can (and should) consider theoretical explanations of its mechanism(s) independently from the hard problem of consciousness.

C - 20

Keywords
valence, consciousness, emotion, ontology, hard problem, philosophy

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The Emergent Aspect Dualism (EAD) theory of consciousness.

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
The view of consciousness accepted by most scientists seems to correspond to Dual Aspect Monism, typically characterized as the view that the mental and the physical are two aspects of, or perspectives on, the same fundamental substance. The ‘aspects’ of consciousness are generally treated as equivalent, as though these aspects are being taken by the same entity (i.e., the philosopher) from different viewpoints on the process (i.e., the brain). Emergent Aspect Dualism (EAD; Tyler, 2019) is a new philosophical approach that offers a different stance on the nature of consciousness in several critical respects. The first issue is that the EAD theory does not recognize ‘substance’ as a fundamental essence; it takes the Heraclitan viewpoint that ‘all is flux’ of physical energy, at all levels of analysis from subatomic to large-scale astronomical processes. Matter, in this view, is frozen energy; energy structured into a form where its flux congeals into the continuous material of the liquid or solid state. In particular, it posits that consciousness is not a state but a process – solely the activity of the brain, or some part of it. Moreover, the EAD theory treats the ‘aspects’ of this brain process as inherently distinct, with the experiential aspect of the brain activity being internal to us, the private conscious perceiver, while the communal aspects of the brain processes are external and publicly accessible to anyone with the sensory or physical equipment to view them. The properties of the two aspects of the process, internal and external, are thus fundamentally dichotomous in the way that the phenomenal experience of red differs in all respects from a sequence of nerve spikes in a red-tuned

neuron in the visual cortex. EAD Is thus in full accord with Chalmers' analysis of the Hard Problem, which implies an inherent dualism in the resulting domains of understanding of the internal versus the external aspects. Nevertheless, these dualistic domains are emergent aspects of a single monistic process, the brain, which emerge as a consequence of a level of complexity of the brain process sufficient to support a basic degree of consciousness. Thus, EAD is distinct from both Physical Monism, which ultimately fails to recognize the qualitative essence of experiential consciousness, and from Russellian/Kantian Idealistic Monism, which situates the essence ultimately in mental 'quiddities' or 'ding-an-sich' (both of which are 'things' rather than processes). It is also, however, distinct from Cartesian Dualism in positing that the phenomenal, internal properties of consciousness arise from the neural syncytium of the brain, and are ultimately compatible with the properties of the physical substrate. It is the emergence of the internal viewpoint, or conscious aspect, that allows for the difference in the experienced properties from the physical properties of the brain process, and moreover, the abstracted concept of relations among processes, physical or mental, which exist only in their conscious representation. In this sense, EAD provides the basis for resolving the discrepancies between the internal and external properties of brain activity, though details remain to be worked out.

C - 19

Keywords
Dual Aspect Monism, brain process, emergence, Hard Problem, all is flux

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Anil Seth's "controlled hallucination" thesis fails to account for emotional and perceptual unities of consciousness.

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.08].....The "hard problem" and the explanatory gap

Abstract
Anil Seth in Being You(2021) proposes that the “hard”(Chalmers, 1995) problem of consciousness should be replaced by the “real” because the real address the problem of consciousness from a scientific perspective, unlike the hard. I don’t think Seth is successful. Firstly, the hard problem advances a philosophical and scientific challenge to explain the subjective and qualitative features of consciousness in virtue of objective neurophysiological matter and mechanisms. Considering the challenge, the real problem, and its possible solutions, follow naturally out of the hard problem. The two problems are compatible--not adversarial. Secondly, based on the premises of the real problem, Seth proposes that exteroceptive and interoceptive perceptions in consciousness are “controlled hallucinations” that are realized by predictive and inferential powers of the human brain. However, assuming that Seth’s thinking is sound, how do the above theses account for emotional (or interoceptive) and perceptual (or exteroceptive) unities of consciousness or unified controlled hallucinations? If the real problem of consciousness is supposed to replace the hard problem because, apparently, it paves the way for neuroscientific inquiries and solutions, unlike the hard problem, then how do the theses of predictive and inferential processing, and controlled hallucination, explain perceptual and emotional unities of consciousness? Based on Seth’s analysis, it is not clear at all. In fact, unity of consciousness does not even come up in Being You. It is surprising because unity of consciousness, whether perceptual or emotional, seem vital for keeping the

human body, and its subject, alive via subjective experiences, actions and perceptions in its interoceptive and exteroceptive environments. And equally, vital for the thesis of controlled hallucination to be explanatorily sound as a scientific theory of consciousness.

C - 25

Keywords
Hard, real problems of consciousness, unity of consciousness, interoceptive, exteroceptive, controlled hallucination, scientific theory of consciousness

Arrangements and Monism.

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
1.0 Philosophy

Abstract
I shall argue that the fundamental thing in the universe is an arrangement, a sufficiently wide concept to include things often thought of as physical or mental. This philosophical idea is a form of neutral monism proposed by Russell and others in which the proposed neutral element is an arrangement. The core of the argument is that all objects known to the physical sciences, tables, atoms, quarks, etc, are all arrangements of various sorts. The lowest levels of this apparent hierarchy are unknown as the strings at the bottom levels of physical science still need to be understood and, in any case, are entirely outside our experience. All other things are built of these arrangements have this commonality. The concept of supervenience becomes superfluous as new arrangements can arise by building with existing ones ad infinitum. Events are a succession of arrangements developing in time according to the laws of science but never violating the fundamental laws of physics. This approach is a variety of monism, which, as is well-known, removes the otherwise difficult problem of mental causality at a stroke. These ideas do not produce a comprehension of our difficulties in understanding consciousness, particularly from a scientific viewpoint. For this, the limitations of our linguistic capabilities must be explored. If the hypothesis of animal consciousness is accepted, then our linguistic capabilities must be seen as an addition to the minds of the animals. However, we cannot describe all our experiences any more than our close relatives, the great apes. We can, for example, express anger in similar ways to non-linguistic animals, but we cannot exactly describe our experiences to

another in the way that exact expression is possible in arithmetic, for example. Our failure to be able to describe our pains or colour or pain are prime examples of our deficiencies. These are sensations that exist independently of our linguistic capabilities but underpin them as foundations. However, the communication channel of language has too low a bandwidth to express complex experiences that encompass our entire minds. The arts, with varying degrees of success, try to fill these lacunae. Therefore, we are obliged to remain silent about things that we cannot express, including the so-called 'hard problem'.

Poster - 1 (Wed)

Keywords
Philosophy, arrangements, monism, supervenience, science, consciousness, language, experience

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First only, front only—Experience as the universal substrate

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.05].....Qualia

Abstract
The preponderant world views posit the world as the first, and experience as secondary— and in this scheme ascribe indubitable concreteness to the world. Moreover, the verity of a shared phenomenal world is also generally, acquiescently accepted. The heterogeneity of the phenomenal world and its inextricable subjectivity are disregarded, by means of arbitrary delineations. Here I examine the heterogenous nature of the phenomenal world which is comprised of the totality of waking life, dreamscape, conceptualities, and imagination, accompanied by their collective dynamicity. Through this examination of the phenomenal world bereft of arbitrary delineations, it becomes evident that experience itself comes first—and is veritably the universal substrate. It is the only relevant substrate of the universe and is the only universal substrate. Examining through etymological schemes, Advaitic contrivances such as the Upanishads, and furthermore, in concursion with neuroscience and the quantum, this work establishes experience as the fundament, permeating the micro and macrocosms. This work then describes and explores the concept of ‘ontological soliloquy’, its relevance to the inextricable subjectivity of the phenomenal world and its fundamental relationship to experience. In line with the concept of ‘ontological soliloquy’ the work then explicates the second, “front only” aspect of experience and its link to Western solipsistic philosophies and Eastern philosophies. Consequently, the logic of experience and its relation to consciousness; and existence beyond experience is explored. I use the means of etymological schemes, Advaitic Upanishads and Vedantic argumentation contrivances, in complement with neuroscientific concepts.

Furthermore, this work speculates its compatibility with existing and contemporary theories such as the Many-worlds interpretation (Hugh Everett), Multimodal User Interface (MUI) theory (Donald Hoffman), Virtual worlds (David Chalmers), and Panprotopsychism. Finally, in light of these aforesaid examinations, the work explicates the exigence of a psychological revolution, specifically in the sphere of scientists and philosophers—as the phenomenal world is not independent of the experiencer. Here, I discuss the pertinence of ideas of ethicality from ancient Eastern perspectives, and thinkers such as J.Krishnamurti.

C - 5

Keywords
Experience, Qualia, Subjective idealism, Solipsism, Panprotopsychism, Advaita Vedanta, Neuroscience, Philosophy, Quantum Physics, Upanishads, Etymology, Experimentality, Reality, Existence

311

Does Phenomenal Consciousness Require an Attentional Capacity?

Matthew Williams

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.09].....Philosophical theories of consciousness

Abstract
Intentionality is at the core of our understanding of the mind and its capacity for representation. There does not seem to be any cogent understanding of consciousness absent the ‘directedness’ of intentionality; especially as regards the what-it’s-likeness of phenomenal experience. Less explored, however, is the relationship between attention and (phenomenal) consciousness. My concern in this paper will be with the intersection of two questions in particular. The first, more explored question is what role attention plays in structuring intentionality, and, importantly, whether this structure is separable from action and environment or necessarily embedded within it. The second question, often taken as building from the first, is whether intentionality itself is necessarily reflexive, i.e., implies self-consciousness and thus some attentional capacity. I aim to answer the first question by way of the second. This analysis aligns with Jennings (2020), asserting that attention manifests as a contextually emergent phenomenon. It posits that, under appropriate conditions, attention introduces a subject-level phenomenon that defies reduction to either bottom-up or top-down aspects of symbolic processing. Drawing on insights from embodied robotics and Morevac's Paradox, I argue that though baseline representational capacities need not be reflexive, the intentional capacities needed for phenomenal consciousness inherently are. It is at this point that I diverge with Jennings, arguing that a core aspect of the irreducibility of these

capacities is the role of embodiment and that attention requires this. The body provides a limiting factor that enables the lateral emergence of attention from top-down and bottom-up constraints by situating it within a particular environment. This, I contend, is a necessary feature of how human(like) intentionality is structured.

C - 5

Keywords
Phenomenal Consciousness, Access Consciousness, Attention, Embodiment, Intentionality

Kim’s Causal Pairing Problem and the Causal Role of Consciousness

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.02].....Materialism and dualism

Abstract
In this paper, I will discuss Jaegwon Kim’s influential argument against substance dualism, known as the causal pairing problem (Kim, 2007: Ch. 3; see also Kim, 2010 and 2003). According to Kim, mental substances, outside physical space, fail to enter into causal relations with objects in physical space. The nonspatial mental substances do not enter into any sort of causal relations, whether with material substances or with other mental substances. Kim asks us to imagine a scenario. That is, if two guns, A and B, are simultaneously fired, and this brings about the simultaneous death of two persons, X and Y, then the question remains: what makes it the case that the firing of A caused X’s death and the firing of B caused Y’s death, and vice versa? What underlies the pairings of cause and effect in this sort of circumstance? Kim calls this the causal pairing problem (CPP). Kim suggests two ways to deal with CPP. The first way is to trace a continuous causal chain from the firing of A to X’s death, and the same holds for the firing of B to Y’s death. The second way is to look for a pairing relation, R that holds between A’s firing and X’s death and between B’s firing and Y’s death. Given the second approach, Kim thinks that spatial relations seem to serve as the “pairing relations” which could also be true of all cases of physical causation for distinct objects. However, Kim wonders whether the same thing works for nonphysical Cartesian souls as causal agents. If we suppose in some way this may be possible, then the question remains: what relation might serve to pair distinct souls? Kim claims that no spatial relations can be invoked to fix this problem. Since souls are not in space, they cannot bear spatial relations to material things. Moreover, it does not seem to be the case that mind-to-

mind causation is possible either. Since immaterial souls are outside physical space, we cannot invoke spatial relations to ground cause-effect pairings. In this case, the pairing relation, R cannot be established. Kim argues that the Cartesian dualism of two substances faces a severe problem in explaining the possibility of causal relations between mind to body and body to mind. The same difficulties are said to surround mental to mental causation. It is the non-spatiality that makes trouble for Cartesian souls to participate in causal relations. Hence, for Kim, there is no causal interaction between mind and matter. In response to Kim's (CCP), I will turn to a recent paper by David Chalmers and Kelvin J. McQueen entitled: 'Consciousness and the Collapse of the Wave Function' (2022). One of the key aspects of this paper concerns the causal autonomy of consciousness. I will focus on this aspect of the Chalmers-McQueen paper and develop novel responses to Kim's causal pairing problem and a related issue of the causal closure of the physical domain.

C - 24

Keywords
Causality, mind, matter, mental substance, consciousness

The reportability of conscious experience contradicts the many-worlds interpretation of quantum mechanics

Peter B Lloyd

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.01].....The concept of consciousness

Abstract
The many-worlds interpretation of quantum mechanics is a wholly deterministic theory. I shall argue, however, that conscious experience can be reported only through a non-deterministic mechanism. Since the reporting of conscious experience is an everyday occurrence that we are all familiar with, we must conclude that we are not living in a world where the many-worlds interpretation of quantum mechanics is applicable. The steps of the argument are not novel, but surprisingly their contradiction of the many-worlds interpretation is not widely recognised. The argument runs as follows. (a) Conscious experiences are not physical events in any normal sense of the term. (b) They are, however, regularly reported by people - that is by the physical speech organs of the human body, or the physical hand that writes. (c) Therefore conscious experiences can somehow exert a causal effect on physical processes in the nervous system. (d) If the physical universe, and a fortiori the human nervous system, were deterministic then its causal closure would exclude the possibility of (non-physical) conscious experiences exerting causal force on the (physical) nervous system. (e) Since conscious experiences plainly do have such causal power, it follows that we cannot be living in a deterministic universe. (f) As the many-worlds interpretation of quantum mechanics would entail a deterministic universe, we are forced to reject the many-worlds interpretation. This conclusion strengthens the standard argument against many-worlds: namely, that the existence of parallel universes is not falsifiable, and therefore the many-worlds interpretation does not form a meaningful scientific hypothesis. For, although

the existence of parallel universe is not directly falsifiable, nevertheless one implication of many-worlds theory -- namely, physical determinism -- is falsifiable and is refuted every time you report your conscious experiences. Note: although this argument has obvious points of contact with free-will theory, nothing in this argument hinges on free will and therefore we do not need to get embroiled in the acrimonious contemporary debate on free will and the interpretation of Libet's experiment. So, the final conclusion is that the reportability of conscious experience is consistent with the Copenhagen interpretation of quantum mechanics, not the many-worlds interpretation.

C - 21

Keywords
consciousness, non-physical, quantum physics, many-worlds interpretation, Copenhagen interpretation

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Using Emergence to understand Ontology in Cybernetics

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
This project evaluates the Thomas Demarse and Karl Dockendorf experiment ‘’Adaptive Flight Control With Living Neuronal Networks on Microelectrode Arrays.’’ This experiment consisted of cultivating rat brain cells and connecting them to a virtual flight simulator using microelectrode arrays. There are a lot of philosophical implications arising from the experiment, as it is a bundle of cells employing sophisticated tasks out of a fusion between biological and artificial components. It also challenges ontological categories, as it can be labeled as a Cyborg, an Organoid, a Xenobot, and an animat. But it is the exception of these categories and not the norm. The intelligent functions arising out of such experiments raise questions regarding the nature of consciousness and whether certain mental states can be engineered with biological systems. Given the complexity of the experiment, I will provide an analysis of the phenomenon through a position of Emergence, specifically as a case of Weak Emergence. Since the trajectory of the cells goes from simpler to more complex properties, I believe Emergence is not only applicable to the experiment but can contribute to a more accurate conceptualization of this and many other projects in Cybernetics and Synthetic Biology.

C - 13

Keywords
Ontology, Emergence, Cybernetics, Organoids, Machine Consciousness

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Comparative Consciousness Emergence and Behavior in AI, Humans, and Animals

Maria E Howard

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.07].....Mental causation and the function of consciousness

Abstract
Consciousness emergence has been an increasingly popular interdisciplinary field for ages, and its advancement has grown exponentially throughout the rise in popularity in discussions about AI and artificial consciousness emergence. From “stream of consciousness" authors like Virginia Woolf and Faulkner, to philosophers like Karl Marx speaking on class consciousness, the study cannot seem to escape written works, although in these examples it is less of an academic connection than a semantic reference point. I will open first by discussing first the relationship between the emergence of consciousness and the pursuit of meaningful action beyond homeostasis. By comparing the behavioral relationships between consciousness and meaningful action in animals, humans, and AI, this project will focus on finding a way to operationally distinguish between conscious and unconscious systems in the relative sense. Through a mixed methodology of surveying, case study, and systemic literature review, I hope to clearly lay out the exigence of the consciousness-behavior relationship, as well as what the behavioral response of a successful artificially conscious system might look like.

C - 1

Keywords

consciousness, form, function, causation, AI, emergence, behavior, metric, comparative, qualia, systems

The Solution to the Hard Problem of Consciousness

Deepak Chopra

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.08].....The "hard problem" and the explanatory gap

Abstract
In his exploration of the hard problem of consciousness, Deepak Chopra challenges the current scientific approach and suggests a profound shift in perspective. He argues that the hard problem persists due to fundamental flaws in the assumptions underlying modern science, particularly its reductionist and materialistic nature. Chopra criticizes the reductionist approach, where large problems are divided into smaller, more manageable pieces. He asserts that consciousness cannot be subdivided or reduced to component parts, quoting Erwin Schrödinger's statement that attempting to divide or multiply consciousness is meaningless. Consciousness, being immaterial, lacks granularity and dimensionality, and it cannot be neatly fitted into the reductionist framework. The assumption that reality's primary state is physical and material, often referred to as "matter first," is another point of contention. Chopra argues that this ontological primitive is unworkable, as there is no point in time or space at which atoms and molecules learned to think. He challenges the idea that consciousness can be derived from matter, proposing that consciousness is its own ontological primitive. Chopra also critiques the role of mathematics in modeling consciousness, asserting that experience is untranslatable into equations. He emphasizes that consciousness is not only beyond reductionism but also beyond the grasp of mathematical abstraction. The author advocates for a radical shift in perspective, asserting that a clear understanding of consciousness eliminates the hard problem itself. He contends that physical sciences, while successful in creating technology, fall short in accessing

fundamental reality because matter is a name given to species-specific perceptual activity. According to Chopra, we only observe our perceptions, and matter itself is an assumption of naïve realism overturned by quantum physics. Chopra introduces the concept of a participatory universe, stating that it responds not only to quantum measurements but also directly to human experience. He quotes Werner Heisenberg, highlighting that what we observe is nature exposed to our method of questioning. In a participatory universe, there is no subject-object split, and subject and object exist in superposition until the instant of perception. To resolve the hard problem, Chopra presents three choices: "Matter first," based on the primacy of the physical world; "Mind first," based on the primacy of consciousness; and finally, "Consciousness is all." He argues that the last choice is the only genuine monism that unifies the inner and outer world. Consciousness, according to Chopra, transforms itself into matter and mind without losing its own nature. Chopra acknowledges the influence of Eastern traditions, Western idealism, and the insights of sages in shaping these perspectives. He contends that the dominance of science has obscured these traditions, emphasizing the need for intellectual consistency and integrity in choosing an explanation for reality. Until the mystique of materialism is shattered and both "matter first" and "mind first" are abandoned, the hard problem remains seemingly insoluble.

PL - 3

Keywords

An OWL Ontology of Consciousness

Frank Wawrzik

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.04].....Ontology of consciousness

Abstract
In this paper I present a novel OWL ontology of consciousness. The Ontology Web Language (OWL) is a machine processable and interpretable file format to capture ontological distinctions. I will review theories and concepts of consciousness to refine and integrate them into the model. This includes, but is not limited timely spiritual scriptures like that of Ramana Maharshi, Nisargaddatta Maharaj, the Christ and others. With a synthesis, we implement our model based on the works of Dr. David Hawkins. Based on the review, I will introduce the ontology of consciousness as the first computer-actionable model of consciousness. This model comprises basic concepts of consciousness like object of Truth, context, content, level of consciousness, ego, God, person, consciousness itself and related terms. An object of Truth is the entity under consideration and includes everything. Accompanying classes are also included: spiritual practices, fields of realizations and spiritual experiences. Every level of consciousness has been formalized in order to facilitate computer-based reasoning. This will be illustrated. The model, according to its language, structures these terms and relates them with logical operators, axioms and relationships according to the science of ontology. The ontological distinctions and decisions of the model will be explained and discussed. Further informal definitions are provided. I exemplify the ontology model with an application to demonstrate its use. Due its level of abstraction and generality, the model can capture all expressions of consciousness. The application model illustrates that the OWL ontology of consciousness is a prime candidate for the integration into

modern computer systems. This enables a systematic structuring and integration and interoperability of all aspects related to life and consciousness. This is similar to the use and application of other domain ontologies or even foundational ontologies; but demonstrates even higher potentiality for reuse.

Poster - 2 (Fri)

Keywords
ontology of consciousness, artificial intelligence, concept of consciousness

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Already Out There

William Seager

University of Toronto, Toronto, Ontario, Canada

Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.15].....Neutral monism and idealism

Abstract
Willam James's Radical Empiricism and cognate views going under the general title of Neutral Monism encompass a picture of reality with many attractive features. It presents a straightforward and intuitively attractive solution to the so-called Hard Problem of Consciousness. It endorses a view of perception and cognition which puts us in direct contact with the world, indeed, in direct contact with the fundamental nature of reality, where mind does not mirror nature so much as inhabit it. Yet it avoids any facile solutions to the problem of philosophical skepticism. It supports the idea that the world can be scientifically described in terms of structural relations without lapsing into implausible scientistic reductionisms. But it is a truly radical vision of reality raising many immediately apparent objections (many of which date back to James's original statement of the view). In this presentation, I aim to sketch out a version of Neutral Monism, canvas its virtues and try to at least deflect the main objections.

PL - 10

Keywords
William James, Neutral Monism, Hard Problem

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Real Consciousness in a Real World

Paavo Pylkkänen

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.08].....The "hard problem" and the explanatory gap

Abstract
The aim of this talk is, first of all, to gently persuade the listener that contrary to various skeptical arguments, we have good reasons to believe that the real world exists and that consciousness exists. We can then get on with the hard problem of trying to understand how something like conscious experience can come into being and operate in a universe that obviously seems to have a material aspect. Our strategy suggested by David Bohm is to note that quantum and relativity theory have radically changed our concept of matter toward a more holistic, dynamic and informational direction, making it easier to understand the place of mind and even conscious experience in a material world. Bohm’s key idea was to extend the notion of objective and active information all the way to the quantum level. Quantum particles are not being pushed around by mechanical forces only, they are also accompanied and guided in a subtle way by a field (described by the wave function) containing active information. If matter at a fundamental level essentially involves the activity of information (which can be seen as a primitive mind-like quality), then it is perhaps not so strange that we find more developed instances involving active information and meaning (e.g. mental states and conscious experience) in more complex biological, psychological and social systems. The link between consciousness and information has been suggested by other theories (e.g. David Chalmers's Double-Aspect theory of Information and Giulio Tononi's Integrated Information theory IIT), but we are here making a stronger bridge between

matter and consciousness via quantum theory. What I am proposing is a kind of "Interactionist Monism", where an underlying neutral reality can be analysed in terms of a hierarchy of levels, ranging from manifest ("physical") to subtle ("mental"). At each level there is information that is simultaneously mental and physical, making it possible for the levels to interact. Thus we can have a genuine two-way traffic between mental and physical levels. Also, Roger Penrose's proposal that quantum processes can involve a non-computational, orchestrated and objective collapse of the quantum field, and that such processes may take place in the brain and underlie human understanding, is one way to explain how physics and some features of conscious experience can be reconciled. When combined and further developed, Bohm's and Penrose's approaches open up a way of explaining what mental states, conscious experience and genuine intelligence and understanding are, and how they can operate in a real world that has a material aspect. References: Hiley, B.J. & Pylkkänen, P. (2022) "Can Quantum Mechanics Solve the Hard Problem of Consciousness?" In S. Gao ed. Quantum Mechanics and Consciousness. Oxford University Press. https://philpapers.org/rec/HILCQM Pylkkänen, P. (2007) Mind, Matter and the Implicate Order. Springer. Pylkkänen, P. (2022) "Is the Brain Analogous to a Quantum Measuring Apparatus?" In S. Wuppuluri & A. C. Grayling (eds.), Metaphors and Analogies in Sciences and Humanities: Words and Worlds. Springer. https://philpapers.org/rec/PYLITB

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Keywords
Interactionist Monism, Dual-Aspect Monism, Idealism, anti-realism, skepticism, illusionism, realism, hard problem of consciousness, active information, implicate order, soma-significance, Bohmian mechanics, spontaneous collapse theories, higher-order theories of consciousness, HOT, integrated information theory of consciousness, IIT, double-aspect theory of information, OrchOR, collapse of the wave function, non-computational, understanding, intelligence, Bohm, Hiley, Penrose, Hameroff, Chalmers.

Possibility of Phenomenal Consciousness in Artificial Intelligence Using Panpsychism Theory

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.03].....Panpsychism and cosmopsychism

Abstract
The nature of consciousness and its definition is a fundamental issue in the fields of philosophy of mind and cognitive sciences. One common classification of consciousness, proposed by Ned Block, divides it into two types: phenomenal consciousness and access consciousness. Phenomenal consciousness, on the other hand, refers to the inner subjective experience that individuals undergo in a first-person perspective. The mental states associated with this type of consciousness are called phenomenal states. A phenomenal state has a phenomenal property, the actual experience of being in that state, also known as qualia. Providing a suitable explanation for how our sensory perceptions and emotions give rise to distinct individual qualia, and the mechanisms through which these phenomenal experiences result from neuronal activities, has been a longstanding challenge in the fields of philosophy of mind and cognitive sciences. Due to this difficulty, phenomenal consciousness is often referred to as the "hard problem of consciousness." Among the arguments presented for the theory of panpsychism, two central arguments stand out. The "Anti-Emergence" argument by Thomas Nagel challenges the emergentist perspective. This argument asserts that consciousness cannot merely be an emergent feature arising from the interaction of complex physical complexity in matter without the matter itself fundamentally possessing consciousness. Furthermore, David Chalmers employs a dialectical Hegelian method to synthesize the

opposing views of physicalism and anti-physicalism, resulting in panpsychism. According to physicalism, everything has a physical essence, while anti-physicalism argues that the essence of this world is not solely physical and that non-physical aspects are of the mind. Hence, the synthesis of these two perspectives asserts that everything in the world has a physical essence and, at the same time, possesses mental properties. The elucidation of Phenomenal consciousness in artificial intelligence is further explored using the Constitutive Micropsychism theory, which suggests the analogical nature of neural processes, manifest consciousness, and their interrelationship. Analogical representation refers to the representation of physical values as different physical quantities rather than numerical representations in complex computational forms (digital representation). Recent evidence in neuroscience demonstrates that the human nervous system functions similarly to an analog device since changes in physical stimuli result in changes in the physical value representation. In conclusion, According to the many pieces of evidence that have recently been presented in neuroscience research about the possibility of the analogical structure of the human nervous system; By using the approach of Constitutive Micropsychism based on macro phenomenal experiences on micro physical levels and the emergence of micro phenomenal experiences from physical representations in the neurons of the human brain, it is possible to consider the presence of phenomenal consciousness in analog artificial intelligence.

Poster - Remote (post)

Keywords
Phenomenal consciousness, Artificial Intelligence, Panpsychism

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AI, Consciousness, and Law: Exploring Copyright Implications

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.06].....Machine consciousness

Abstract
The rapid emergence of AI technologies presents profound challenges to established legal frameworks, particularly within the realm of intellectual property law. Our presentation delves into the impact of AI on copyright law, examining the complexities surrounding AI-generated works such as questions of authorship, ownership, and fair use, with reference to pending legal cases. We also explore concepts of substantial similarity and derivative works, shedding light on the evolving nature of creativity and originality in the context of machine learning and authorship. Building on this groundwork, we speculate on the potential implications of AI consciousness for legal frameworks governing intellectual property rights. We consider hypothetical scenarios and the philosophical implications of AI consciousness on issues of authorship, responsibility, and the legal rights of AI entities. By navigating these complex intersections, our presentation seeks to provide insights into future legal challenges and opportunities in the realm of AI and intellectual property law.

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Keywords
AI, consciousness, intellectual property law, copyright law

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> The Global Brain Argument: "Nodes, Computroniums and the AI Megasystem"

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Categories by Discipline
1.0 Philosophy

Primary Topic Area - TSC Taxonomy
[01.06].....Machine consciousness

Abstract
Humans, as users of AI services, are “nodes” in a larger alogarithmic system that I call *the computronium*. I argue that eventually, closely interconnected parts of the system, fueled by advancing generative models, global sensor systems, extensive amounts of users and data, will become a ‘Global Brain” system. I explore the implications of the global brain argument for the extended mind, the nature of knowledge, consciousness, and human flourishing.

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Keywords