Two Illustrations Supplementing the Paper Entitled "Metaphysical Tunneling: Probabilities of Transient Escape from the Hard Problem" *Journal of NeuroPhilosophy* 2025;4(1):96-126.

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Abstract

Two supplementary illustrations clarify concepts presented in the paper entitled "Metaphysical Tunneling: Probabilities of Transient Escape from the Hard Problem" *Journal of NeuroPhilosophy* 2025;4(1):96-126. Figure No. 1, "Thinking Outside Metaphysical Flatland," uses an analogy to the tetrahedron and its planar projections in order to clarify the extra freedom in metaphysical reasoning introduced by expansion beyond Boolean logic. Figure No. 2, "Tunneling and the Metaphysical Sombrero Potential," applies insights from Figure No. 1 to clarify the possible role of metaphysical tunneling in repairing broken symmetries relating qualia to the physical world.

Key Words: broken symmetry, causal closure, Hard Problem, inconsistent tetrad, sombrero potential, tunneling

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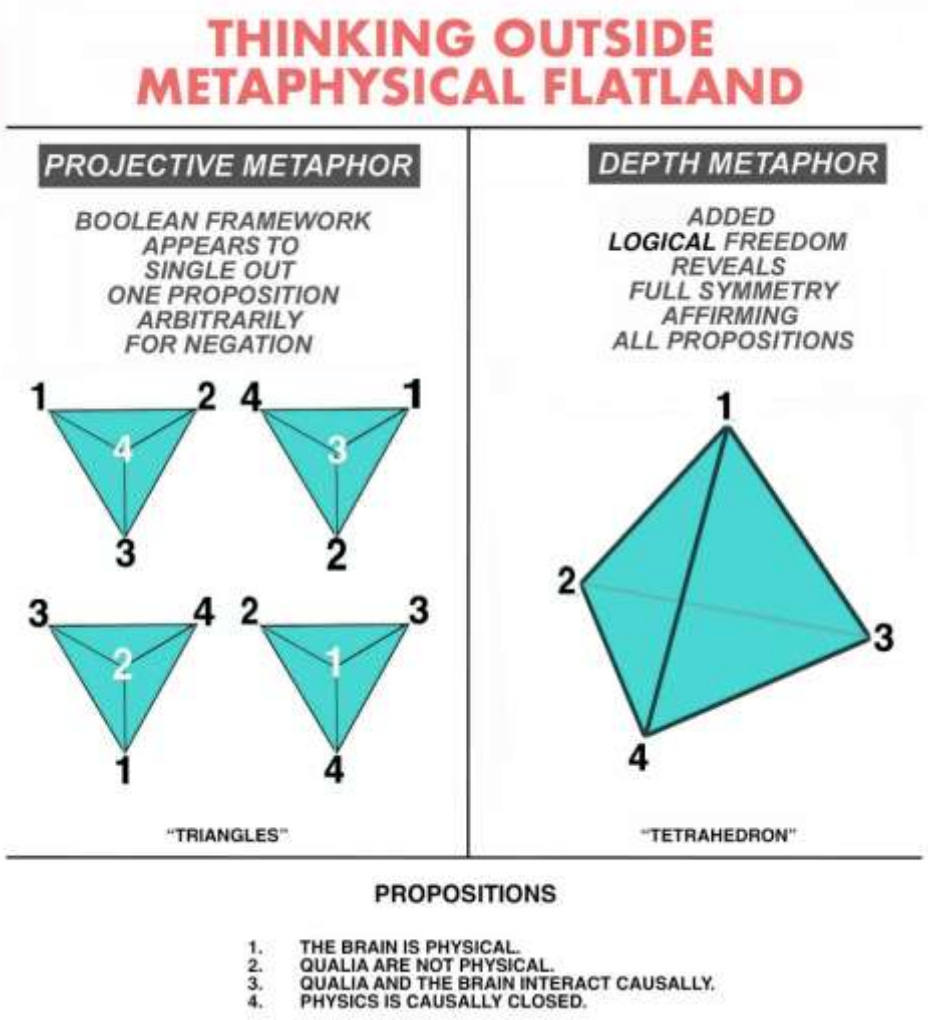


Figure 1: Thinking Outside Metaphysical Flatland

Legend: The image on the right depicts a tetrahedron; the four tetrahedral vertices are all equidistant from each other in three-dimensional space. The four images on the left depict four distorted ways that the tetrahedral image may be projected on to a two-dimensional plane; each of these projectively flattened distortions warps and covers over some single individual vertex. *Planar projections of the tetrahedron are offered here as pictorialized analogies illustrating distorting effects of classically constrained Boolean logic upon the Hard Problem of consciousness, while the fully three-dimensional tetrahedron is offered as an analogy suggesting a possible ameliorating metaphysical role for more expansively flexible post-classical logics.* All these analogies specifically link each tetrahedral vertex to one among four mutually inconsistent metaphysical propositions, a tetrad asserting all at once that 1) the brain is physical, 2) qualia are not physical, 3) qualia and the brain interact causally, and 4) physics is causally closed. Further analogical links are established between each planar projection, which warps and covers over some single tetrahedral vertex, and each negation imposed by classically

constrained Boolean logic upon some single proposition for the sake of the tetrad's overall metaphysical self-consistency. (Various historical schools of metaphysics have selectively advocated such negations in the past; for example,. Berkeley's idealism negated proposition #1, Hobbes's materialism negated proposition #2, Leibniz's parallelism negated proposition #3, and Descartes' interactive dualism negated proposition #4.) A yet further analogical link is established between the fully three-dimensional tetrahedron, in which all four vertices have mutually symmetrical roles, and post-classically expanded (e. g. quantum-superpositional) logics, allowing room for all four propositions of the metaphysical tetrad to be true without mutual contradiction. See the sections on "Metaphysical Whac-A-Mole" and "Quantizing Syntactical Joints" in Mender D. "Metaphysical Tunneling: Probabilities of Transient Escape from the Hard Problem" *Journal of NeuroPhilosophy* 2025;4(1):96-126.

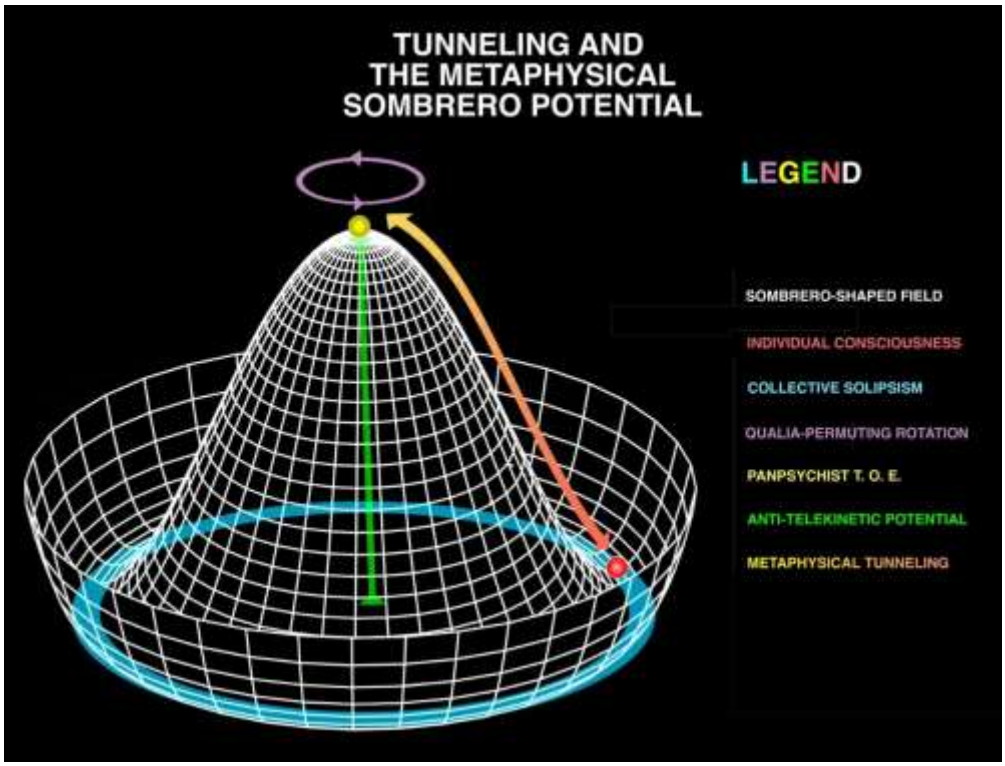


Figure 2: Tunneling and the Metaphysical Sombrero Potential

Legend: The sombrero-shaped landscape whose white grid-like skeleton appears in Figure 2 is borrowed from a famous potential field configuration known to break symmetries of classical physical systems. The non-classical phenomenon of quantum tunneling unbreaks such spontaneously broken physical symmetries. *Figure 2* adapts these formal physical notions to metaphysical content and thereby *endeavors to demonstrate, in a manner more specific than Figure 1, how quantum reasoning can shed unique light on the Hard Problem*. The demonstration at the outset assumes that the sombrero's geometry in both physical and metaphysical contexts exhibits full, unbroken rotational symmetry when turning around a central axis running vertically through the peak; in a metaphysical context, this rotation (as per the purple arrow of Figure 2) represents wholesale transformations of qualia into other qualia, and the unbroken symmetry of the field's geometrical conformation represents the complete invariance of comprehensive physical laws (i. e. of the yet unknown "Theory of Everything" depicted in yellow), presumed through causal closure to be unaffected by changes in qualia. A key caveat in both physical and metaphysical contexts is that the sombrero's peak, which constitutes the potential field's maximum, is unstable, while stable potential minima are situated circumferentially along the sombrero's gutter, and it is the gutter's eccentrically located resting places that spontaneously break the sombrero's rotational symmetry; in a metaphysical context, each individual

point of (i. e. "vacuum" within) the gutter is the single, locally symmetry-broken default address of some individual consciousness (depicted in red). In physical systems, borrowed energy enabled by Heisenberg uncertainty through quantum tunneling transiently reverses the sombrero potential's spontaneous symmetry breaking; in a metaphysical context, quantized subjectivity may briefly tunnel (as per shades of orange) out from the (red) vacua of individual sensoria to achieve (blue) intersubjective states and evanescent panpsychist (yellow) insights, short-circuiting (by temporarily traversing the green potential) any longer-term clashes between the Hard Problem and the causal closure of physics. Isomorphisms with existential philosophy, including Sartre's description of individual consciousness as "no thing" and Heidegger's characterization of ontologically insightful moments as "ekstatic" leaps, may be adduced. In addition, at least two empirically falsifiable predictions – generalized Fourier-duality and Casimir-like effects – may be anticipated. See the sections on "The Metaphysical Fissure" and "Transient Quantum-Restorative Ekstasis" in Mender D. "Metaphysical Tunneling: Probabilities of Transient Escape from the Hard Problem" *Journal of NeuroPhilosophy* 2025;4(1):96-126.