

## Review of: "Neuropsychoanalysis and Dual-Aspect Monism"

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As a clinical psychologist who specializes in neuroscience and nonlinear dynamics, little more is important to me than the relationship between the brain and the mind. I agree with Hart that the philosophical underpinnings of this relationship determine perspective in nontrivial ways and need to be illuminated. While neuropsychoanalysis claims to resolve the mind-body problem through dual-aspect monism, I find Solms' approach problematic partly as pointed to in this paper.

I also subscribe to dual-aspect monism, in that I believe that mind and brain are two sides of a single reality, much like particle and wave in the quantum realm, yet show up as different ontological realms that are accessed in different ways-mind through subjective means and brain through more objective measures. At the same time, I also believe the framework presented in this paper is flawed by the underlying assumption that the two reams are completely separate to begin with and so require different epistemologies that are causally related.

In this review, I would like to offer a different approach to the mind/body interface that's based on a meta-reductionist approach (inclusive of reductionism, but extending beyond it) and a epistemology, which contrasts with Solm's assertion that realms of mind and brain need separate epistemologies. A Fractal Epistemology for a Scientific Psychology (Marks-Tarlow, et al., 2020) is a more holistic approach to understanding based on principles derived from the mathematics of fractal geometry and thoroughly aligned with how complex forces in nature interface with one another to make patterns.

Rather than look for causal relationships between separate realms, this epistemology assumes the ontological existence of both mind and brain and examines the boundary conditions between them. Whereas a reductionist approach assumes clean boundaries and a relationship to be navigated based on separation between the realms, a fractal epistemology assumes paradoxical boundaries that are both open and closed simultaneously--structurally open to allow the flow of matter, energy, and or information across open boundaries; functionally closed in the sense of allowing boundedness of each of the realms.

Consider how our skin is structurally open to allow air in and toxins out, yet its porousness doesn't prevent it from enclosing our organs and giving us the psychological sense of separation between our bodies inside and outside. So too with mind/brain relations--there is structural openness between realms such that conditions that affect the brain, e.g., drugs, trauma, affect the mind. At the same time, how we use our minds affects how the brain develops--early experiences shape neuronal growth and connectivity in the brain in a two way circular causal relationship. Yet, there remains a functional boundedness of both realms despite fractal boundaries that are completely interpenetrating at the edges. Philosophically, if we accept the premise that the boundary conditions between mind and brain are fractal and



interpenetrating, then there is a holistic quality to mind/brain that cannot be divided cleanly in the first place, which invalidates the assumption of separate ontologies for the two realms.

I hope this approach to the mind/body problem sheds some light and look forward to continued dialogue!