Hypothesis Article

Synthesis of Free Energy Principle and Objectification of Perceived Structures

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Abstract

This paper explores the synthesis of Karl Friston's Free Energy Principle and the objectification of perceived structures. By integrating this principle with Immanuel Kant's concept of the noumenon and Werner Heisenberg's collapse of the wave function, this hypothesis illustrates how individuals, through biological and social synchronization, form shared perceptions. The physical resonance of individual brains, functioning akin to high-frequency systems, interacts through various sensory inputs to generate collective, low-frequency synchronization. These interactions provide a foundation for the objective structure of consciousness, resonating with Hegel's concept of the "objective spirit."

Keywords

Quantum Mechanics, Individual Perception, Philosophy of Perception, Epistemology, Cognitive Structures

Introduction

The interplay between philosophy and quantum mechanics offers unique insights into how individuals perceive and construct their reality. Immanuel Kant's noumenon—the "thing-in-itself"—represents a reality independent of human perception, accessible only through mental categories. Werner Heisenberg's collapse of the wave function provides a metaphor for how probabilities become concrete realities upon observation. Karl Friston's Free Energy Principle extends this view by explaining how organisms minimize uncertainty, constructing reality through a dynamic feedback loop of sensory inputs and predictions.

This paper proposes that the resonance between individual brains creates a shared, objective consciousness. Each brain functions as an independent high-frequency system, but through various forms of communication (e.g., acoustic, optic, olfactory), these systems synchronize into a lower-frequency collective. This synchronization reflects a broader, objective reality that aligns with Hegel's "objective spirit."

Resonance of Individual Brains and Collective Synchronization

(Füge hier die Grafik ein, falls du sie heruntergeladen hast)

In this conceptual model, individual brains resonate within their own high-frequency domains, each generating independent, personal perceptions. These perceptions are shaped by biological and sensory feedback loops, a core aspect of Friston's Free Energy Principle. However, these brains also synchronize through collective, lower-frequency waves. This synchronization is mediated through physical interactions, such as:

- Acoustic signals: sound waves and communication,
- Optic signals: visual cues and shared observations,
- Olfactory signals: scent-based interactions,
- Sensory feedback: touch and other sensory inputs,
- Social influences: cultural and interpersonal exchanges.

This dual interaction—individual resonance combined with collective synchronization—creates a shared perception of reality, paralleling Heisenberg's collapse of the wave function, wherein individual probabilities become structured, shared realities.

The Objective Spirit

Hegel's concept of the "objective spirit" refers to a collective consciousness that emerges through the interaction of individual minds. In this context, the brains act as physical entities, much like smartphones, connected via physical communication channels to form a "network" of consciousness. Through synchronized resonance, this network creates objective patterns and structures of perception, solidifying a shared understanding of reality.

Conclusion

The integration of Friston's Free Energy Principle with Kantian philosophy and Heisenberg's quantum mechanics reveals how individual brains, while resonating independently, synchronize through collective interaction to form a shared, objective consciousness. This process echoes Hegel's concept of the "objective spirit," where the interactions between individual perceptions give rise to a collective reality. The physical and sensory feedback mechanisms that mediate these interactions are central to the formation of shared perceptions, providing a hypothetical foundation for the objectification of perceived structures.

References

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Disclosures

None.

Abbreviations

None.

Author Contributions

Florian Lüders MD is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

None.