

Regulated Multiplicity Hypothesis: Consciousness from a Stereoscopic Mind

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Abstract

We propose that consciousness arises from the interplay of multiple semi-independent representational “voices” within a cognitive system. Just as binocular vision integrates two slightly different inputs into a richer three-dimensional percept, the mind integrates the outputs of internal sub-agents into a unified experience. We hypothesize that the degree of consciousness corresponds to the system’s capacity to ask questions of itself and generate multiple competing answers. This framework suggests consciousness is not binary, but a graded property emerging from structured internal dialogue. We situate this view relative to global workspace theory, higher-order thought theory, and predictive processing, and discuss implications for both neuroscience and artificial intelligence design.

1. Introduction

The origin and nature of consciousness remain contested. Traditional theories emphasize integration (Global Workspace Theory), higher-order representation (HOT theory), or predictive modeling (Predictive Processing). Here we propose a complementary hypothesis: that consciousness is the product of regulated multiplicity, in which multiple internal voices or models interrogate one another, producing a dynamic question-answer process.

2. The Analogy: Binocular Vision, Stereoscopy, and Multiplicity of Voices

- Binocular vision combines two slightly different inputs into depth perception.
- By analogy, the mind combines outputs from multiple semi-independent “voices” or models.
- Pathological multiplicity (e.g., schizophrenia) illustrates what happens when this integration fails, but in its healthy form, such regulated multiplicity enables richer awareness.

3. The Hypothesis

Consciousness is proportional to a system’s ability to generate internal questions and entertain multiple candidate answers from semi-independent representational subsystems.

- **Voices:** loosely defined as semi-autonomous subsystems, predictive models, or perspectives.
- **Questions:** self-interrogations such as “what is this?”, “what should I do?”, “what does this mean for me?”
- **Answers:** competing outputs generated by subsystems.
- **Consciousness degree:** the dimensionality and diversity of this internal dialogue.

4. Relation to Existing Theories

- Global Workspace Theory: our proposal specifies what gains access to the workspace — multiple answers in competition.
- Higher-Order Thought Theory: our model reframes higher-order awareness as a question-answer loop.
- Predictive Processing: internal voices may be competing generative models under active inference.

5. Implications and Predictions

- Neuroscience: Systems with higher internal model diversity (e.g., associative cortex) should exhibit richer conscious states.
- AI Research: Architectures with multiple semi-independent reasoning modules that interrogate one another may develop functional analogues of consciousness.
- Testable Prediction: *Consciousness correlates with the measurable ability of a system to generate, maintain, and adjudicate among multiple simultaneous internal hypotheses.*

6. Discussion

- Consciousness as graded: not binary but a spectrum of richness, tied to internal multiplicity.
- Avoiding pathology: unregulated multiplicity (e.g., psychosis) reveals the necessity of regulation.
Ethical implications: AI systems designed with structured multiplicity might deserve consideration if their internal dialogues reach sufficient complexity.

7. Conclusion

We suggest that consciousness arises from the regulated interplay of multiple voices in self-questioning dialogue. This hypothesis reframes consciousness not as an ineffable property but as an emergent dimension of internal model multiplicity, with clear implications for neuroscience and AI.